

November 10, 2022

Mr. Brock Bowles
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Adequacy Questions 1, DRMS AM-4 application – Home Office Mine, Permit M1977-439

Dear Mr. Bowles:

This letter is in response to your Adequacy Questions 1 letter, received via electronic copy on February 24, 2022 regarding Martin Marietta's 112c Permit Amendment Application (AM4) for the Home Office Mine (File No. M-1977-439) that was submitted to you on December 23, 2021. Please find below our responses to the Adequacy Questions 1:

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

1. On Exhibit C2 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.

Response

The owner of structure A-21 is William and Paulette Seaworth. Text has been added to the revised Exhibit C2, attached.

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.

Response

The owner is the City of Greeley, Fort Collins-Loveland Water District, North Weld County Water District and East Larimer County Water District. This has been corrected on the revised Exhibit C-2.

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.

Response

The Assessor's records are incorrect. Martin Marietta's predecessor, Sterling Sand and Gravel, deeded it to the City of Fort Collins in 1978 under Book 1913 Page 890.

4. On Exhibit C-2 South, the parcel of land between A37 and A38 is labeled as City of Greeley TriDistrict. 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.

Response

The Assessor's records are incorrect. Our predecessor, Lafarge West, Inc., deeded this parcel to the City of Greeley and the Tri-Districts as part of the sale of the parcels west of Taft Hill Road. Western Mobile Northern, Inc. was a subsidiary of Western Mobile Inc. which as a predecessor to Lafarge West, Inc. Julie Mikulas with Martin Marietta has personally tried several times to get the Assessor to correct their records, but it has not happened. The deed indicating ownership of this parcel is included as part of Exhibit N, Document 2.

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.

Response

The owners of this parcel are William and Paulette Seaworth. The label has been added to Exhibit C2.

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 A-45 – City of Greeley, et al. Please clarify the owner.

Response

The A4 label on Exhibit C2 was incorrect. The label has been deleted from the revised version of Exhibit C-2.

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.

Response

Assuming you mean Page 3. Excavation limits have been added to Exhibit C3 and C4 based on the original approved plans and Page 4 has been updated.

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.

Response

We are assuming you mean on Page 3. We haven't been able to locate the original Exhibit C-1 map that showed what was being added or deleted from the permit in 1987 to know where Area 6 was located. Based on what was leased at the time and the acreage, we believe this was the KOA Campground and it has been released from the permit. The text has been updated on Page 3.

9. The text refers to 'Area' on various exhibits. All the exhibits submitted with the application use the term 'Stages'. Please update the text and exhibits for consistency.

Response

To ensure consistency throughout the application, Exhibits B, C, D, E, F, G, L, N, and O have been updated to refer to 'Area' instead of 'Stage'. Copies of each of these updated Exhibits are included with this resubmittal package.

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.

Response

Exhibit C-3 has been updated to Area G-I and Area G-II. Text on Page 4 has been updated to reference Exhibit C3.

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.

Response

Areas B, C, and I are not shown on Exhibit D because they were released from the permit and Exhibit D has been updated.

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.

Response

The rip rap discussed was along the river edge of historical mining areas prior to 1973. These areas have been released from the permit. Exhibit D has been updated.

13. Page 5, the text states that materials will be stockpiled or processed in Areas 1-5. Areas 1-5 were not labeled on the exhibits. Please label Areas 1-5 on the exhibits and update the text.

Response

Assuming you mean Page 4. Area 1 and Area 2 are labeled on Exhibit C4 but are no longer used for processing since mining is completed east of Taft Hill Road/south of the river. Area 3 and Area 4 have been added to Exhibit C4 and Exhibit D has been updated. They are used for stockpiles of aggregate that Martin Marietta has processed and are required to leave for the property owner to use in reclamation. Area 5 is also Area E-II and has historically been used for processing and stockpiles but is also the last stage of mining. The processing plant will be downsized, and stockpile volumes will be small as Martin Marietta mines one half and then the other. Exhibit D has been updated.

14. Page 5, the text that settling pond locations are identified on Exhibit C-4. Please identify the settling pond locations on Exhibit C-4 and update the text.

Response

The settling ponds referenced in Area 1 were backfilled and are currently used for the asphalt plant. The settling ponds in Area 2 were south of the current permit boundary and have been released from the permit with Area H and Area I. The text on page 5, has been updated to identify the silt storage in Area F.

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.

Response

Area A was released from the permit as shown on Exhibit F4.

16. Page 5, the text refers to Phase III of Area E. Phase III of the Area E is not shown on the exhibits. Please identify Phase III of Area E and update the text.

Response

Area E will only have two phases. Exhibit C4 and F2 have been amended.

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.

Response

Area 3 and Area 4 have been added to Exhibit C4 and the pre-1973 pond is Area W and Area X which were reclaimed as wetlands.

18. Page 5, the text refers to Areas T, U, 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.

Response

Areas T, U, Z have been released from the permit and Exhibit D has been updated.

19. Page 5, the text states that Areas W, X, Y, 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.

Response

They are not being used as commercial/industrial. The ponds have been filled with silt and reclaimed as wetlands. Exhibit D has been amended.

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.

Response

Table II was included in the original submittal as part of Exhibit C. Much of the referenced areas have been reclaimed and released from the permit. Exhibit D has been amended.

21. Page 5, the text refers to Area 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.

Response

Area D and H have been released from the permit. Exhibit D has been amended.

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.

Response

Table III has been updated.

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.

Response

Assuming you mean Exhibit D, for the Addendum #1 at the end of Exhibit D, the pond was backfilled prior to 1993 except for a small portion used for a stormwater control. The text has been updated.

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 exhibits and update the text.

Response

Exhibits F1 and F2 have been updated to show access roads that will remain.

25. Page 1, the text refers to the backfilled portions of Area E. The backfilled 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.

Response

Exhibit F4 is no longer valid and was included just so you could see what has been released from the permit. We have eliminated Exhibit F4.

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 Greeley, 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.

Response

Area E will continue to be open ponds. Once mining is completed, it is our understanding that the property owner will create their own water storage design and get a new permit for Area E like they have done for other areas of the permit that have been released. For now, we will continue to show the reclamation as open ponds.

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.

Response

The rip rap discussed was along the river edge of historical mining areas prior to 1973. Those areas have been released from the permit. Due to changes in regulations, placing any fill in the river corridor would require a 404 permit and this practice is no longer done except to re-establish a bank after a flood with

emergency authorization. As far as Martin Marietta knows, the rip rap is still in place along the river, but we do not intend to add any additional rip rap.

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 structures will support the post mining land use.

Response

The structures to remain are shown on the reclamation plan Exhibit F2. No bridges will remain in the post mine 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.

Response

No island will remain. The text on page 4 about an island has been removed.

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, Exhibit 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.

Response

The Exhibit maps are correct, text in Exhibit E has been modified.

- 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.

Response

Acreage has been updated in Exhibit E.

- 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.

Response

Exhibit F4 is no longer valid and was included just so you could see what has been released from the permit. Exhibit F4 has been eliminated and Exhibit E and Exhibit F1 have been updated.

- 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.

Response

All of Area F-II will be silt storage and Martin Marietta has the option with the property owner to fill Area F-I but they do not anticipate needing to do so.

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 land owners from Exhibit F-4.

Response

Exhibit F4 was only submitted to show the areas released from the permit. This exhibit has been eliminated.

32. Exhibit F-4 shows Area G with 3 phases. All other texts and Exhibit F-1 & F-3 show Area G with only 2 phases. Please update Exhibit F-4.

Response

Exhibit F4 was submitted to show the areas released from the permit only. The key on F4 shows the dikes are optional. This Exhibit has been removed from our submittal.

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.

Response

Exhibit F4 was only submitted to show the areas released from the permit. Silt storage was originally planned for the west edge of Area F but the property owner requested that Martin Marietta start filling in the silt in the middle section of Area F. Martin Marietta retained the option to fill in the west side if needed but based on their calculations they do not currently think that the west section will be utilized for silt storage.

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.

Response

The bridge was never installed nor is a bridge planned to be installed at this point. A low water crossing was in this location during the 1990's.

35. Exhibit F-4, does not show the ponds in Area Y. Please update the exhibit to show these ponds.

Response

The ponds are shown. We have made the line type more prominent so they show up better.

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.

Response

Floodplain lines and discharge points have been added to Exhibit C3 and C4.

- 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 associated with the current Home Office Pit? Please clarify and update the text.

Response

Yes, a 404 permit was applied for but it expired a long time ago since Martin Marietta no longer works in the river.

- 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.

Response

No, this no longer occurs.

- d. Table VIII shows Pond Surface Acreage. Please update this table to show ponds in the current permit boundary.

Response

The table has been updated.

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 predict the effects the lined pond will have on the ground water table.

Response

Except for Area G, none of the ponds will be lined. All of the ponds with exposed water are considered Pre-1981 per the Division of Water Resources. These are marked on Exhibit F1 and F2 with DWR. Please see the latest Substitute Water Supply Plan (SWSP) submitted by DWR also. The property owner intends to line Area E but as they have done in the past for areas released from this permit, they will apply for their own permit with how they want to line it and Martin Marietta will release that area from this permit once the new permit is approved.

38. A demonstration needs to be made that the Home Office Pit is in compliance with all applicable water laws.

Response

Martin Marietta annually submits a substitute water supply plan to the Colorado Division of Water Resources in December. Please see the latest approval in your electronic files submitted by DWR on 12/27/21.

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 any propose 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 known at this time, please commit to submitting them later in a technical revision.

Response

Ponds within Area F-I, F-II, F-III, E-I, E-II, W, Y, 1 and 2 are within the 100-year flood plain of the Cache La Poudre River. Mining and reclamation are completed in accordance with mining and reclamation plans in effect at the time of mining.

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 of 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 contours maps: before and after clay liner construction

Response

Tetra Tech's hydrogeologist, Tom Hesemann, does not believe a ground water model is warranted. Monitoring well data shows baseline groundwater levels and water levels during mining and reclamation.

Water levels monitored beginning in July 2016 to present demonstrate there is 6 or more feet of saturated thickness in the aquifer after installation of the liner down gradient of Stage G (see Table 1 of our revised Exhibit G). Given a typical specific capacity of alluvial wells of 25 to 35 gallons per minute per foot of drawdown, adequate water will remain in the aquifer to meet historic well yields downgradient of the compacted clay liner in Stage G Phase 1. Monitoring data is more reliable than a groundwater model due to complicated boundary conditions represented by lined and unlined ponds and dewatering in the vicinity. For this reason, we do not believe preparation of a groundwater model is warranted for this project.

- 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 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 of the proposal.

Response

As discussed in Comment Response 40a above, the data shows that material changes in the production of nearby wells will not occur. However, should there be a complaint, Martin Marietta will investigate the nature of the decreased production and implement corrective actions to restore well production.

In addition to responding to the comments from the DRMS, we have also responded to the referral agency comment letters that were shared with us. Attached are copies of the letters that we wrote to each agency in response to their comments. Specifically, you will find response letters to the following entities:

- Division of Water Resources
- History Colorado, State Historic Preservation Office
- Telesto Solutions, Inc. on behalf of Loveland Ready-Mix Concrete, Inc.
- William Seaworth, Seaworth Properties

Thank you for your consideration. If you have any questions or need additional information, please let me know.

Please note that Kathy Junglen no longer works for Tetra Tech. Please change the point of contact for Tetra Tech to Pam Hora, 720-864-4507, pam.hora@tetrattech.com.

Sincerely,

TETRA TECH



Pamela Franch Hora, AICP
Senior Planner

cc: Julie Mikulas, Martin Marietta