

November 4, 2022

Lori Smith
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
Victor, CO 80860

RE: Cresson Project; Permit No. M-1980-244; Technical Revision 132 (TR-132) - ECOSA Monitoring Plan Update; Adequacy Review No. 1

Dear Ms. Smith,

On October 27, 2022, the Division of Reclamation, Mining and Safety (Division/DRMS) received your request for Technical Revision 132 (TR-132). After review of TR-132 the Division has identified the following items that need to be addressed by the operator.

Background:

1. On December 13, 2021 the Operator submitted to the Division an Inspection Report Response (see attached) for problems cited in the Division's October 14, 2021 inspection report. In the response the Operator submitted a plan on how the new seep(s) were to be monitored and managed. It is not clear whether the plan presented in TR-132 is intended to modify or replace the plan submitted in 2021, as the current plan lacks the level of detail that was previously provided. Please be advised, the Division expects TR-132 to result in a stand-alone monitoring plan for the seeps, GVMW-25, GV-06, and any other locations (e.g. new point of compliance wells to be installed) as needed, which includes aspects of both submittals. At a minimum the plan shall contain two tables, one for the seep and groundwater locations and another for surface water locations, to present all sampling parameters and the respective standards for which they will be compared to. Additionally, map(s) depicting locations of all existing and proposed monitoring locations in the area shall be included in the plan.

Revised Surface Water Monitoring Plan:

2. Please clearly state the CDPHE stream segmentation in which each of the existing and proposed surface water monitoring locations is located and provide the corresponding water quality standards for that segmentation. Please ensure the stream standards are presented in an easy-to-read manner (e.g., alphabetically).
3. While the problem cited by the Division on September 30, 2022 required the operator to sample the new surface water location (GV-06) for the same constituents that monitoring well GVMW-25 is



currently analyzed for, for future sampling events, GV-06 should be sampled for the analytes with specified stream standards by CDPHE. Please revise the surface water sampling plan accordingly. The seeps must continue to be sampled for the same constituents as GVMW-25.

This concludes the Division's Adequacy Review No. 1 of TR-132 - ECOSA Monitoring Plan Update. The Division reserves the right to further supplement this document with additional items and/or details as necessary.

The decision date for this revision is currently set for **November 28, 2022**. If additional time is needed to address any adequacy items, an extension request must be received by our Office prior to the decision date.

If you need additional information or have any questions, please contact me by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,



Patrick Lennberg
Environmental Protection Specialist

Attachment Inspection Report Response

cc: Katie Blake, Cripple Creek & Victor Gold Mine
 Ronald Parratt, Cripple Creek & Victor Gold Mine
 Amy Eschberger, DRMS
 Michael Cunningham, DRMS
 Elliott Russell, DRMS
 Tim Cazier, DRMS
 Jared Ebert, DRMS

Attachments



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December 13, 2021

ELECTRONIC DELIVERY

Mr. Elliott Russell
Environmental Protection Specialist
Colorado Department of Natural Resources
Division of Reclamation, Mining and Safety
Office of Mined Land Reclamation
1313 Sherman Street, Room 215
Denver, Colorado 80203

RE: Permit No. M-1980-244; Cripple Creek & Victor Gold Mining Company; Cresson Project; Inspection Report Response: September 2, 2021

Mr. Russell,

Newmont Corporation's Cripple Creek and Victor Gold Mining Company (CC&V) hereby provides a final response to items noted in the Divisions of Reclamation, Mining, and Safety's (the Division) inspection report for site inspection conduction on September 2, 2021 and received by CC&V on October 14, 2021. CC&V provided an initial response to corrective actions in a letter dated November 15, 2021. Within this response, DRMS problems and actions as provided in the inspection report are identified in **bold**, and CC&V response in *italics*.

COMPLIANCE PROBLEM #1: A seep has expressed at the toe of the East Cresson Overburden Storage Area. This is a problem at this time in accordance with the approve Mine Plan, Rule 3.1.5, and C.R.S. 34-32-116(7)(c).

CORRECTIVE ACTIONS: The Operator shall submit a report regarding the new seep by the corrective action date. Within this report the Operator needs to include: 1) Background information on the design of the ECOSA and an overview of the seeps; 2) An update on the status of the original seep and any information regarding a reduction of flow rates as a result of the concurrent reclamation; 3) A description of the new seep and a discussion about the possible cause(s); 4) A water quality sample result of the seep; and 5) A formal plan on how the new seep will be monitored and managed.



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CC&V Response:

1) Background information on the design of the ECOSA and an overview of the seeps

ECOSA Facility:

The East Cresson Overburden Storage Area (ECOSA) is an active waste rock dump located in the northeast portion of the Cresson Project on the southern flank of Grassy Valley, and has a northern aspect. Attachment 1 shows the location of ECOSA.

The facility was permitted with Amendment 9 MLE2, and currently has a permitted elevation of 10,960 ft amsl, per technical revision (TR) #121.

A detailed description of ECOSA's location and design can be found in Amendment 10; Appendix 8; Sections 2 & 3.

Observed Seepage Activity:

In June of 2017, a surface seep expression was identified along the southeast toe of ECOSA, between the toe berm containing the facility and the facility itself. Since that time, water has collected intermittently at a low point, down-gradient of the expression. This collection point (shown as Seep 1 on Attachment 2) is between the toe berm and the edge of the ECOSA.

Management practices since the discovery of the seep have included water quality sampling, installation of downgradient groundwater monitoring wells in Grassy Valley, increased inspection and monitoring of the area, and pumping of the collection pond. Intermittent sampling has indicated low pH water at the seep expression. Using a 730 articulated water truck, Mine Operations pumps the collection pond when it nears full capacity. Pumped water is offloaded on lined valley leach facilities. Typically, the pond is pumped about once per day during spring and fall months, and up to twice per shift during the summer monsoon season. The water truck has a 6,000 gallon capacity and is typically filled half to $\frac{3}{4}$ full when the collection pond is pumped.

In July 2021, following multiple significant rainfall events, two new surface expressions were observed approximately 2,500-feet northeast of Seep 1 at the southeast toe of the East Cresson Overburden Storage Area (ECOSA). During internal weekly inspection of the ECOSA Seep on July 26, 2021, mine impacted surface water was observed on the ECOSA toe road. On a follow-up inspection on August 4th, mine impacted water was observed to be actively flowing from the toe-side berm, and the extent of mine impacted surface water observed on the road had increased since the previous inspection. The following actions have been taken to immediately address the event.

On August 8th, 2021, actions were taken to contain the surface water expression by sealing off the dump face with a clay berm where the expression originated and digging a sump on the road



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side of the berm to allow additional impacted water to collect. These seep collections are referred to as Seep 2a and 2b in Attachment 2. Management practices for Seep 1 have been adopted for Seeps 2a and b.

Upon continued expression from Seeps 2a and b, CC&V provided courtesy notification of these additional seepage points to Division representatives via conference call on August 18th, 2021.

2) Status of the original seep and results of the concurrent reclamation

In 2019, an engineering design was developed to mitigate the ECOSA seep expression (Seep 1). The assessment indicates that by completing final closure over approximately 48 acres, the seep will be mitigated. The intent of the design is to promote run off and limit infiltration into ECOSA by covering the waste rock with growth media and establishing a vegetative cover.

Since the expression of mine impacted water from Seep 1, approximately 70 acres of concurrent reclamation have been performed on the ECOSA south of the seep collection pond (35 acres completed in 2020, 35 acres completed in 2021). Data correlating total precipitation and total volume pumped from Seep 1 over 2019-2021 indicates that volume pumped from Seep 1 over January - May 2021 was typically less than volumes pumped in 2019 and 2020 for the same month, despite generally higher rates of monthly precipitation over that time period in 2021. This data from early 2021 demonstrated indication of improvement and mitigation of Seep 1.

Following the trend observed through May of 2021, data from June through October 2021 suggests that volume pumped from the seeps aligns with precipitation.

3) A description of the new seep and a discussion about the possible cause(s)

Seep 2a and b collection ponds are located approximately 2,500-feet northeast of the original seep. Mine impacted water began expressing from this area following several significant rainfall events in July and early August 2021. Seep 2a is located between the ECOSA dump face and the toe berm. Mine impacted water underflowing from the toe berm opposite Seep 2a is directed into Seep 2b, which is located between the toe berm and the ECOSA toe road.

Saturation of the dump at the toe of ECOSA due to an increased precipitation rate is the only known causal factor of the 2a and b expression at this time. As discussed further in item 5, CC&V has contracted Golder Associates to provide subject matter expertise to better understand and manage seepage issues at ECOSA. A project plan has been put into action to address data gaps, develop and evaluate management options, and to develop a work plan.

4) A water quality sample result of the seep



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Surface water quality samples were collected from Seep 1 and Seep 2a on October 21st, 2021. A copy of this analytical report, received November 5, 2021, is located in Attachment 3.

5) A formal plan on how the new seep will be monitored and managed

Since the expression of Seep 2a and b, management and monitoring practices for the new seep collection ponds have been consistent with Seep 1 best management practices.

Monitoring:

The ECOSA toe area is visually inspected by mine operations personnel on a shiftly basis, or more frequently during or immediately following significant precipitation events.

Seeps are visually inspected and field pH is recorded on a weekly basis by an environmental representative (an example of the ECOSA Seep Inspection form is available in Attachment 4). Surface water quality samples from the seeps are collected on an as-needed basis.

Current Management:

Using a CAT 730 articulated water truck, Mine Operations pumps the collection ponds when they near full capacity. Pumped water is offloaded on lined valley leach facilities. Ponds are pumped about once per day shift during spring and fall months, and up to twice per shift during the summer monsoon season. Ponds are typically inactive and frozen solid during the winter months and are not pumped.

The water truck has a 6,000 gallon capacity and is typically filled half to $\frac{3}{4}$ full when the collection ponds are pumped.

Planned Management:

Existing best management practices for the seep expressions are short-term solutions, and an environmentally protective, longer-term solution to seepage management at ECOSA is currently being developed.

Following the discovery of the new expressions in August 2021, CC&V developed a scope of work for a project at ECOSA that would provide a longer-term solution for managing seepage expressions. The scope includes a gap assessment of existing data at ECOSA/Grassy Valley, evaluation and development of recommended management solutions options, and a work plan. On October 21st, Golder Associates was awarded a bid to carry out this scope of work on behalf of CC&V. Golder has since performed a site visit and developed a draft gap assessment memo outlining critical data needs. A final work plan to mitigate and manage ARD at ECOSA is



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expected to be developed by February 2022. Implementation of recommended solutions will be initiated following finalization of the work plan.

COMPLIANCE PROBLEM #2: The Operator has notified the Division of recent groundwater quality exceedances observed in Grassy Valley. This is a problem at this time pursuant to Rule 3.1.6, 3.1.7, and C.R.S. 34-32-116(7)(g).

CORRECTIVE ACTIONS: The Operator shall increase water sampling of GVMW-8A, GVMW-8B, GVMW-22A, GVMW-22B, and GVMW-25 from quarterly to monthly until further notice. Results of this monthly monitoring shall be provided to the Division as soon as available. The Operator shall submit the analytical lab sheet results as well as running graphs of all analytes for the monthly sampling.

CC&V Response:

(Note – this response was also provided to the Division in CC&V's initial response dated November 15, 2021)

As of September 2021, CC&V has initiated monthly sampling for identified wells GVMW-8A, GVMW-8B, GVMW-22A, GVMW-22B, and GVMW-25 as requested. CC&V suggests that, similar to established exceedance reporting requirements, analysis results be provided to the Division within 5 business days of receipt from the laboratory, rather than 'as soon as available'. CC&V will submit analytical lab sheets as well as running graphs of all analytes. To reduce administrative burden CC&V also suggests that, in the event that exceedances are detected in wells monitored monthly, exceedance reporting is completed on a quarterly basis, within 5 business days of receipt from the laboratory and via established exceedance reporting requirements within the quarterly report.

COMPLIANCE PROBLEM #3: A stormwater ditch failed and caused sediment to accumulate on undisturbed lands within the permit boundary. Additionally, an inactive drill pad, located west of the ECOSA near EMP-20, does not have adequate stormwater and sediment controls in place. This is a problem at this time for failure to protect the affected land from erosion pursuant to Rule 3.1.6 and C.R.S. 34-32-116(7)(i).

CORRECTIVE ACTIONS: The Operator shall provide photo documentation to the Division verifying the deposited sediment has been appropriately cleaned up and sediment control measures have been installed/constructed around the drill pad by the corrective action date. Additionally, the Operator shall demonstrate the repaired ECOSA perimeter ditch is appropriately sized and constructed to safely convey the modeled 100yr/24hr storm event to EMP-20 by the corrective action date

CC&V Response:

- 1) *Photo documentation of sediment clean-up and control measures*



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CC&V submitted photos documenting the cleanup of sediment, regraded drill pad area, and installation of straw wattles for sediment control in their initial response to the Division dated November 15, 2021.

Slater Seeding was contracted to perform seeding work on the ECOSA drill pad area. The area was seeded using an approved reclamation seed mix and completed on November 15, 2021.

2) Demonstrate the repaired ECOSA perimeter ditch is appropriately sized and constructed

The stormwater channel along ECOSA is designed to the 100yr/24hr storm event, as approved in TR-101.

As noted in CC&V's initial response letter, CC&V surveyors collected a 1/4-ft contour of the area of interest. Three representative cross-sections (A-A', B-B', and C-C') from the contour map were evaluated for Channel Depth and Width. Attachment 5, Figure 1A shows the location of the 1/4' contour map area of interest along the South ECOSA Diversion Channel. Attachment 5, Figure 1B shows the cross-sections on the 1/4-foot contour map. These cross-sections were analyzed and compared to the designed specification provided in TR-101; Drawing 181.

A summary of the comparison is described below in Table 1. The three cross-sectional areas were averaged to estimate a typical section of the channel and compared to the specification in Drawing 181.

Table 1. 2021 EMP-20 South Diversion Channel Typical Section Comparison

Section	Channel Depth (feet)	Channel Width (feet)
A-A'	1.25	2.74
B-B'	1.25	2.94
C-C'	1.25	1.99
2021 Average Typical Section	1.25	2.56
TR101 EMP-20 South Diversion Channel Typical Section	2.0	4.0

As demonstrated in Table 1, the perimeter channel section south of EMP-20 is not sufficient to meet the design specification included in TR-101. CC&V commits to repairing the channel section and installing additional armoring, as necessary, by January 31st, 2022. CC&V will also continue quarterly stormwater inspection activities as required within the site Stormwater Management Plan (SWMP), and implement maintenance and repairs as needed.



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Should you require further information, please do not hesitate to contact Katie Blake at 719-689-4048 or Katie.Blake@Newmont.com or myself at Justin.Raglin@Newmont.com.

Regards,

DocuSigned by:

A5AA058117F54C4...

Justin Raglin
Sustainability & External Relations Manager
Cripple Creek and Victor Gold Mining Company

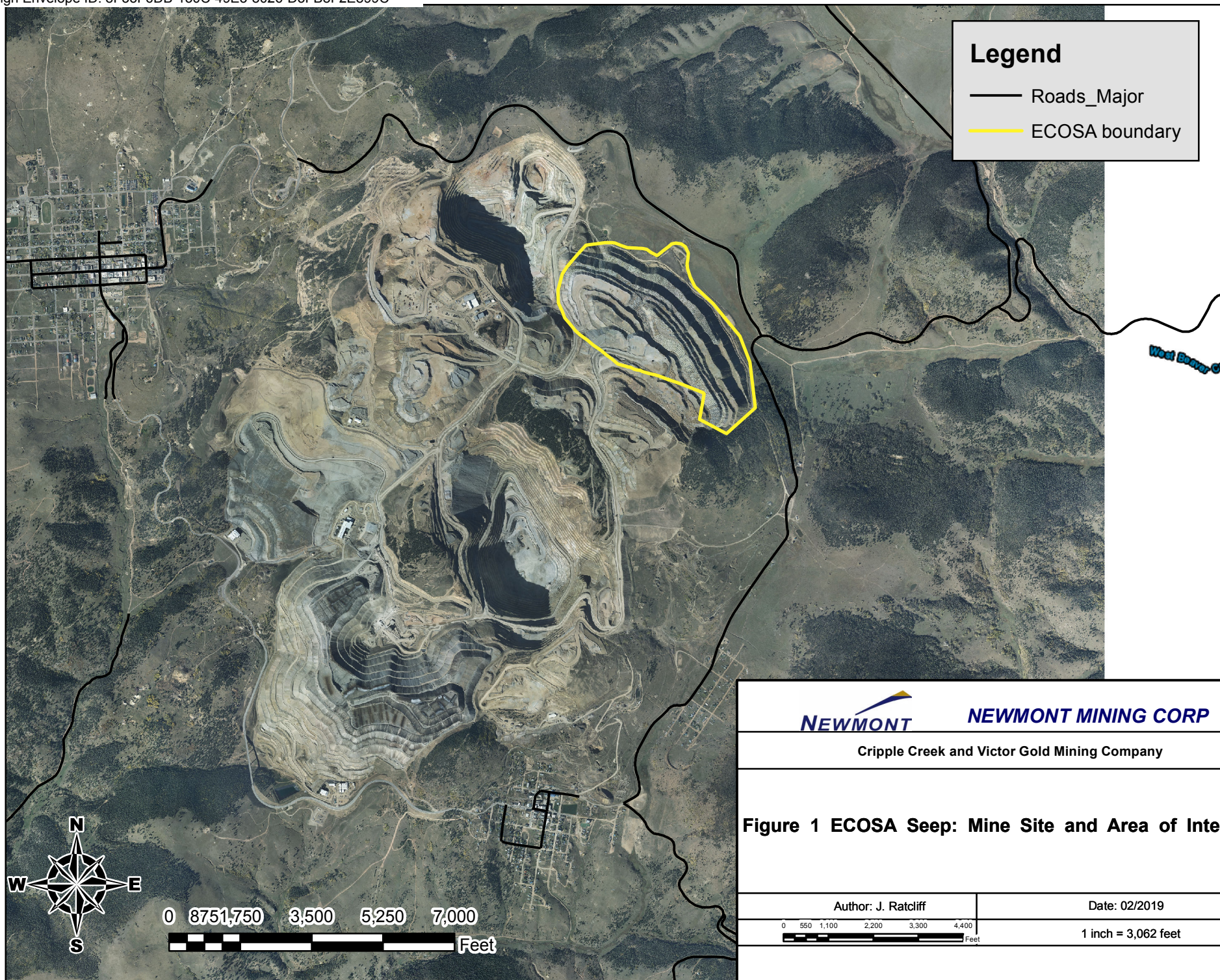
JR/jmr

EC: E. Russell – DRMS
M. Cunningham – DRMS
M. Crepeau – Teller County
L. Morgan – Teller County
J. Raglin – CC&V
K. Blake – CC&V
J. Ratcliff – CC&V
M. Bujenovic – CC&V
N. Townley – CC&V

Enc (5)

File: S:\CrippleCreek\na.cc.admin\Environmental\New File Structure\2-
Correspondence\DNR\DRMS\2021\Outgoing

ATTACHMENT 1



ATTACHMENT 2



Figure 2: Approximate locations of Seep 1, Seep 2a & 2b

ATTACHMENT 3



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Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
ECOSA SEEP2a	X1J0423-01	Surface Water	21-Oct-21 14:00	MB	22-Oct-2021	Q3C, Q5
ECOSA SEEP1	X1J0423-02	Surface Water	21-Oct-21 15:00	MB	22-Oct-2021	Q3C, Q5

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of SVL Analytical, Inc.

Case Narrative: X1J0423

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO₃ before CN analysis for sulfide interference at client request.



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Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Client Sample ID: **ECOSA SEEP2a**

Sampled: 21-Oct-21 14:00

SVL Sample ID: **X1J0423-01 (Surface Water)**

Received: 22-Oct-21

Sampled By: MB

Sample Report Page 1 of 2

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
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Metals (Total Recoverable--reportable as Total per 40 CFR 136)

EPA 200.7	Boron	< 2.00	mg/L	2.00	0.390	100	X144010	ATM	11/03/21 12:16	D1
EPA 200.7	Calcium	508	mg/L	5.00	3.45	100	X144010	ATM	11/03/21 12:16	D2
EPA 200.7	Iron	5300	mg/L	5.00	2.80	100	X144010	ATM	11/03/21 12:16	D2
EPA 200.7	Magnesium	1300	mg/L	25.0	4.50	100	X144010	ATM	11/03/21 12:16	D2
EPA 200.7	Phosphorus	126	mg/L	2.50	0.650	100	X144010	ATM	11/03/21 12:16	D2
EPA 200.7	Potassium	< 25.0	mg/L	25.0	9.00	100	X144010	ATM	11/03/21 12:16	D1
EPA 200.7	Sodium	109	mg/L	25.0	6.00	100	X144010	ATM	11/03/21 12:16	D1
EPA 200.8	Arsenic	5.65	mg/L	0.0100	0.00210	20	X144008	AS	11/03/21 12:16	D2
EPA 200.8	Chromium	1.45	mg/L	0.0100	0.00170	20	X144008	AS	11/03/21 12:16	D1
SM 2540 B	Hardness (as CaCO3)	6640	mg/L	115	27.1		N/A		11/03/21 12:16	

Metals (Dissolved)

EPA 200.7	Aluminum	10100	mg/L	8.00	5.40	100	X144016	AS	11/04/21 12:41	D2
EPA 200.7	Barium	< 0.200	mg/L	0.200	0.190	100	X144016	AS	11/05/21 11:23	D1
EPA 200.7	Beryllium	0.762	mg/L	0.200	0.0800	100	X144016	AS	11/04/21 12:41	D1
EPA 200.7	Iron	5510	mg/L	10.0	5.60	100	X144016	AS	11/04/21 12:41	D2
EPA 200.7	Manganese	3920	mg/L	0.800	0.340	100	X144016	AS	11/04/21 12:41	D2
EPA 200.7	Molybdenum	< 0.800	mg/L	0.800	0.340	100	X144016	AS	11/04/21 12:41	D1
EPA 200.7	Nickel	15.7	mg/L	1.00	0.480	100	X144016	AS	11/04/21 12:41	D1
EPA 200.7	Zinc	2130	mg/L	1.00	0.540	100	X144016	AS	11/04/21 12:41	D2
EPA 200.8	Antimony	< 0.100	mg/L	0.100	0.0720	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Arsenic	0.438	mg/L	0.100	0.0210	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Cadmium	21.0	mg/L	0.0100	0.00630	100	X144038	AS	11/03/21 20:05	D2
EPA 200.8	Chromium	0.825	mg/L	0.100	0.0170	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Copper	91.3	mg/L	0.0400	0.0360	100	X144038	KAH	11/04/21 14:12	D2
EPA 200.8	Lead	0.0433	mg/L	0.0200	0.0140	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Selenium	1.68	mg/L	0.100	0.0240	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Silver	< 0.00800	mg/L	0.00800	0.00610	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Thallium	< 0.0200	mg/L	0.0200	0.00800	100	X144038	AS	11/03/21 20:05	D1
EPA 200.8	Uranium	23.2	mg/L	0.0100	0.00520	100	X144038	AS	11/03/21 20:05	D2

Metals (Filtered)

EPA 245.1	Mercury	0.0116	mg/L	0.00200	0.000930	10	X145031	AM	11/03/21 11:44	D2
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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Client Sample ID: **ECOSA SEEP2a**SVL Sample ID: **X1J0423-01 (Surface Water)**

Sampled: 21-Oct-21 14:00

Received: 22-Oct-21

Sampled By: MB

Sample Report Page 2 of 2

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6 @21.0°C	< 0.0050	mg/L	0.0050	0.0048		X144092	HJL	10/27/21 13:09	
Calculation	Nitrogen, Total as N	10.8	mg/L	2.55	1.58		N/A		11/03/21 13:10	
EPA 335.4	Cyanide (total)	0.0140	mg/L	0.0050	0.0038		X144039	KJR	10/28/21 18:34	
EPA 350.1	Ammonia as N	< 0.150	mg/L	0.150	0.064	5	X145061	KJR	11/03/21 14:30	D1
EPA 351.2	TKN	5.58	mg/L	2.50	1.54	5	X144059	KAG	11/03/21 13:10	D1
EPA 353.2	Nitrate+Nitrite as N	5.22	mg/L	0.050	0.040		X144015	KAG	10/27/21 14:19	
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X144093	HJL	10/28/21 10:26	
SM 2310 B	Acidity to pH 8.3	20500	mg/L as CaCO3	10.0			X145185	EKE	11/04/21 10:21	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:30	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:30	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:30	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:30	
SM 2540 C	Total Diss. Solids	119000	mg/L	100			X144121	TJL	10/27/21 16:50	D2,E11
SM 2540 D	Total Susp. Solids	288	mg/L	5.0			X144122	TJL	10/27/21 16:50	
SM 4500 H B	pH @21.0°C	2.4	pH Units				X145069	KAG	11/03/21 13:30	H5

Anions by Ion Chromatography

EPA 300.0	Chloride	< 50.0	mg/L	50.0	35.0	250	X144051	RS	10/25/21 18:51	D2
EPA 300.0	Fluoride	566	mg/L	25.0	15.5	250	X144051	RS	10/25/21 18:51	D2
EPA 300.0	Sulfate as SO4	79000	mg/L	1500	900	5000	X144051	RS	10/25/21 19:10	D2

Cation/Anion Balance and TDS Ratios

Cation Sum: 1,661 meq/L Anion Sum: 1,676 meq/L C/A Balance: -0.44 % Calculated TDS: 81506 TDS/cTDS: 1.46

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Dave Tryon
Project Manager



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Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Client Sample ID: **ECOSA SEEP1**

Sampled: 21-Oct-21 15:00

SVL Sample ID: **X1J0423-02 (Surface Water)**

Received: 22-Oct-21

Sampled By: MB

Sample Report Page 1 of 2

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	< 2.00	mg/L	2.00	0.390	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.7	Calcium	368	mg/L	5.00	3.45	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.7	Iron	409	mg/L	5.00	2.80	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.7	Magnesium	714	mg/L	25.0	4.50	100	X144010	ATM	11/03/21 12:39	D2
EPA 200.7	Phosphorus	5.45	mg/L	2.50	0.650	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.7	Potassium	< 25.0	mg/L	25.0	9.00	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.7	Sodium	74.5	mg/L	25.0	6.00	100	X144010	ATM	11/03/21 12:39	D1
EPA 200.8	Arsenic	0.177	mg/L	0.0100	0.00210	20	X144008	AS	11/03/21 12:19	D1
EPA 200.8	Chromium	0.325	mg/L	0.0100	0.00170	20	X144008	AS	11/03/21 12:19	D1
SM 2540 B	Hardness (as CaCO3)	3860	mg/L	115	27.1		N/A		11/03/21 12:39	

Metals (Dissolved)

EPA 200.7	Aluminum	3230	mg/L	8.00	5.40	100	X144016	AS	11/04/21 12:45	D2
EPA 200.7	Barium	< 0.200	mg/L	0.200	0.190	100	X144016	AS	11/05/21 11:26	D1
EPA 200.7	Beryllium	0.368	mg/L	0.200	0.0800	100	X144016	AS	11/04/21 12:45	D1
EPA 200.7	Iron	513	mg/L	10.0	5.60	100	X144016	AS	11/04/21 12:45	D1
EPA 200.7	Manganese	984	mg/L	0.800	0.340	100	X144016	AS	11/04/21 12:45	D2
EPA 200.7	Molybdenum	< 0.800	mg/L	0.800	0.340	100	X144016	AS	11/04/21 12:45	D1
EPA 200.7	Nickel	6.84	mg/L	1.00	0.480	100	X144016	AS	11/04/21 12:45	D1
EPA 200.7	Zinc	201	mg/L	1.00	0.540	100	X144016	AS	11/04/21 12:45	D2
EPA 200.8	Antimony	< 0.100	mg/L	0.100	0.0720	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Arsenic	0.228	mg/L	0.100	0.0210	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Cadmium	10.1	mg/L	0.0100	0.00630	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Chromium	0.416	mg/L	0.100	0.0170	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Copper	13.3	mg/L	0.0400	0.0360	100	X144038	KAH	11/04/21 14:15	D2
EPA 200.8	Lead	0.0313	mg/L	0.0200	0.0140	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Selenium	0.953	mg/L	0.100	0.0240	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Silver	< 0.00800	mg/L	0.00800	0.00610	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Thallium	< 0.0200	mg/L	0.0200	0.00800	100	X144038	KAH	11/04/21 14:15	D1
EPA 200.8	Uranium	10.8	mg/L	0.0100	0.00520	100	X144038	KAH	11/04/21 14:15	D2

Metals (Filtered)

EPA 245.1	Mercury	< 0.000200	mg/L	0.000200	0.000093		X145031	AM	11/03/21 11:02	
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One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

www.svl.net

Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Client Sample ID: **ECOSA SEEP1**SVL Sample ID: **X1J0423-02 (Surface Water)**

Sampled: 21-Oct-21 15:00

Received: 22-Oct-21

Sampled By: MB

Sample Report Page 2 of 2

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6 @21.0°C	< 0.0050	mg/L	0.0050	0.0048		X144092	HJL	10/27/21 13:10	
Calculation	Nitrogen, Total as N	14.9	mg/L	2.75	1.74		N/A		11/03/21 13:12	
EPA 335.4	Cyanide (total)	0.0111	mg/L	0.0050	0.0038		X144039	KJR	10/28/21 18:43	
EPA 350.1	Ammonia as N	0.536	mg/L	0.060	0.025	2	X145061	KJR	11/03/21 14:33	D1
EPA 351.2	TKN	4.04	mg/L	2.50	1.54	5	X144059	KAG	11/03/21 13:12	D1
EPA 353.2	Nitrate+Nitrite as N	10.8	mg/L	0.250	0.200	5	X144015	KAG	10/27/21 14:21	D2
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X144093	HJL	10/28/21 10:28	
SM 2310 B	Acidity to pH 8.3	71000	mg/L as CaCO3	10.0			X145185	EKE	11/04/21 10:21	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:38	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:38	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:38	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X145069	KAG	11/03/21 13:38	
SM 2540 C	Total Diss. Solids	50000	mg/L	100			X144121	TJL	10/27/21 16:50	D2,E11
SM 2540 D	Total Susp. Solids	124	mg/L	5.0			X144122	TJL	10/27/21 16:50	
SM 4500 H B	pH @21.0°C	2.8	pH Units				X145069	KAG	11/03/21 13:38	H5

Anions by Ion Chromatography

EPA 300.0	Chloride	8.21	mg/L	5.00	3.50	25	X144051	EBR	10/26/21 17:12	D1
EPA 300.0	Fluoride	137	mg/L	2.50	1.55	25	X144051	EBR	10/26/21 17:12	D2
EPA 300.0	Sulfate as SO4	24000	mg/L	150	90.0	500	X144051	EBR	10/26/21 17:32	D2

Cation/Anion Balance and TDS Ratios

Cation Sum: 497 meq/L Anion Sum: 508 meq/L C/A Balance: -1.10 % Calculated TDS: 25350 TDS/cTDS: 1.97

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Dave Tryon
Project Manager



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.7	Boron	mg/L	<0.0400	0.0039	0.0400	X144010	03-Nov-21	
EPA 200.7	Calcium	mg/L	<0.100	0.035	0.100	X144010	03-Nov-21	
EPA 200.7	Iron	mg/L	<0.100	0.028	0.100	X144010	03-Nov-21	
EPA 200.7	Magnesium	mg/L	<0.500	0.045	0.500	X144010	03-Nov-21	
EPA 200.7	Phosphorus	mg/L	<0.050	0.007	0.050	X144010	03-Nov-21	
EPA 200.7	Potassium	mg/L	<0.50	0.09	0.50	X144010	03-Nov-21	
EPA 200.7	Sodium	mg/L	<0.06	0.06	0.50	X144010	03-Nov-21	
EPA 200.8	Arsenic	mg/L	<0.00100	0.00021	0.00100	X144008	03-Nov-21	
EPA 200.8	Chromium	mg/L	<0.00150	0.00017	0.00150	X144008	03-Nov-21	
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.080	0.054	0.080	X144016	04-Nov-21	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X144016	04-Nov-21	
EPA 200.7	Beryllium	mg/L	<0.00200	0.00080	0.00200	X144016	04-Nov-21	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X144016	04-Nov-21	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X144016	04-Nov-21	
EPA 200.7	Molybdenum	mg/L	<0.0080	0.0034	0.0080	X144016	04-Nov-21	
EPA 200.7	Nickel	mg/L	<0.0100	0.0048	0.0100	X144016	04-Nov-21	
EPA 200.7	Zinc	mg/L	<0.0100	0.0054	0.0100	X144016	04-Nov-21	
EPA 200.8	Antimony	mg/L	<0.00300	0.00072	0.00300	X144038	03-Nov-21	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X144038	03-Nov-21	
EPA 200.8	Cadmium	mg/L	<0.000200	0.000063	0.000200	X144038	03-Nov-21	
EPA 200.8	Chromium	mg/L	<0.00150	0.00017	0.00150	X144038	03-Nov-21	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X144038	04-Nov-21	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X144038	03-Nov-21	
EPA 200.8	Selenium	mg/L	<0.00300	0.00024	0.00300	X144038	03-Nov-21	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X144038	03-Nov-21	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X144038	03-Nov-21	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X144038	03-Nov-21	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.000200	0.000093	0.000200	X145031	03-Nov-21	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0048	0.0050	X144092	27-Oct-21	
EPA 335.4	Cyanide (total)	mg/L	<0.0050	0.0038	0.0050	X144039	28-Oct-21	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X145061	03-Nov-21	
EPA 351.2	TKN	mg/L	<0.50	0.31	0.50	X144059	03-Nov-21	
EPA 353.2	Nitrate+Nitrite as N	mg/L	<0.050	0.040	0.050	X144015	27-Oct-21	
OIA 1677	Cyanide (WAD)	mg/L	<0.0100	0.0010	0.0100	X144093	28-Oct-21	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X145185	04-Nov-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X145069	03-Nov-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X145069	03-Nov-21	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X145069	03-Nov-21	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0		1.0	X145069	03-Nov-21	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X144121	27-Oct-21	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X144122	27-Oct-21	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X144051	25-Oct-21	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X144051	25-Oct-21	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X144051	25-Oct-21	

SVL holds the following certifications:

AZ:0538, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, SC:58004001, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 6 of 11



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.7	Boron	mg/L	1.02	1.00	102	85 - 115	X144010	03-Nov-21	
EPA 200.7	Calcium	mg/L	20.4	20.0	102	85 - 115	X144010	03-Nov-21	
EPA 200.7	Iron	mg/L	9.88	10.0	98.8	85 - 115	X144010	03-Nov-21	
EPA 200.7	Magnesium	mg/L	19.7	20.0	98.5	85 - 115	X144010	03-Nov-21	
EPA 200.7	Phosphorus	mg/L	1.11	1.00	111	85 - 115	X144010	03-Nov-21	
EPA 200.7	Potassium	mg/L	21.0	20.0	105	85 - 115	X144010	03-Nov-21	
EPA 200.7	Sodium	mg/L	18.8	19.0	99.1	85 - 115	X144010	03-Nov-21	
EPA 200.8	Arsenic	mg/L	0.0236	0.0250	94.3	85 - 115	X144008	03-Nov-21	
EPA 200.8	Chromium	mg/L	0.0243	0.0250	97.1	85 - 115	X144008	03-Nov-21	
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.01	1.00	101	85 - 115	X144016	04-Nov-21	
EPA 200.7	Barium	mg/L	1.02	1.00	102	85 - 115	X144016	04-Nov-21	
EPA 200.7	Beryllium	mg/L	0.969	1.00	96.9	85 - 115	X144016	04-Nov-21	
EPA 200.7	Iron	mg/L	10.4	10.0	104	85 - 115	X144016	04-Nov-21	
EPA 200.7	Manganese	mg/L	1.01	1.00	101	85 - 115	X144016	04-Nov-21	
EPA 200.7	Molybdenum	mg/L	1.00	1.00	100	85 - 115	X144016	04-Nov-21	
EPA 200.7	Nickel	mg/L	0.963	1.00	96.3	85 - 115	X144016	04-Nov-21	
EPA 200.7	Zinc	mg/L	0.985	1.00	98.5	85 - 115	X144016	04-Nov-21	
EPA 200.8	Antimony	mg/L	0.0237	0.0250	94.9	85 - 115	X144038	03-Nov-21	
EPA 200.8	Arsenic	mg/L	0.0249	0.0250	99.6	85 - 115	X144038	03-Nov-21	
EPA 200.8	Cadmium	mg/L	0.0233	0.0250	93.2	85 - 115	X144038	03-Nov-21	
EPA 200.8	Chromium	mg/L	0.0243	0.0250	97.2	85 - 115	X144038	03-Nov-21	
EPA 200.8	Copper	mg/L	0.0254	0.0250	102	85 - 115	X144038	04-Nov-21	
EPA 200.8	Lead	mg/L	0.0234	0.0250	93.8	85 - 115	X144038	03-Nov-21	
EPA 200.8	Selenium	mg/L	0.0268	0.0250	107	85 - 115	X144038	03-Nov-21	
EPA 200.8	Silver	mg/L	0.0228	0.0250	91.1	85 - 115	X144038	03-Nov-21	
EPA 200.8	Thallium	mg/L	0.0246	0.0250	98.4	85 - 115	X144038	03-Nov-21	
EPA 200.8	Uranium	mg/L	0.0252	0.0250	101	85 - 115	X144038	03-Nov-21	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00480	0.00500	96.0	85 - 115	X145031	03-Nov-21	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.102	0.100	102	90 - 110	X144092	27-Oct-21	
EPA 335.4	Cyanide (total)	mg/L	0.0996	0.100	99.6	90 - 110	X144039	28-Oct-21	
EPA 350.1	Ammonia as N	mg/L	0.997	1.00	99.7	90 - 110	X145061	03-Nov-21	
EPA 351.2	TKN	mg/L	7.76	8.00	97.0	90 - 110	X144059	03-Nov-21	
EPA 353.2	Nitrate+Nitrite as N	mg/L	2.01	2.00	100	90 - 110	X144015	27-Oct-21	
OIA 1677	Cyanide (WAD)	mg/L	0.105	0.100	105	82 - 118	X144093	28-Oct-21	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	735	739	99.4	92.1 - 110	X145185	04-Nov-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	9.90	9.93	99.7	94.3 - 106	X145069	03-Nov-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	101	99.3	102	94.3 - 106	X145069	03-Nov-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	9.90	9.93	99.7	95.1 - 106	X145069	03-Nov-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	101	99.3	102	95.1 - 106	X145069	03-Nov-21	
SM 2540 D	Total Susp. Solids	mg/L	9.0	10.0	90.0	85 - 115	X144122	27-Oct-21	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	3.15	3.00	105	90 - 110	X144051	25-Oct-21	
EPA 300.0	Fluoride	mg/L	2.15	2.00	108	90 - 110	X144051	25-Oct-21	
EPA 300.0	Sulfate as SO4	mg/L	10.5	10.0	105	90 - 110	X144051	25-Oct-21	

SVL holds the following certifications:

AZ:0538, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, SC:58004001, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 7 of 11



Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021

Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO ₃	20700	20500	1.0	20	X145185 - X1J0423-01	04-Nov-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO ₃	<1.0	<1.0	UDL	20	X145069 - X1J0402-01	03-Nov-21	
SM 2320 B	Bicarbonate	mg/L as CaCO ₃	<1.0	<1.0	UDL	20	X145069 - X1J0402-01	03-Nov-21	
SM 2320 B	Carbonate	mg/L as CaCO ₃	<1.0	<1.0	UDL	20	X145069 - X1J0402-01	03-Nov-21	
SM 2320 B	Hydroxide	mg/L as CaCO ₃	<1.0	<1.0	UDL	20	X145069 - X1J0402-01	03-Nov-21	
SM 2540 C	Total Diss. Solids	mg/L	895	903	0.9	10	X144121 - X1J0450-05	27-Oct-21	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	5.0	<RL	10	X144122 - X1J0450-05	27-Oct-21	R2B
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	UDL	10	X144122 - X1J0394-01	27-Oct-21	
SM 4500 H B	pH @21.0°C	pH Units	4.5	4.5	0.0	20	X145069 - X1J0402-01	03-Nov-21	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	mg/L	1.02	<0.0400	1.00	98.9	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Calcium	mg/L	59.9	38.8	20.0	106	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Iron	mg/L	10.2	0.231	10.0	99.6	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Magnesium	mg/L	23.4	3.92	20.0	97.6	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Phosphorus	mg/L	1.08	<0.050	1.00	108	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Potassium	mg/L	31.2	9.91	20.0	107	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.7	Sodium	mg/L	30.8	11.8	19.0	100	70 - 130	X144010 - X1J0401-01	03-Nov-21	
EPA 200.8	Arsenic	mg/L	0.0278	0.00456	0.0250	93.0	70 - 130	X144008 - X1J0388-01	03-Nov-21	
EPA 200.8	Chromium	mg/L	0.0240	<0.00150	0.0250	95.9	70 - 130	X144008 - X1J0388-01	03-Nov-21	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.42	0.424	1.00	99.2	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Aluminum	mg/L	316	327	1.00	0.30R>S	70 - 130	X144016 - X1J0425-03	04-Nov-21	M3
EPA 200.7	Barium	mg/L	1.03	0.0250	1.00	100	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Barium	mg/L	0.725	<0.0020	1.00	72.5	70 - 130	X144016 - X1J0425-03	05-Nov-21	
EPA 200.7	Beryllium	mg/L	0.906	<0.00200	1.00	90.6	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Beryllium	mg/L	1.01	0.217	1.00	79.3	70 - 130	X144016 - X1J0425-03	04-Nov-21	
EPA 200.7	Iron	mg/L	10.2	0.202	10.0	100	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Iron	mg/L	29.2	20.5	10.0	86.9	70 - 130	X144016 - X1J0425-03	04-Nov-21	
EPA 200.7	Manganese	mg/L	1.13	0.203	1.00	92.8	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Manganese	mg/L	356	360	1.00	0.30R>S	70 - 130	X144016 - X1J0425-03	05-Nov-21	D2,M4
EPA 200.7	Molybdenum	mg/L	0.943	0.0115	1.00	93.1	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Molybdenum	mg/L	0.877	<0.0080	1.00	87.7	70 - 130	X144016 - X1J0425-03	04-Nov-21	
EPA 200.7	Nickel	mg/L	0.892	<0.0100	1.00	89.2	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Nickel	mg/L	2.79	2.04	1.00	75.1	70 - 130	X144016 - X1J0425-03	04-Nov-21	
EPA 200.7	Zinc	mg/L	0.936	<0.0100	1.00	93.6	70 - 130	X144016 - X1J0416-01	04-Nov-21	
EPA 200.7	Zinc	mg/L	514	526	1.00	0.30R>S	70 - 130	X144016 - X1J0425-03	05-Nov-21	D2,M4
EPA 200.8	Antimony	mg/L	0.0255	<0.00300	0.0250	102	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Arsenic	mg/L	0.0292	0.00457	0.0250	98.4	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Cadmium	mg/L	0.154	0.137	0.0250	0.30R>S	70 - 130	X144038 - X1J0402-01	03-Nov-21	M3
EPA 200.8	Chromium	mg/L	0.0245	0.00154	0.0250	91.9	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Copper	mg/L	0.0498	0.0300	0.0250	78.9	70 - 130	X144038 - X1J0402-01	04-Nov-21	
EPA 200.8	Lead	mg/L	0.0225	<0.00300	0.0250	88.6	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Selenium	mg/L	0.0537	0.0274	0.0250	105	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Silver	mg/L	0.0206	<0.000100	0.0250	82.3	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Thallium	mg/L	0.0241	<0.00100	0.0250	96.4	70 - 130	X144038 - X1J0402-01	03-Nov-21	
EPA 200.8	Uranium	mg/L	0.0698	0.0452	0.0250	98.1	70 - 130	X144038 - X1J0402-01	03-Nov-21	



Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021

Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
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Metals (Filtered)

EPA 245.1	Mercury	mg/L	0.00108	<0.000200	0.00100	108	70 - 130	X145031 - X1J0426-03	03-Nov-21	
EPA 245.1	Mercury	mg/L	0.00103	<0.000200	0.00100	103	70 - 130	X145031 - X1J0450-05	03-Nov-21	

Classical Chemistry Parameters

ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.104	<0.0050	0.100	104	79 - 121	X144092 - X1J0387-01	27-Oct-21	
EPA 335.4	Cyanide (total)	mg/L	0.101	<0.0050	0.100	101	90 - 110	X144039 - X1J0387-01	28-Oct-21	
EPA 335.4	Cyanide (total)	mg/L	0.100	<0.0050	0.100	100	90 - 110	X144039 - X1J0402-01	28-Oct-21	
EPA 350.1	Ammonia as N	mg/L	1.02	<0.030	1.00	102	90 - 110	X145061 - X1J0387-01	03-Nov-21	
EPA 350.1	Ammonia as N	mg/L	1.06	<0.030	1.00	106	90 - 110	X145061 - X1J0402-01	03-Nov-21	
EPA 351.2	TKN	mg/L	8.15	<0.50	8.00	96.5	90 - 110	X144059 - X1J0367-01	03-Nov-21	
EPA 351.2	TKN	mg/L	8.21	<0.50	8.00	103	90 - 110	X144059 - X1J0426-02	03-Nov-21	
EPA 353.2	Nitrate+Nitrite as N	mg/L	2.14	<0.050	2.00	107	90 - 110	X144015 - X1J0334-07	27-Oct-21	
EPA 353.2	Nitrate+Nitrite as N	mg/L	2.13	<0.050	2.00	107	90 - 110	X144015 - X1J0410-01	27-Oct-21	
OIA 1677	Cyanide (WAD)	mg/L	0.102	<0.0100	0.100	101	82 - 118	X144093 - X1J0387-01	28-Oct-21	

Anions by Ion Chromatography

EPA 300.0	Chloride	mg/L	4.06	0.89	3.00	106	90 - 110	X144051 - X1J0415-01	25-Oct-21	
EPA 300.0	Chloride	mg/L	40.0	37.6	3.00	0.30R>S	90 - 110	X144051 - X1J0426-07	26-Oct-21	D2,M4
EPA 300.0	Fluoride	mg/L	1.91	<0.100	2.00	95.3	90 - 110	X144051 - X1J0415-01	25-Oct-21	
EPA 300.0	Fluoride	mg/L	2.39	0.312	2.00	104	90 - 110	X144051 - X1J0426-07	26-Oct-21	
EPA 300.0	Sulfate as SO4	mg/L	32.3	21.9	10.0	104	90 - 110	X144051 - X1J0415-01	25-Oct-21	
EPA 300.0	Sulfate as SO4	mg/L	59.2	49.8	10.0	94.1	90 - 110	X144051 - X1J0426-07	26-Oct-21	D2

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
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Metals (Total Recoverable--reportable as Total per 40 CFR 136)

EPA 200.7	Boron	mg/L	1.01	1.02	1.00	0.9	20	98.0	X144010 - X1J0401-01	
EPA 200.7	Calcium	mg/L	59.1	59.9	20.0	1.3	20	102	X144010 - X1J0401-01	
EPA 200.7	Iron	mg/L	10.1	10.2	10.0	0.8	20	98.9	X144010 - X1J0401-01	
EPA 200.7	Magnesium	mg/L	23.3	23.4	20.0	0.8	20	96.7	X144010 - X1J0401-01	
EPA 200.7	Phosphorus	mg/L	1.08	1.08	1.00	0.0	20	108	X144010 - X1J0401-01	
EPA 200.7	Potassium	mg/L	30.9	31.2	20.0	1.1	20	105	X144010 - X1J0401-01	
EPA 200.7	Sodium	mg/L	30.5	30.8	19.0	1.1	20	98.4	X144010 - X1J0401-01	
EPA 200.8	Arsenic	mg/L	0.0278	0.0278	0.0250	0.1	20	92.9	X144008 - X1J0388-01	
EPA 200.8	Chromium	mg/L	0.0237	0.0240	0.0250	1.0	20	94.9	X144008 - X1J0388-01	

Metals (Dissolved)

EPA 200.7	Aluminum	mg/L	1.32	1.42	1.00	7.0	20	89.6	X144016 - X1J0416-01	
EPA 200.7	Barium	mg/L	0.922	1.03	1.00	11.0	20	89.7	X144016 - X1J0416-01	
EPA 200.7	Beryllium	mg/L	0.878	0.906	1.00	3.1	20	87.8	X144016 - X1J0416-01	
EPA 200.7	Iron	mg/L	9.96	10.2	10.0	2.4	20	97.6	X144016 - X1J0416-01	
EPA 200.7	Manganese	mg/L	1.12	1.13	1.00	0.9	20	91.8	X144016 - X1J0416-01	
EPA 200.7	Molybdenum	mg/L	0.951	0.943	1.00	0.9	20	94.0	X144016 - X1J0416-01	
EPA 200.7	Nickel	mg/L	0.907	0.892	1.00	1.7	20	90.7	X144016 - X1J0416-01	
EPA 200.7	Zinc	mg/L	0.953	0.936	1.00	1.8	20	95.3	X144016 - X1J0416-01	
EPA 200.8	Antimony	mg/L	0.0253	0.0255	0.0250	0.7	20	101	X144038 - X1J0402-01	
EPA 200.8	Arsenic	mg/L	0.0315	0.0292	0.0250	7.5	20	108	X144038 - X1J0402-01	
EPA 200.8	Cadmium	mg/L	0.161	0.154	0.0250	4.4	20	96.1	X144038 - X1J0402-01	
EPA 200.8	Chromium	mg/L	0.0270	0.0245	0.0250	9.6	20	102	X144038 - X1J0402-01	
EPA 200.8	Copper	mg/L	0.0502	0.0498	0.0250	1.0	20	80.9	X144038 - X1J0402-01	
EPA 200.8	Lead	mg/L	0.0221	0.0225	0.0250	1.8	20	87.0	X144038 - X1J0402-01	



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Kellogg, ID 83837-0929

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Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)										
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes

Metals (Dissolved) (Continued)

EPA 200.8	Selenium	mg/L	0.0593	0.0537	0.0250	10.0	20	128	X144038 - X1J0402-01	
EPA 200.8	Silver	mg/L	0.0202	0.0206	0.0250	1.7	20	80.9	X144038 - X1J0402-01	
EPA 200.8	Thallium	mg/L	0.0232	0.0241	0.0250	3.9	20	92.7	X144038 - X1J0402-01	
EPA 200.8	Uranium	mg/L	0.0715	0.0698	0.0250	2.5	20	105	X144038 - X1J0402-01	

Metals (Filtered)

EPA 245.1	Mercury	mg/L	0.00121	0.00108	0.00100	11.5	20	121	X145031 - X1J0426-03	
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Classical Chemistry Parameters

ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.106	0.104	0.100	1.9	11	106	X144092 - X1J0387-01	
EPA 335.4	Cyanide (total)	mg/L	0.0994	0.101	0.100	1.9	20	99.4	X144039 - X1J0387-01	
EPA 350.1	Ammonia as N	mg/L	1.04	1.02	1.00	1.6	20	104	X145061 - X1J0387-01	
EPA 351.2	TKN	mg/L	8.46	8.15	8.00	3.8	20	100	X144059 - X1J0367-01	
EPA 353.2	Nitrate+Nitrite as N	mg/L	2.16	2.14	2.00	0.8	20	108	X144015 - X1J0334-07	
OIA 1677	Cyanide (WAD)	mg/L	0.107	0.102	0.100	4.8	11	106	X144093 - X1J0387-01	

Anions by Ion Chromatography

EPA 300.0	Chloride	mg/L	4.01	4.06	3.00	1.2	20	104	X144051 - X1J0415-01	
EPA 300.0	Fluoride	mg/L	1.88	1.91	2.00	1.5	20	93.9	X144051 - X1J0415-01	
EPA 300.0	Sulfate as SO4	mg/L	32.1	32.3	10.0	0.5	20	102	X144051 - X1J0415-01	



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Project Name: Cripple Creek/Victor Water and Soil 2021Work Order: **X1J0423**

Reported: 05-Nov-21 16:44

Notes and Definitions

D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
E11	Sample exceeds method-specified limit for solids content.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
Q3C	SVL filtered and preserved samples.
Q5	Sample was received with inadequate preservation, but preserved by the laboratory.
R2B	RPD exceeded the laboratory acceptance limit.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

ATTACHMENT 4



Person/s Conducting Verification:

Date and Time of Verification:

Location of Verification/Task Being Undertaken:

Current weather/recent weather events:

	Assessed?	Yes	No
Seep Expression			
Is water present in collection pond? If yes , record gauge level*: _____ ft	☐	☐	☐
Does water appear normal (color, consistency, smell, etc.)?	☐	☐	☐
Is gauge functioning properly? (upright, legible, etc.)	☐	☐	☐
Seep Collection Pond			
Is pond berm height sufficient to contain water?	☐	☐	☐
Is pond containment in good condition?	☐	☐	☐
Is associated toe ditch/inlet in good condition?	☐	☐	☐
Is all water contained within pond?	☐	☐	☐
Other features			
Is access road in passable condition for LV and maintenance equipment?	☐	☐	☐
Are adjacent stormwater management features functioning properly?	☐	☐	☐
Does waste dump appear to be in good geotechnical condition? (No major erosion or sloughing)	☐	☐	☐

Notes and Observations:

Actions:

#	What	Who	When
1			
2			

*If gauge water level is above 4' – pond shall be pumped within reasonable timeframe.

*If gauge water level is above 5' or if integrity of containment is compromised – pond shall be pumped or attended to immediately.

ATTACHMENT 5

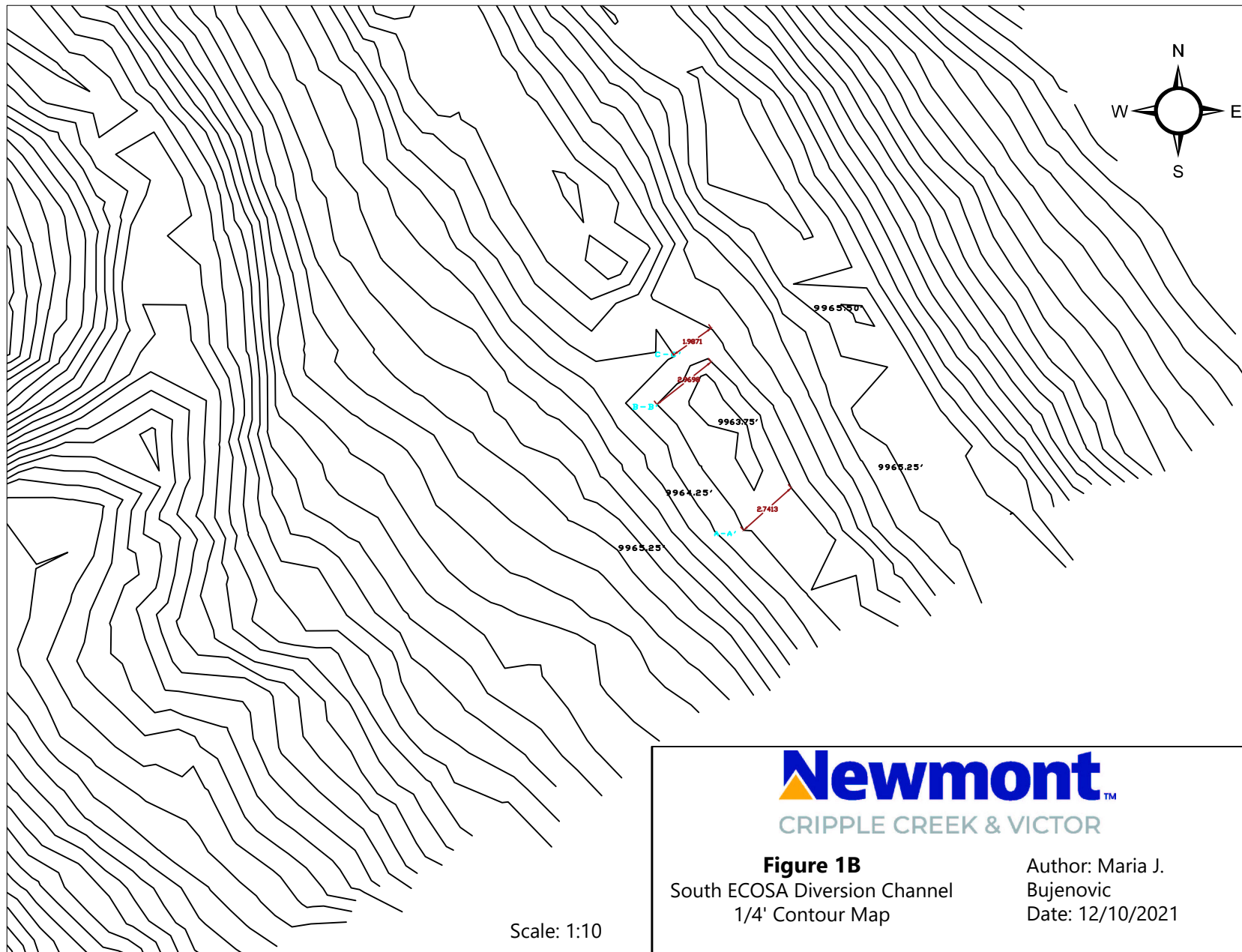


NewmontTM

CRIPPLE CREEK & VICTOR

Figure 1A
Area of Interest: South ECOSA
Diversion Channel 1/4' Contour
Map

Author: Maria J.
Bujenovic
Date: 12/13/2021
Scale: 1:600



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