



February 24, 2022

Kathy Junglen
Tetra Tech, Inc.
1900 S Sunset, Suite 1-E
Longmont, CO 80501

**RE: Home Office Mine, M-1977-439
Amendment 4 (AM4)
Adequacy Questions 1**

Dear Ms. Junglen:

On December 23, 2021, the Division of Reclamation, Mining and Safety received your Amendment Application (AM4) package for the Home Office Pit, File No. M-1977-439. The following questions will address adequacy issues and any missing information that is need to complete the amendment application. This information needs to be addressed and/or received before the Division can approve the application:

Rule 1.6.2(1)(g) – General Application Procedures - Adequate as submitted.

Rule 6.4 - Specific Exhibit Requirements - 112 Reclamation Operation

6.4.1 EXHIBIT A - Legal Description - Adequate as submitted.

6.4.2 EXHIBIT B - Index Map – Adequate as submitted.

6.4.3 EXHIBIT C - Pre-mining & Mining Plan Map(s) of Affected Lands

1. On Exhibit C-2 South, the pond located east of Taft Hill Road, north of the river and west of structure A-21 is not labeled with an owner. Please clarify and label the owner.
2. On Exhibit C-2 South, the pond labeled A-35 says the owner is City of Greeley on the map, the legend says City of Fort Collins and the Larimer County Assessor site says Western-Mobile Northern Inc. Please clarify the owner of this pond.
3. On Exhibit C-2 South, The parcel of land A37 is labeled as City of Fort Collins Trail Path System. According to the Larimer County Assessor it belongs to Martin Marietta. Please clarify and label the owner.
4. On Exhibit C-2 South, the parcel of land between A37 and A38 is labeled as City of Greeley Tri District. This strip of land also includes the pond in the SE corner of the map. According to the Larimer County Assessor site, Western-Mobile Northern Inc. is the owner. Please clarify the owner of this pond.
5. On Exhibit C-2 South, the parcel of land to the west of Taft Hill Road and along the Cache la Poudre River is not labeled. Please clarify the land owners.
6. On Exhibit C-2 South, the upper left hand corner is labeled as A4, an unlined pond owned by Ronny and Billy. The area is also labeled as A45- City of Greeley, et al. Please clarify the owner.



6.4.4 EXHIBIT D - Mining Plan

7. Page 4, the text states that excavation limits are represented in Exhibit C-4. The excavation limits are not shown on Exhibit C-4 of the application. Please show excavation limits on Exhibits C-3 and C-4.
8. Page 4, the text states that in Exhibit C-1, Area 6 is a leased area. Please label Area 6 on Exhibit C-1 and update the text.
9. The text refers to 'Areas' on various exhibits. All the exhibits submitted with the application use the term 'Stages'. Please update the text and exhibits for consistency.
10. Page 4, the text states that Area G contains phases I & II and are labeled on Exhibit C-4. The Exhibit C-4 submitted with the application does not show Area G. Please update the text to reference the correct exhibit and identify all the phases of Area G on the appropriate map.
11. Page 4 and 5, the text refers to Areas B, C and I, but Areas B, C and I are not shown on any map. Please clarify and update the text.
12. Page 5, the text states that the construction of access roads and the use of rip rap are identified on Exhibit C-4 and that these areas contributed to disturbances within 100 feet of the river. These areas were not identified on Exhibit C-4. Please identify these areas on Exhibit C-4 and update the text.
13. Page 5, the text states that materials will be stockpiled or processed at Areas 1-5. Areas 1-5 were not labeled on the exhibits. Please label Areas 1-5 on the exhibits and update the text.
14. Page 5, the text states that settling pond locations are identified on Exhibit C-4. Please identify the settling pond locations on Exhibit C-4 and update the text.
15. Page 5, the text refers to Area A. Area A is not shown on the exhibits. Please identify Area A on the exhibits and update the text.
16. Page 5, the text refers to Phase III of Area E. Phase III of Area E is not shown on the exhibits. Please identify Phase III of Area E and update the text.
17. Page 5, the text refers to Areas 3 and 4 that will be mined and extending a pre-1973 pond. Please identify Area 3 and 4 and the pre-1973 pond on the appropriate exhibit.
18. Page 5, the text refers to Areas T, U and Z. Areas T, U and Z are not identified on any exhibit. Please identify Areas T, U and Z on the exhibits and update the text.
19. Page 5, the text states that Areas W, X, Y and Z have a commercial/industrial use at present by different companies, such as Keeton Fisheries Consultants. Please clarify if these areas are still being used by different companies, if these areas will have a commercial/industrial post mining land use and update the text.
20. Page 5, the text refers to the acreage of each area is listed in Table II. Table II was not submitted in the application package. Please submit an updated Table II or reference where it is located.
21. Page 5, the text refers to Areas D and H. Areas D and H are not shown on the exhibits. Please identify Areas D and H on the exhibits and update the text.
22. Please update Table III, Excavation Sequence and Mining Timetable to reflect current conditions as some of the areas listed are no longer in the Home Office permit and Area G is listed with 3 phases.
23. The Addendum #1 at the end of Exhibit B references the pond in Area 1. Please clarify if this Addendum is still relevant and update the text.

6.4.5 EXHIBIT E - Reclamation Plan

24. Page 1, the text states that the access roads represented on Exhibits C-4 and F will be permanent access for the landowners. No access roads are shown on Exhibits C-4 or any of the F Exhibits. Please clarify if any access roads will remain and if so, include them on the appropriate reclamation exhibit and update the text.
25. Page 1, the text refers to the backfilled portions of Area E. The backfill areas shown on Exhibits F-2 and F-4 are not consistent. Please clarify which areas are proposed to be backfilled in Area E and update the text.
26. Page 1, the text states that Area E will remain commercial/industrial in use. However, Exhibit F-2 shows that Area E will become an open pond owned by Greely, et al., which is actually a developed water resource land use. Please clarify what the post mining land use will be for Area E and update the text.
27. Page 2, the text states that rip rap will be maintained, and that a detailed discussion/justification is given in Exhibit G. There is no discussion in Exhibit G about rip rap, and rip rapped areas were not identified on any of the exhibits. Please clarify if rip rap is still utilized, where the discussion can be found, identify areas where rip rap is utilized and update the text.
28. Page 2, the text states that buildings, bridges, and other structures suitable for post mine land uses will not be disassembled. Please submit a list of all structures that are proposed to remain. Include the location, the size and how the structure will support the post mining land use.
29. Page 4, the text states that an island will remain in Area F. Exhibit F-1 does not show an island in Area F. Please clarify if an island will remain in Area F and update the text.
30. The following questions are for Exhibit E (Stage F), page 17:
 - a. The text references two parcels in Area F with one 12-foot berm separating the two parcels. This configuration is shown on Exhibit F-4. However, Exhibits C-1, C-3, F-1 and the maps in Exhibit G show three ponds and two berms. Please update the text and exhibits for consistency.
 - b. The text describes the eastern boundary as North Taft Hill Road and the western boundary as the Taylor and Gill Ditch. Parcel I is 15 acres and Parcel II is 20 acres for a total of 35 acres. Using Google Earth as an estimator tool, this area is approximately 45 acres. Please clarify the acreage of Area F and the acreage of each parcel.
 - c. The text states that the western edge will be used for silt storage and the eastern edge will be open water with a 12-foot wide berm separating the silt storage from the open water. This plan is illustrated on Exhibit F-4. However, Exhibits C-1 and C-3 shows that the silt is being stored on the eastern side of the 12-foot berm (middle parcel) rather than the western side. Please clarify and update the text.
 - d. The text states that approximately 11.18 acres will be used for silt storage. According to Exhibit C-1, approximately 11 acres has already been utilized as silt storage. Please clarify the plans and expected area to be used for silt storage and update the text.

6.4.6 EXHIBIT F - Reclamation Plan Map -

31. Exhibit F-4 lists many incorrect landowners. Since the current landowners are listed on Exhibits C. Please remove the landowners from Exhibit F-4.
32. Exhibit F-4 shows Area G with 3 phases. All other texts and Exhibits F-1 & F-3 show Area G with

only 2 phases. Please update Exhibit F-4.

33. Exhibit F-4 shows Area F with the silt storage on the west side. Exhibit F-1 shows the west side of Area F as open water. Please clarify where the silt storage will be located.
34. Exhibit F-4 shows a bridge across the Cache La Poudre River between Area 1 and Area Y with an access road. This bridge is not shown on Exhibit F-2. Please clarify if this bridge is still proposed.
35. Exhibit F-4, does not show the ponds in Area Y. Please update the exhibit to show these ponds.

6.4.7 EXHIBIT G - Water Information

36. Exhibit G was reviewed to ensure consistency with the information submitted in AM4. The most current version of Exhibit G is from AM1 in 1987. The following questions refer to the 1987 Exhibit G:
 - a. Page 1, (also Page 3, of Exhibit D), the text states that Exhibit C-7 shows the 100-year and 500-year flood plains and water discharge points. Exhibit C-7 was not included with the application package. Please provide an updated copy of Exhibit C-7 and update the text.
 - b. Page 1, the text states that a 404 permit will be applied for in 1987. Was a 404 permit applied for? Is there a current 404 permit associate with the current Home Office Pit? Please clarify and update the text.
 - c. Page 2, discusses rip rapped areas and that the operator occasionally enters the river to remove potentially flood hazardous debris and pushes river bed material onto adjacent rip rapped banks. Is this still a standard practice or part of a 404 permit? Please clarify and update the text.
 - d. Table VIII shows Pond Surface Acreage. Please update this table to show ponds in the current permit boundary.
37. It is not clear from the submitted exhibits which ponds are classified as Pre-1981 and Post-1981, which ponds are currently lined (or slurry wall), which pond are certified by DWR, which ponds are proposed to be lined (or slurry wall), and which ponds will be backfilled. Please update the reclamation exhibits showing this information. All ponds that are proposed to be lined will need hydrologic modeling to predicted the effects the lined pond will have on the ground water table.
38. A demonstration needs to be made that the Home Office Pit is in compliance with all applicable water laws.
39. Please clarify which ponds are within the 100-year flood plain of the Cache La Poudre River. Provide a flood analysis and flood control plan addressing how the operation will safely convey the expected 100-year flood event throughout the life of the mine including final reclamation.

The analysis should quantify the velocity and volume of flows expected, the elevation of the event and its relation to the elevation of any proposed spillways and reservoir embankments. The flood control plan should propose mitigation measures such as inflow and outflow channels and/or other appropriate measures. If specific measures are not know at this time, please commit to submitting them later in a technical revision.

40. The following questions are for the water information submitted with the AM4 application and refer to Stage G:
 - a. Data from monitoring wells around the Stage G area was submitted showing ground water baseline conditions. The predicted effect the Stage G clay lined pit will have on the ground water table was not discussed. Please submit a ground water model predicting the effects that

both phases of Stage G will have on the ground water. The Division recommends that 5 quarters of monthly ground water level data be used to create an adequate model. The model analysis needs to address:

- i. The impacts of static water levels,
 - ii. The impacts on all wells within 600 feet of the permit,
 - iii. The anticipated mounding and shadowing effects
 - iv. Breakdown the effect that each clay liner (Phases) will have on the water level as each clay liner is built
 - v. Create ground water contour maps: before and after clay liner construction.
- b. Page 6, Martin Marietta proposes mitigation measures if a well goes dry due to mining or reclamation activities. DRMS has determined that mitigation measures should be implemented before a well goes dry. Please describe the event or measurement that will determine when well mitigation measures will be implemented. DRMS proposes a trigger level of +/- 2 feet deviation for 2 consecutive months from the seasonal peak/low water level for each well prior to clay liner installation. If a different trigger measurement/event is proposed by Martin Marietta, please provide the rationale for the proposal.

41.

6.4.8 EXHIBIT H - Wildlife Information - Adequate as submitted.

6.4.9 EXHIBIT I - Soils Information - Adequate as submitted.

6.4.10 EXHIBIT J - Vegetation Information - Adequate as submitted.

6.4.11 EXHIBIT K - Climate - Adequate as submitted.

6.4.12 EXHIBIT L - Reclamation Costs

42. A cost estimate was not completed at this time because a significant amount of information needed to complete an estimate was requested in this adequacy review. A cost estimate will be completed when the information is received and Martin Marietta will have an opportunity to review/comment on it.

6.4.13 EXHIBIT M - Other Permits and Licenses (Statement Req'd) - Adequate as submitted.

6.4.14 EXHIBIT N - Source of Legal Right to Enter - Adequate as submitted.

6.4.15 EXHIBIT O - Owner(s) of Record of Affected Land and Substance to be Mined - Adequate as submitted.

6.4.16 EXHIBIT P - Municipalities Within Two Miles - Adequate as submitted.

6.4.17 EXHIBIT Q - Proof of Mailing of Notices to Board of County - Adequate as submitted.

6.4.18 EXHIBIT R - Proof of Filing with County Clerk and Recorder - Adequate as submitted.

6.4.19 EXHIBIT S - Permanent Man-made Structures Adequate as submitted.

Please note that the decision date for this application is April 11, 2022. If you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this application. Also, the comment period for this application closes on February 27, 2022 and any comments or objections received may initiate new adequacy questions.

All corrected pages must also be provided to Larimer County Clerk & Recorder.

If you have any questions, please contact me at (720) 774-0040 or brock.bowles@state.co.us.

Sincerely,



Brock Bowles
Environmental Protection Specialist

CC: Julie Mikulas, Martin Marietta Materials, Inc.
Michael Cunningham, DRMS
Amy Eschberger, DRMS