

SENT VIA ELECTRONIC COMMUNICATIONS

March 17, 2022

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;
Adequacy Review Response; Technical Revision 129 (TR-129) Proposed Numeric Protection
Levels and Site Compliance Well Identification, Permit No. M-1980-244

Mr. Russell:

Cripple Creek and Victor Gold Mining Company (CC&V) received the Division of Reclamation, Mining, and Safety (DRMS) adequacy review response to Technical Revision 129 (TR-129) for Permit No. M-1980-244. CC&V has reviewed the comments issued in the letter dated March 17, 2021 from DRMS and has prepared responses for each comment based on our understanding of outcome from our meeting on 2-17-2022. The DRMS adequacy review comments (*in italics*) and the corresponding response (**in bold**) are presented below.

Proposed Numeric Protection Limits:

1. *The operator states they will be supplementing this TR with proposed numeric protection limits (NPLs) for the points of compliance. Please note that any NPLs proposed by the Operator must comply with the criteria outlined in WQCC's Regulation No. 41 – The Basic Standards of Ground Water. As an implementing agency under Regulation No. 41, the Division is exercising its discretion to review the prior setting of NPLs at the site to determine whether or not the NPLs are representative of existing water quality as of January 31, 1994, taking into account location, sampling date and quality of all available data.*

CC&V is currently doing the technical review necessary to supplement the TR with proposed NPLs for identified groundwater basins at the site, which would be applicable at the points of compliance.

2. *Until such time as the WQCC re-classifies the groundwater basins influenced by the Cresson Project or the DRMS determines it may modify NPLs, the DRMS will require CC&V meet the current NPLs and corrective actions will be required where groundwater quality consistently does not meet those NPLs.*

At this time, CC&V understands that the DRMS is reviewing the previously approved NPLs and the applicability of Regulation 41 table value standards. Historically, groundwater quality has exceeded Regulation 41 table value standards because of sources that existed prior to 1994, and these exceedances represent the status quo for the site. While DRMS is conducting its review, CC&V understands that the DRMS expects that corrective actions would be expected if groundwater data demonstrate new or increased impacts to groundwater quality that indicate a departure from the status quo of the site.

Background:

3. *The following is the Operator's June 3, 2021 response to the Division's January 28, 2021 adequacy review question #2. The original question is provided (italics) with the Operator's response in bold.*

In Amendment 13, Exhibit G it states that there are 53 active wells used for various monitoring activities at site and of those 27 wells are monitored on a quarterly basis or more frequently. It is also stated that there are 27 monitoring wells in the Cresson Project Area with an additional 29 monitoring wells in the Grassy Valley Area. The Division, using the provided maps, was only able to determine that there are 49 monitoring wells and of those only 25 (DRMS compliance monitoring wells) are monitored on a quarterly basis

- *Clarify the number of total active monitoring wells at the site on a basin-by-basin basis and explain the difference between a non-DRMS monitoring well and a DRMS compliance monitoring well.*
- *What are the non-DRMS compliance monitoring wells sampled for and how often are they sampled? Why are the sample results for these wells not provided to the Division?*

The difference between a non-DRMS monitoring well and a DRMS compliance monitoring well is that a DRMS compliance monitoring well is specified within DRMS Exhibit G as a monitoring location and a non-DRMS monitoring well is not specified within Exhibit G as a compliance monitoring location.

Non-DRMS compliance monitoring wells generally are legacy wells that were constructed under prior ownership. Non-DRMS wells which CC&V currently inspects on a regular basis (quarterly) are the active OSABH wells (OSABH-12, OSABH-14, OSABH-16, OSABH-17, and OSABH-18). In the past, various wells have been inspected intermittently as necessary to support hydrogeological and hydrogeochemical investigations. Within the past 5 years, non-DRMS wells GVMW-7A & GVMW-7B were sampled in 2016 and 2017 to investigate potential impacts from the freshwater pipeline break in Grassy Valley, and then in 2019 and 2020. Monitoring well GVMW-10 was also sampled in 2016 and 2017 in association with the fresh water pipeline break. Monitoring well GVMW-6A was sampled in 2019-2020, monitoring well GVMW-23A was sounded to measure groundwater elevation and field parameters once in 2017, and monitoring well WCMW-2-65 was sampled twice (2017 & 2020). When these wells

have been sampled, the water has been analyzed for the same analytical suite as DRMS compliance wells.

Analytical water quality data for samples from the DRMS compliance wells are included within quarterly data submissions, however, data for non-DRMS monitoring wells has not been reported to the Division as they are not defined as compliance monitoring locations in Exhibit G.

Based on our most recent review of the basins, CC&V has a total of 56 active monitoring wells installed at the mine site, of which 25 are currently defined as DRMS compliance monitoring wells within Exhibit G, and 8 are grouted vibrating wire piezometers used to measure groundwater levels only. Breaking these down on a basin-by-basin basis generates the following table:

Basin	DRMS Compliance Wells	Non-DRMS Monitoring Wells	Vibrating Wire Piezometers
Grassy Valley	GVMW-8A GVMW-8B GVMW-22A GVMW-22B GVMW-25	GVMW-4A, GVMW-4B GVMW-6A GVMW-7A, GVMW-7B GVMW-10 GVMW-15A, GVMW-15B GVMW-15C, GVMW-21A GVMW-23A, GVMW-23B GVMW-24A, GVMW-24B OSABH-12 OSABH-14 OSABH-16 OSABH-17 OSABH-18	GVPZ1 GVPZ2 GVPZ3 GVPZ4
Vindicator Valley	VIN-2A VIN-2B		CVWP-1 VWVP-1 BVWP-1
Wilson Creek	WCMW-3-134 WCMW-6-234	WCMW-2-65	
Arequa Gulch	CRMW-3A, CRMW-3B CRMW-3C CRMW-5A, CRMW-5B CRMW-5C, CRMW-5D ESPMW-1	GRMW-1A GRMW-2A GRMW-3A	
Rosebud Gulch	SGMW-5 (dry) SGMW-6A (dry) SGMW-6B SGMW-7A (dry) SGMW-7B (dry)		
Poverty Gulch	PGMW-2 (dry) PGMW-3 PGMW-4 (dry)		GHC 15-1

Grassy Valley

Grassy Valley contains 24 monitoring wells, and 4 piezometers (GVPZ1, GVPZ2, GVPZ3, & GVPZ4). Of the 24 monitoring wells, 5 are identified in Exhibit G as DRMS compliance monitoring wells (GVMW-8A, GVMW-8B, GVMW-22A, GVMW-22B, and GVMW-25). OSABH monitoring wells are inspected on a quarterly basis and sampled if there is sufficient water to collect a sample. Other identified monitoring wells within Grassy Valley are inspected and sampled on an infrequent basis, with the previous samples being collected at the times specified in this document above.

Vindicator Valley

Vindicator Valley contains 2 monitoring wells and 3 piezometers (CVWP-1, VVWP-1, & BVWP-1). All monitoring wells within Vindicator Valley are identified as DRMS compliance monitoring wells.

Wilson Creek

Wilson Creek contains 3 monitoring wells. Two monitoring wells within Wilson Creek are identified as DRMS compliance monitoring wells (WCMW-3-134 & WCMW-6-234), and one monitoring well (WCMW-2-65) is a non-compliance monitoring well.

Arequa Gulch

Arequa Gulch contains 11 monitoring wells. Eight monitoring wells within Arequa Gulch are identified as DRMS compliance monitoring wells (ESMPW-1, CRMW-3A, CRMW-3B, CRMW-3C, CRMW-5A, CRMW-5B, CRMW-5C, and CRMW-5D), and three monitoring wells (GRMW-1A, GRMW-2A, and GRMW-3A) are non-compliance monitoring wells.

Squaw Gulch (Rosebud Gulch)

Rosebud Gulch contains 5 monitoring wells. All of the monitoring wells within Rosebud are identified as DRMS compliance monitoring wells (SGMW-5, SGMW-6A, SGMW-6B, SGMW-7A, and SGMW-7B).

Poverty Gulch

Poverty Gulch contains 3 monitoring wells and one piezometer (GHC 15-1). All of the monitoring wells within Poverty Gulch are identified as DRMS compliance monitoring wells (PGMW-2, PGMW-3, and PGMW-4).

4. *The following is the Operator's June 3, 2021 response to the Division's January 28, 2021 adequacy review question #3. The original question is provided (italics) with the Operator's response in bold.*

It does not appear, from review of the permit record, that any of the DRMS compliance monitoring locations were identified as specific points of compliance to satisfy the condition of Rule 3.7.1 The Division requests the operator propose a specific point of compliance for each basin.

"Per conversation with DRMS on May 12, 2021, CC&V commits to submitting a Technical Revision by July 31, 2021, defining CC&V's Points of Compliance in a manner consistent with the conditions of

Rule 3.1.7(6). The TR will include an update to Exhibit G, applicable maps, and CC&V's Quality Assurance Project Plan (QAPP)."

As discussed, and agreed to with the Division on February 17, 2022, CC&V commits to update Exhibit G, applicable maps, and CC&V's Quality Assurance Project Plan (QAPP) with applicable changes when this technical revision is approved to reduce duplicative efforts. Proposed Points of Compliance for DRMS Permit M-1980-244 are addressed in this document below.

Points of Compliance:

5. *Please provide potentiometric maps of each basin that demonstrate the proposed points of compliance are hydrologically down-gradient, and provide basin information on the groundwater flow direction.*

Within Arequa Gulch, and Wilson Creek basins there are sufficient wells and groundwater elevation data to generate a groundwater gradient map (two locations recording groundwater elevation data). Gradient maps for the drainages (where possible) have been created and are presented within Appendix A. Within Grassy Valley there are sufficient wells and groundwater elevation data to generate a potentiometric surface map which is included within Appendix A. Within the Rosebud Gulch and Poverty Gulch, and Vindicator Valley basins there are insufficient data to generate a potentiometric map or gradient as there is only one location in Poverty Gulch (PGMW-3) where groundwater elevation measurements have been made, only one location within Rosebud Gulch (SGMW-6B) where consistent groundwater elevation measurements have been made, and one location within Vindicator Valley where groundwater elevation measurements have been made (VIN-2A & VIN-2B are effectively at the same location).

6. *Groundwater at the site has been separated into a shallow, deep and deeper water bearing intervals, e.g., CRMW-5A, -5B, -5C, and -5D. All intervals need to have a point of compliance identified within each basin. Identify the additional points of compliance for Arequa Gulch, Grassy Valley, Vindicator Valley and Wilson Creek. At this time, Basins that do not currently have multiple groundwater intervals identified additional points of compliance do not to be identified.*

As discussed with the Division, CC&V has updated the proposed Points of Compliance well table (presented in the table below) for the Cripple Creek & Victor mine site DRMS permit No. M-1980-244, to include multiple POCs in basins with existing wells at multiple depth intervals.

Basin	Points of Compliance
Grassy Valley	GVMW-22A, GVMW-22B
Vindicator Valley	VIN-2A, VIN-2B
Wilson Creek	WCMW-6-234
Arequa Gulch	CRMW-5A, CRMW-5B, CRMW-5C, CRMW-5D
Squaw Gulch	SGMW-8 (proposed new well)
Poverty Gulch	PGMW-5 (proposed new well)

7. *Additional clarification is needed. In the potential points of compliance table, SGMW-8 is listed and in the following paragraph SGMW-8A is referenced, are these the same well? Does the Operator anticipate there may be more than one well installed during the test drilling program?*

The monitoring well listed within the proposed table (SGMW-8), and the well referenced within the following paragraph (SGMW-8A) in the submitted response are the same well, a typographic error was made in writing the response. As discussed with the Division on February 17, 2022, multiple additional wells are not anticipated to be drilled within Rosebud Gulch to construct the required Point of Compliance, as described in more detail below.

8. *Additional information is requested to describe what the test drilling program will entail to determine proper new well locations. Please indicate what criteria will be used to determine appropriate locations and how that is consistent with the request for a potentiometric map in Comment 5.*

It is anticipated that CC&V will use a standard test hole program to determine the location and number of wells necessary for the Squaw Gulch point(s) of compliance. For this process, an initial location for the point of compliance monitoring wells will be chosen, the available geology data will be examined, and an initial borehole will be drilled and constructed. Depending upon the hydrogeological conditions encountered (yield, depth to water, saturated thickness, etc.) a well may or may not be completed, and the necessity of multiple wells at the location will be evaluated. It is currently anticipated that the point(s) of compliance for Rosebud Gulch will follow previous direction provided by DRMS, where the well will be drilled to bedrock with the screened interval of the well at the base of the alluvial sequence above the encountered bedrock. This is consistent with Comment 5 above as it is necessary to have 2 data points to generate a gradient, and 3 points to generate a potentiometric surface. There is currently only 1 sampling location where groundwater levels can be consistently measured (the others are dry); the construction of an additional monitoring location will provide supplemental data to evaluate the hydrologic gradient within Squaw Gulch.

As discussed with DRMS on 2-17-2022 CC&V is in the process of reviewing all available information to assess and propose Numeric Protection Levels (NPL's) should it be deemed appropriate, and will provide DRMS with updated exhibits, maps, and documents once this technical revision is approved to update the permit documentation. Should the Division required further information please do not hesitate to contact Ronald Parratt at 719-851-4019 or ronald.parratt@Newmont.com or myself at 719-851-4042 or justin.raglin@newmont.com.

Sincerely,



Justin Raglin
Sustainability and External Relations Manager
Cripple Creek & Victor Mine

EC: T. Cazier – DRMS
M. Cunningham – DRMS
E. Russell – DRMS
P. Lennberg
D. Williams – Teller County
J. Raglin – CC&V
R. Parratt – CC&V
K. Blake - CC&V
Encl.
File

Attachment A



Newmont
CRIPPLE CREEK & VICTOR

Cripple Creek & Victor S&ER

CC&V Wilson Creek Groundwater Contours

Author: R. Parratt

Date: 03/2022

1 inch = 500 feet

Figure 1

File: Wilson Creek Contours

Source: E
USGS, A



