



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

March 13, 2024

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

Re: Additional Surface Water Monitoring Locations Required, Grassy Valley Surface Water Monitoring; Cresson Project; Permit No. M-1980-244

Dear Ms. Smith:

On September 30, 2022, the Division of Reclamation, Mining and Safety (Division/DRMS) issued its letter of Corrective Actions Required in response to August 2022 sampling data for GVMW-25. In corrective action item 2a the Division required the Operator to establish a surface water monitoring location downgradient of GVMW-25 as close to the current permit boundary as possible, at a location that routinely has water available to sample. On October 27, 2022 the Operator submitted TR-132, later approved on March 10, 2023, which updated the ECOSA monitoring plan and established GV-06.

The Operator began monthly sampling of GV-06 on October 4, 2022 and provided the Division the first sample results on October 24, 2022. From November 2022 through May 2023 attempts to sample GV-06 were unsuccessful, due to snow and frozen conditions. Samples were collected from June until November 2023. Results from GV-06 for total arsenic were consistently below the laboratory reporting limit until November 2023 when the result was 0.00113 mg/L which exceeded the Regulation – 32 Classifications and Numeric Standards for Arkansas River Basin (Reg. 32) chronic stream standard of 0.00002 mg/L. Also, during the same month of the total arsenic exceedance both total and dissolved iron concentrations were the highest seen at GV-06 which both exceeded Reg. 32 chronic stream standards. In response to this exceedance, the Division required the Operator to initiate weekly sampling of GV-06 on February 9, 2024 with the first weekly sampling attempt occurring on February 12th. To date a sample has not been collected due to snow and frozen conditions at the location.

The Division is concerned that the continued discharge of ARD from the ECOSA to the shallow groundwater system is migrating down Grassy Valley through undefined pathways and expressing to surface water near or below GV-06.

As part of AM-11 filed in December 2015, Adrian Brown submitted a Hydrogeochemistry Evaluation for the site. In this evaluation the principle surface water outflow from the diatreme occurs within Grassy Valley. The flow in Grassy Valley was monitored using six surface water (flume) locations (Plate 7,



attached); GV-01, GV-02, GV-03, GV-04, GV-4.5 and GV-05. It appears from this plate that the current GV-06 location matches the location of GV-04 however, the Operator should verify if this is the case or not.

To ensure compliance with Rule 3.1.5(10), 3.1.5(11), and 3.1.6(1) and based on the increase in total arsenic and iron (total and dissolved) concentrations at GV-06, the Division is expanding the weekly surface water monitoring requirements to include locations GV-04 (unless GV-06 and GV-04 are one in the same), GV-4.5, and GV-05 surface monitoring flumes from the AM-11 documents, until further notice. Samples will be analyzed and compared with the appropriate Reg. 32 stream standards. Along with the results of the first sampling attempt, the Operator will provide the coordinates of each location in decimal degrees. After weekly samples for all four locations have been obtained and the results reviewed the Division may reduce the sampling frequency.

The Operator will provide the Division all historic analytical results for GV-04, GV-4.5, and GV-05 within 30 days of the date on this letter, by **April 12, 2024**.

The Division reserves the right to further supplement this document with additional items and details as necessary.

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.

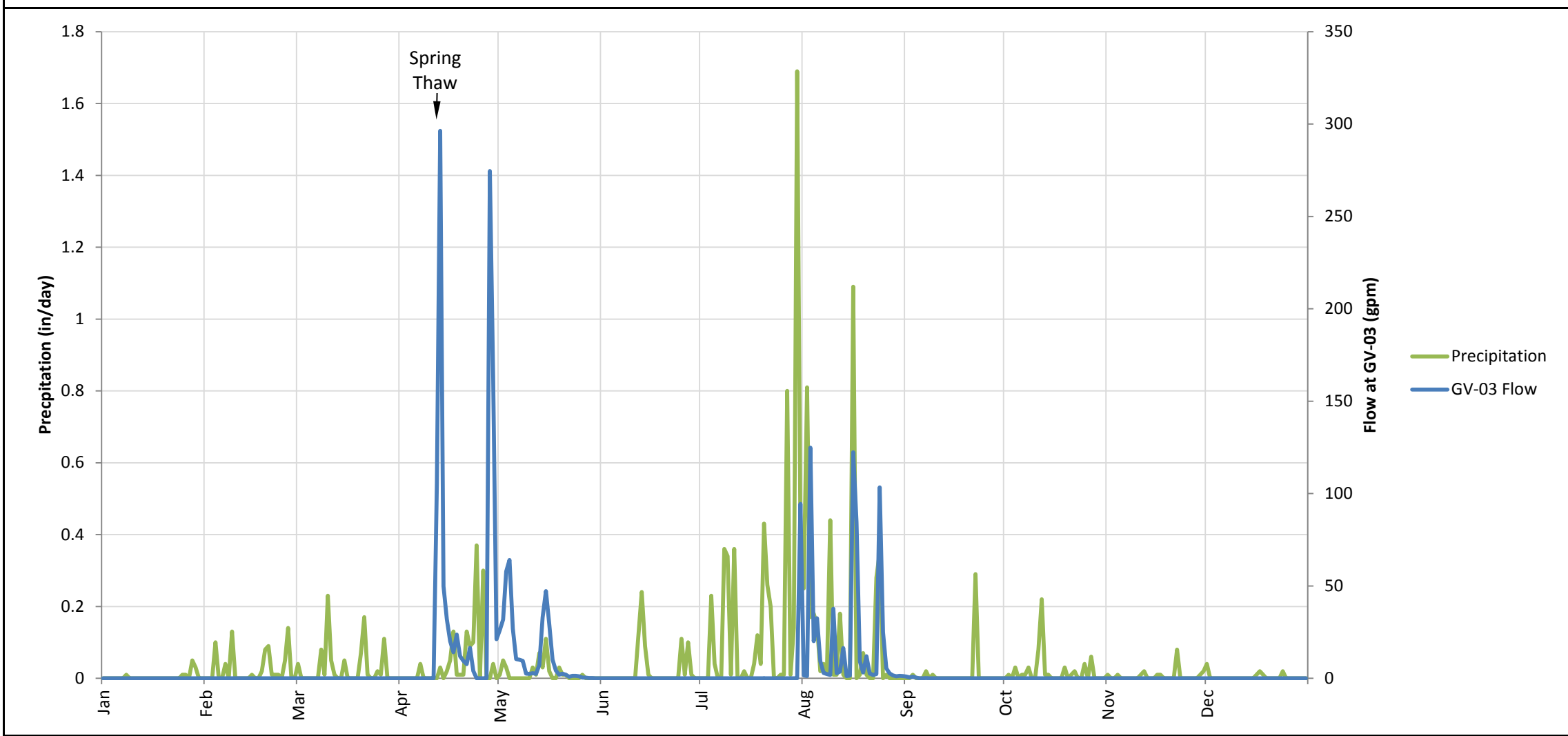
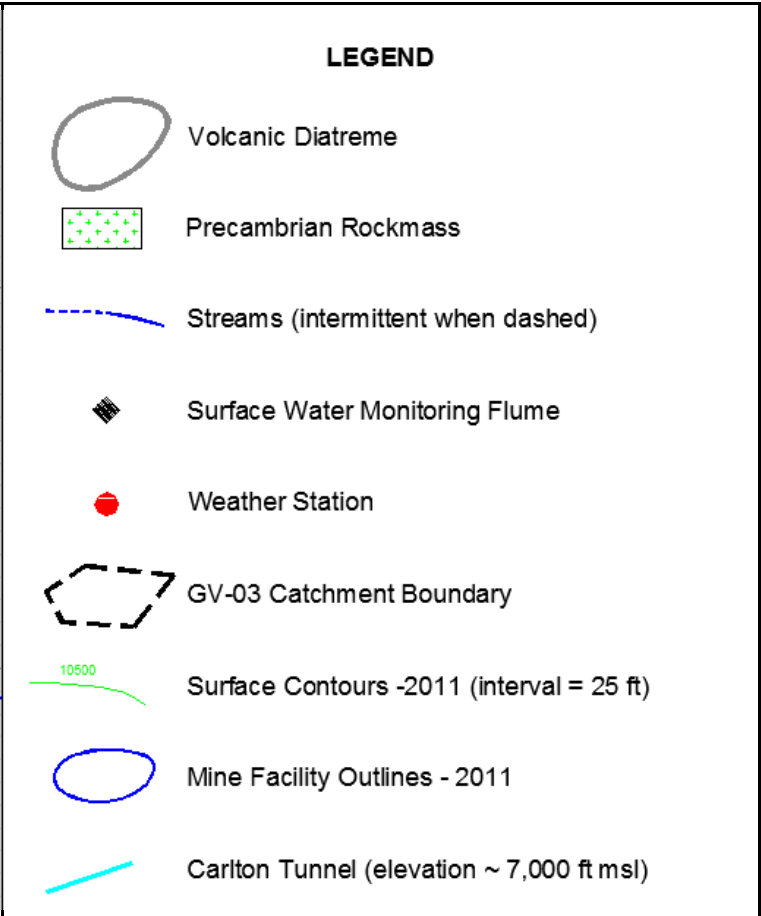
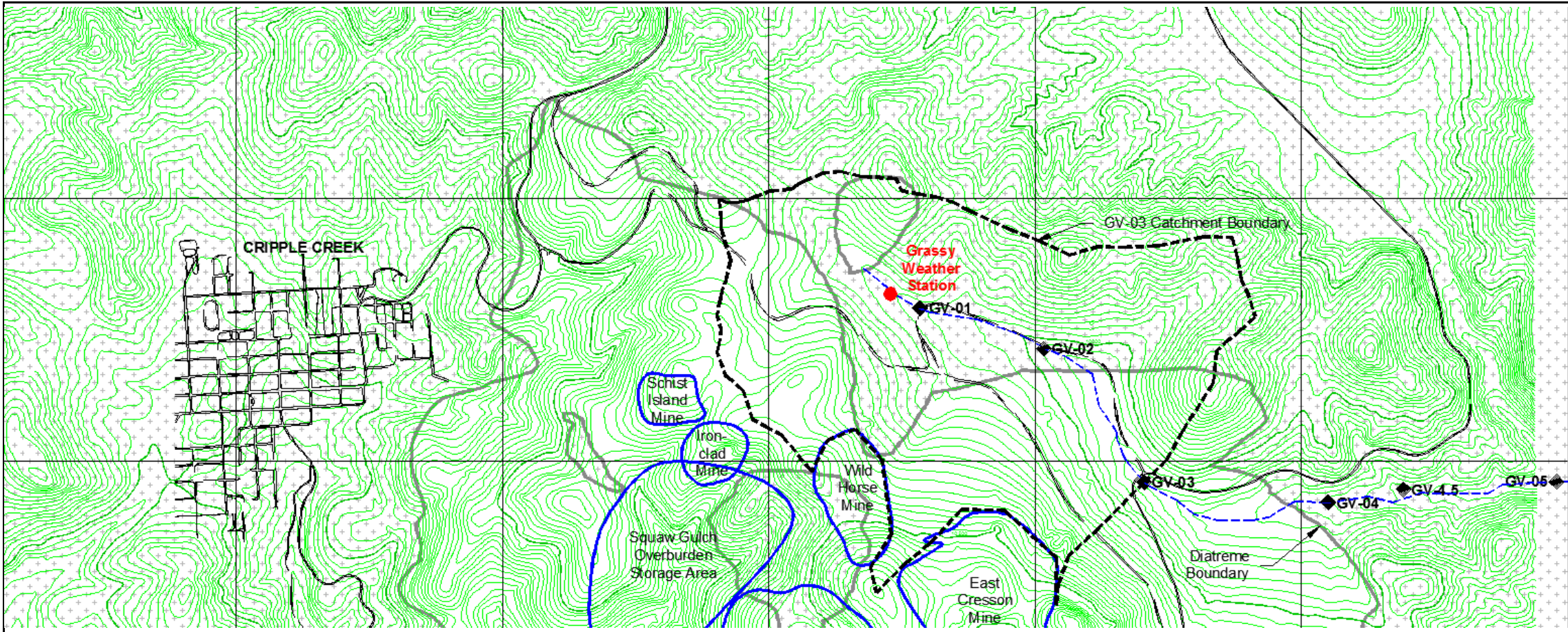
Sincerely,




Patrick Lennberg
Environmental Protection Specialist

cc: Katie Blake, CC&V
Anthony Matarrese, CC&V
Johnna Gonzalez, CC&V
Elliott Russell, DRMS
Amy Eschberger, DRMS
Hunter Ridely, DRMS
Nikie Gagnon, DRMS
Lucas West, DRMS

Attachments



EVALUATION OF GRASSY VALLEY RUNOFF			
Basin Yield			
Catchment area	1124	acres	
Runoff	9.6	acre feet	
Basin yield	0.103	inches	
Precipitation Yield			
Catchment area	1124	acres	
Precipitation (Grassy)	14.97	inches	
Volume of precipitation	1402	acre feet	
Runoff	9.6	acre feet	
Precipitation yield	0.69%		
Spring Thaw			
Catchment area	1124	acres	
Spring thaw runoff	2.6	acre feet	
Spring thaw yield	0.028	inches	
NOTES			
1. Precipitation at Grassy Valley station, daily totals for 2010.			
2. Flow at GV-03 for 2010 measured with a Parshall Flume and Hobo water pressure transducer.			
3. Flow between 4/24 and 4/27 not recorded; estimated using precipitation and temperature.			
4. Flow before 4/9 and after 10/15 zero, based on temperature being below 0°C and frozen flume well.			
 Scale: 1" = 2,500' (5000' grid)			
Drawn: A.Brown			
Date: 2015-12-14			
CC&V Amendment 11 Hydrogeochemistry			
PLATE 7			
GRASSY VALLEY YIELD			