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CRIPPLE CREEK & VICTOR PO Box 191 100 N. 3<sup>rd</sup> Street Victor CO 80860

February 16, 2024

#### 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: <u>Permit No. M-1980-244; Cripple Creek & Victor Gold Mining Company; Cresson Project;</u> <u>Technical Revision 140 – Third Adequacy Review Response</u>

Dear Mr. Russell:

On February 6, 2024, Newmont Corporation's Cripple Creek and Victor Gold Mining Company (CC&V) received the Division of Reclamation, Mining and Safety (DRMS) Third Adequacy Review of Technical Revision (TR) 140 to Permit M-1980-244, regarding the VLF2, Phase 3 Stage A.2 Record of Construction Report. Below are DRMS comments in bold and CC&V's responses in *italics*.

1) <u>General Quality Control</u>: The response was adequate.

#### 2) <u>Leak Detection Survey Drawings</u>: The response was not adequate.

Part (C) of this comment was not addressed in the response. For reference, this is part (C):

Given the additional bends shown on the survey drawings, the individual segments are longer than indicated in the table; resulting in flatter slopes than represented, or calculated by the Division and presented in our January 17th review letter.

In the last paragraph of the January 26<sup>th</sup> letter, Comment #2, the Division stated the following needed to be address with respect to part (C):

All horizontal bends must be accounted for, and each of those bends must have a top of pipe elevation to accurately assess the as-constructed grade at which these leak detection pipes were installed.

Please see the three examples in Attachment A depicting the unsupported horizontal bends presented in the Leak Detection Trench As-Built drawings. Based on the information received to date there is either additional survey data that has not been reported but supports the existence of the additional horizontal bends in the Record Drawings; or the Record Drawings do not reflect the as-constructed conditions of the Leak Detection System (LDS) piping. Please explain the discrepancy and make the appropriate changes (either submit additional survey data and/or revise the record drawings) and resubmit to the Division.



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The original drawing was generated to provide a plan view layout and was not intended to display elevation information on all the bends at frequencies shorter than 100 feet. The revised drawings are enclosed as Attachment 1 &2.

3) Leak Detection Plan & Profile Drawings: The response was not adequate.

The Division asked for the slope indicator labels to be moved to the profile view as is standard civil engineering practice. Instead, the font size of the slope indicators in the plan view was slightly increased but is still obscured by crisscrossing topography contours. The Division also asked for segments (*i.e., beginning and ending stations; STA X+XX to STA Y+YY*) not meeting the 2% slope criteria and why (e.g., *was constructed at a ZZ% slope due to \_\_\_\_\_\_\_\_\_field conditions*) also be provided in the profile view. None of this information was moved to or expanded upon in the profile view. As such, only incomplete and illegible information has been provided to explain why deviations to the approved drawings and specifications were allowed by the approving engineer. This required information is for the public record. As such it must be thorough and legible. Therefore, as a condition to approving TR-140, the Division is now requiring standard civil engineering practice be followed on Figures 5 and 6 cited in the Deviations. This includes the following:

- Slope indicators must be shown in the Profile Views on Figures 5 and 6.
- Beginning and ending stations where the 2% minimum slope was not adhered to, must be identified in the Profile View on Figures 5 and 6.
- The rationale for these segments of the Leak Detection System needing not meet approved drawings and specifications must clearly be directed at these specific segments either by a note with a leader specifying the beginning and ending stations or a note in the Profile View over the specific segments explaining why the approved grades were not met.

Enclosed as Attachments 3-5, Figures 5, 6a and 6b have been revised to include the location of the survey points, slopes, and an explanation for the reason why the minimum slope of less than 2% was allowed with the corresponding stationing in the profile view as requested.

- 4) Drain Cover Fill Isopach Drawings 1 and 2: The response was adequate.
- 5) <u>Additional Comment</u>: Based on the meeting between the Division and CC&V held online this morning, additional commitments are necessary to avoid future concerns and comments related to the LDS maximum survey spacing and minimum pipe slopes. As stated by the Division during the meeting, it is imperative the LDS be constructed as close as practical to the approved design in order to ensure the utmost efficiency in detecting potential leaks in the liner system in the most expedient manner.

Pursuant specifically to Rule 7.3.2(2), the Division's mandate is to "confirm that the facility was constructed in accordance with the approved design plan." The Division



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strives to ensure Permittees and Operators are aware requirements and commitments arrived at through the review processes that may extend or clarify design requirements stemming from technical revisions and amendments to a permit.

However, during today's meeting it became clear that some of these clarifications to the approved design and subsequent commitments from CC&V, were not carried over the appropriate documentation referenced during construction. We present the following excerpts from recent reviews related to the LDS construction as evidence of commitments made by CC&V that must be adhered to in future construction:

• When agreeing to adhere to 100-foot maximum survey segments, this part of the LDS was already constructed and surveyed, as it is a part of the same LDS approved in Phase 2B Part 1. <u>The 100-foot maximum survey segments will be adhered to in all future LDS</u> <u>constructions</u>. {reference Newmont Response to Comment #3c, Technical Revision 125 PAR Response – VLF 2 Phase 2B, Part 2 Record of Construction – Construction Quality Assurance Report dated January 19, 2021}

Noted.

Although we believe a minimum slope of 1% on the leak detection trench is adequate, <u>the</u> <u>minimum slope on the leak detection trench has been increased to 2%</u> for additional conservatism to address the concerns around potential settlement. The updated design is provided in Attachment 13.
{reference Newmont Response to Comment #77, Preliminary Adequacy Review,

Amendment Application (AM-13) Response to Comments dated August 3, 2020}

Noted.

• Per CC&V's discussion with the Division during the November 24, 2020 teleconference to discuss additional input from the Division, the Division requested that CC&V re-open comment number 77, though the Division accepted the initial response to Comment 77 in the first round of adequacy review comments. The Division's follow-up comment request was for CC&V and the EoR to verify that the 2% LDS grade included in the design would maintain positive flow if modeled settlement occurred after the VLF was constructed and loaded with ore.

As such, CC&V provides the following response:

With a minimum 2% constructed flowline slope of the leak detection trench, the leak detection trench will maintain a slope that will provide positive drainage towards the sump after the leach pad has been loaded with ore.

*{reference Newmont Response to Comment #77, Second Adequacy Review and Supplemental Second Adequacy Review, Amendment Application (AM-13) Response to Comments dated December 4, 2020}* 



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#### Noted.

During the meeting, CC&V and the Division agreed these commitments need to be incorporated into the design drawings and project specifications in order to eliminate potential future problems in missing these commitments. CC&V stated they had begun redesigning future Phase 3 LDS pipe layouts such that they would be installed at a nominal three percent grade, with an intended goal of obtaining a minimum of a two percent slope even where site conditions make it difficult to achieve the current two percent slopes referenced in the excerpts above. The Division agreed a three percent nominal slope would go a long way in precluding future construction issues and stated a need to establish an absolute minimum grade for any segment of the LDS. A half percent grade was offered during the meeting, although the Division would prefer a one percent grade as an ideal absolute minimum, and then only where unanticipated field conditions preclude the establishment of the approved two percent slope. As the three percent nominal grade is a significant change to the approved design, the Division stated a Technical Revision would be required to avoid the new design being a deviation to the approved two percent design. Similarly, it was agreed the criteria for surveying the as-constructed LDS alignment needs to be incorporated into the project specifications either through a technical revision or the upcoming amendment (AM-14). In summary, the following items to be addressed in a revision (TR, or AM-14).

#### LDS As-Constructed Survey Criteria (to be added to the Project Specifications):

i. Maximum distance between survey points is 100 feet.

This will be addressed in AM-14, VLF2 Phase 3B and 3C.

ii. Additional intermediate survey points as necessary to reflect horizontal and vertical bends.

*This will be addressed in AM-14. Survey of the bends will be addressed in the certification.* 

## <u>LDS Constructed slope</u> (to be addressed in Design Drawings and/or design reports specific to each liner system phase):

i. Nominal overall design slope of three percent.

The approved design for the LDS for Phase 3B and 3C is a minimum of two percent. This is based on settlement calculations presented in the design report dated July 2020 and approved by DRMS on December 23, 2020. CC&V intends to meet the minimum slope requirement by issuing construction drawings at a steeper slope as an added control. CC&V does not believe this merits a Technical Revision as it meets the approved design intent and remains committed to working with DRMS to determine necessary processes for approval once the plan has been finalized.

ii. Absolute minimum acceptable as-constructed slope for any LDS pipe segment (The Division recommends 1.0%, but no less than 0.5%).



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*CC&V* concurs with the Division of acceptable minimum slope of 1% except in isolated conditions where 0.5% is acceptable if foundation conditions do not jeopardize the design intent based on the opinion of the Engineer.

#### iii. General acceptable criteria under which achieving a slope less than the heretofore accepted 2% pipe slope (This should be reflected in design drawing notes for all LDS plans and detail drawings)

When segments of the Leak Detection Trench slope are constructed below the minimum design slope, the engineer will evaluate the conditions encountered during the construction of the trench (i.e. bedrock).

The criteria listed above will be added to the Issued for Construction Drawings to clarify expectations for the contractor for already approved VLF2 Phase 3. The notes will be included in the Issued for Permit Drawings for Amendment 14.

# iv. The absolute minimum acceptable as-constructed slope for any LDS pipe segment should reflect final leach pad build out configuration(s) where the maximum expected differential settlement impacting the LDS is expected.

The absolute acceptable minimum as-built slope is 0.5%.

Should you require further information, please do not hesitate to contact Johnna Gonzalez at (719)851-4190, Johnna.Gonzalez@Newmont.com, or myself at (719) 237-3442 or Katie.Blake@newmont.com.

Sincerely,

DocuSigned by: Katie Blake

Katie Blake Sustainability & External Relations Manager Cripple Creek & Victor Gold Mining Co

EC:

M. Cunningham – DRMS T. Cazier - DRMS J. McBryde – Teller County J. Gonzalez – CC&V K. Blake – CC&V N. Townley – CC&V

Attachment 1: 03 Leak Detection Trench 1 – As-built Exhibit\_2023 Attachment 2: 04 Leak Detection Trench 2 – As-built Exhibit 2023 Attachment 3: Figure 5 - Leak Detection Trench 1 Attachment 4: 6a Leak Detection Trench 2



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Attachment 5: 6b - Leak Detection Trench 2

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Point Table						
Point #	Northing	Easting	Elevation	Description		
1	58892.424	35778.383	10028.842	PIPET		
2	58895.705	35805.785	10028.193	PIPET		
3	58897.287	35825.477	10027.837	PIPET		
4	58894.531	35862.659	10027.016	PIPET		
5	58891.239	35888.440	10026.534	PIPET		
6	58887.358	35919.471	10026.015	PIPET		
7	58893.341	35959.957	10025.027	PIPET		
8	58911.915	35964.311	10024.188	PIPET		
9	58927.928	35962.579	10023.629	PIPET		
10	58947.705	35963.237	10023.064	PIPET		
11	58972.148	35973.914	10022.587	PIPET		
12	58993.479	35977.247	10022.062	PIPET		
13	59017.314	35975.778	10021.549	PIPET		
14	59041.302	35976.677	10021.416	PIPET		
15	59045.915	35997.438	10020.841	PIPET		
16	59048.927	36016.941	10020.372	PIPET		
17	59053.453	36038.648	10019.985	PIPET		
18	59057.529	36083.899	10019.428	PIPET		
19	59054.439	36106.576	10018.736	PIPET		
20	59052.109	36128.027	10017.906	PIPET		
21	59051.997	36150.575	10017.459	PIPET		
22	59053.110	36163.910	10017.246	PIPET		
23	59062.441	36190.312	10016.111	PIPET		
24	59090.894	36199.334	10015.451	PIPET		
25	59118.493	36182.782	10014.740	PIPET		
26	59145.993	36150.782	10013.746	PIPET		
27	59172.567	36120.737	10012.518	PIPET		
28	59230.353	36087.071	10012.145	PIPET		
29	59243.994	36080.964	10011.380	PIPET		
30	59296.511	36063.020	10010.543	PIPET		
31	59334.956	36050.137	10009.974	PIPET		
32	59375.744	36039.954	10009.074	PIPET		
33	59415.361	36030.900	10008.063	PIPET		
34	59453.881	36021.186	10007.335	PIPET		
35	59480.007	36010.134	10006.582	PIPET		
36	59507.998	35991.240	10005.873	PIPET		
37	59564.822	35934.968	10004.569	PIPET		
38	59591.139	35904.266	10003.500	PIPET		
39	59618.185	35870.711	10002.802	PIPET		
40	59642.940	35841.407	10001.814	PIPET		
41	59666.186	35814.178	10000.890	PIPET		
42	59725.518	35747.701	9999.896	PIPET		
43	59759.076	35727.057	9999.088	PIPET		
44	59772.062	35719.985	9998.796	PIPET		



## **GENERAL NOTES:**

- 1. DEFINITION: CERTIFY CERTIFICATION A PROFESSIONAL'S OPINION BASED ON HIS OR HER OBSERVATION OF CONDITIONS, KNOWLEDGE, INFORMATION AND BELIEFS. IT IS EXPRESSLY



CONSTRUCTORS 9100 E Panorama Drive, Ste 300 Englewood, CO 80112 Tele: (303) 741-6116 www.jhlconstructors.com

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<u>SURVEYOR'S STATEME</u>NT

I, KARL E. CHESLEY, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, BASIS OF MY KNOWLEDGE, INFORMATION AND BELIEF, DO HEREBY STATE THAT AS A RESULT OF A AS-BUILT SURVEY MADE UNDER MY RESPONSIBLE CHARGE IN AUGUST 2023, TO NORMAL STANDARDS OF CARE OF A PROFESSIONAL LAND SURVEYOR PRACTICING IN THE STATE OF COLORADO.

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KARL E. CHESLEY, P.L.S. 37054 FOR AND BEHALF OF JHL CONSTRUCTORS, INC.

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<u> </u>		Point Tal	$\frown$				$\wedge$	Point Tal		$\wedge$
Point #	Northing	Easting	Elevation	Description		Point #	Northing	Easting	Elevation	Descriptio
201	59189.974	36898.132	10143.489	PIPET		251	58034.776	36600.090	10180.141	PIPET
202	59181.917	36899.072	10143.880	PIPET		252	58010.296	36619.746	10180.672	PIPET
203	59174.216	36901.187	10144.399	PIPET	-	253	57985.399	36640.358	10181.257	PIPET
204	59149.787	36906.255	10145.031	PIPET	-	254	57971.098	36656.994	10181.720	PIPET
205	59102.499	36919.278	10145.415	PIPET	-	255	57959.541	36679.917	10182.225	PIPET
206	59088.231	36922.994	10145.947	PIPET	-	256	57950.090	36704.639	10182.885	PIPET
207	59072.193	36931.305	10146.481	PIPET	-	257	57954.004	36731.099	10183.373	PIPET
208	59050.318	36944.107	10146.905	PIPET	-	258	57962.784	36756.319	10183.890	PIPET
209	59034.585	36952.398	10147.207	PIPET	-	259	57972.263	36781.270	10184.350	PIPET
210	58991.077	36966.523	10147.846	PIPET	-	260	57980.989	36807.589	10184.710	PIPET
211	58987.428	36967.781	10148.140	PIPET	-	261	57990.838	36838.054	10185.307	PIPET
212	58964.269	36974.982	10148.497	PIPET	-	262	57997.561	36863.679	10185.727	PIPET
213	58935.224	36984.772	10149.083	PIPET	-	263	57994.892	36898.289	10186.822	PIPET
214	58909.480	36998.192	10150.013	PIPET	-	264	57985.327	36927.956	10187.488	PIPET
215	58884.937	37006.563	10150.531	PIPET		265	57960.645	36946.976	10188.026	PIPET
216	58875.606	37008.625	10150.577	PIPET	-	266	57928.239	36959.512	10188.678	PIPET
217	58851.144	37012.534	10150.985	PIPET		267	57894.616	36964.490	10189.130	PIPET
218	58822.642	37008.657	10151.632	PIPET		268	57852.856	36956.998	10189.953	PIPET
219	58795.426	37000.785	10152.262	PIPET	-	269	57809.590	36937.779	10190.583	PIPET
220	58777.656	36993.145	10153.125	PIPET		270	57768.715	36916.945	10191.674	PIPET
221	58764.232	36980.890	10153.999	PIPET		271	57736.085	36900.688	10192.381	PIPET
222	58748.388	36960.339	10154.264	PIPET		272	57696.105	36888.951	10193.194	PIPET
223	58733.905	36939.660	10154.866	PIPET		273	57645.858	36879.154	10194.218	PIPET
224	58726.777	36917.607	10155.251	PIPET		274	57617.415	36873.302	10194.812	PIPET
225	58726.797	36901.266	10155.422	PIPET	-	275	57593.962	36870.790	10195.208	PIPET
226	58737.090	36875.676	10156.102	PIPET	-	276	57578.959	36868.653	10195.432	PIPET
227	58745.464	36852.718	10156.537	PIPET	-	278	58696.839	36599.381	10161.593	PIPET
228	58755.789	36821.936	10157.261	PIPET	-	279	58689.011	36572.461	10162.208	PIPET
229	58752.114	36789.999	10157.547	PIPET	-	280	58681.759	36540.248	10162.943	PIPET
230	58746.111	36762.688	10158.126	PIPET	-	281	58676.622	36519.843	10163.304	PIPET
231	58740.462	36740.096	10158.631	PIPET	-	282	58669.333	36493.682	10163.734	PIPET
232	58729.341	36702.850	10159.310	PIPET	-	283	58659.880	36463.129	10164.420	PIPET
233	58720.864	36675.893	10159.871	PIPET	-	284	58641.143	36405.369	10165.596	PIPET
234	58712.542	36649.158	10160.331	PIPET		285	58629.416	36382.455	10165.893	PIPET
235	58705.478	36626.075	10160.886	PIPET	-	286	58612.152	36361.479	10166.418	PIPET
236	58429.728	36402.612	10171.132	PIPET	-	287	58588.358	36354.146	10167.044	PIPET
237	58396.921	36406.493	10171.535	PIPET		288	58556.037	36355.011	10167.693	PIPET
238	58366.215	36408.960	10171.938	PIPET		289	58528.209	36365.744	10168.676	PIPET
239	58336.717	36411.488	10172.398	PIPET		290	58494.782	36380.897	10169.604	PIPET
240	58303.201	36415.186	10173.041	PIPET		291	58469.303	36391.852	10170.038	PIPET
241	58286.617	36421.685	10173.608	PIPET		292	58443.401	36401.586	10170.563	PIPET
242	58258.979	36441.180	10174.455	PIPET						
243	58235.902	36463.954	10175.194	PIPET						
244	58210.704	36490.988	10176.025	PIPET						
245	58200.344	36502.009	10176.309	PIPET						
246	58172.104	36518.654	10176.891	PIPET						I
247	58143.474	36532.970	10177.501	PIPET						
248	58117.232	36548.181	10178.195	PIPET	-					
249	58096.035	36560.266	10178.700	PIPET						YX'

### **GENERAL NOTES:**

- 1. DEFINITION: CERTIFY CERTIFICATION A PROFESSIONAL'S OPINION BASED ON HIS OR HER OBSERVATION OF CONDITIONS, KNOWLEDGE, INFORMATION AND BELIEFS. IT IS EXPRESSLY UNDERSTOOD THAT THE PROFESSIONAL'S CERTIFICATION OF A CONDITION'S EXISTENCE RELIEVES NO OTHER PARTY OF ANY RESPONSIBILITY OR OBLIGATION HE OR SHE HAS ACCEPTED BY CONTACT OR CUSTOM.
- 2. PER C.R.S. 18-04-508, ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR LAND MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR.
- 3. PER C.R.S. 38-51-106 "LINEAL UNITS DEPICTED ON THIS AS-BUILT SURVEY ARE U.S. SURVEY FEET. ONE METER EQUALS 39.37/12 US SURVEY FEET, EXACTLY ACCORDING THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY".
- 4. SITE ADDRESS: 1632 CO. ROAD 82 CRIPPLE CREEK, COLORADO 80813.
- 5. THIS IS NOT A BOUNDARY SURVEY, THIS IS NOT A LAND SURVEY PLAT. ALL INFO ON THIS AS-BUILT SURVEY IS FOR INFORMATIONAL PURPOSES ONLY AND DONE FOR THE BENEFIT OF JHL CONSTRUCTORS, INC.
- 6. THIS AS-BUILT SURVEY IS BASED ON THE PLANS FROM ENGINEER OF RECORD: NEWFIELDS. SHEET A 120 STAGE A PIPING REVISED 08.08.23, SHEET A 140 STAGE A LEAK DETECTION LAYOUTS
- 7. BENCHMARK INFORMATION: JHL CONSTRUCTORS, INC. USED FOR ALL OF THE RECORD DRAWINGS VERTICAL DATUM - CONTROL - JHL- 8 ELEVATION = 10003.754



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Revision:

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Leak Detection Trench 2

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As-Built Exhibit

JHL PROJECT# 2205

DATE: 8/29/2023

SCALE: 1" = 100

Sheet No.



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$\sim$	SEPTEMBER 2021 GROUND CONTOURS
$\sim$	STAGE A.2 SUBGRADE AS-BUILT CONTOURS
	LEAK DETECTION PIPE
02 0145.42	LEAK DETECTION CERTIFICATION POINT
2.00%	SLOPE BETWEEN POINTS