



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

February 14, 2022

Becky Morris
Environmental Scientist
H2E, Inc.
801 East 4th Street, Suite 5
Gillette, WY 82716

RE: Loring Quarry Large Scale Mine Permit Application

Dear Ms. Morris:

The department has completed its review of Simon Contractors of SD Incorporated's large scale mine permit application submitted on January 13, 2022, for the Loring Quarry. Based on our review, we have determined that the mine permit application is incomplete. Simon Contractors will need to address the following items in order to complete the application:

1. Application Form: Since Simon Contractors is an in-state corporation, "NA" should be placed in the "Resident agent" section of the form which is just above the "Resident agent address" block on the form.

In addition, under "Estimated overburden /waste tons per year", Simon Contractors states once initial topsoil stripping is completed, no additional overburden is produced. First, topsoil is not considered overburden. Overburden is the material remaining above the limestone deposit after topsoil has been removed and stockpiled. Second, in the operating and reclamation plans, Simon Contractors discusses removing topsoil and overburden and creating separate stockpiles for each. Also, separate topsoil and overburden stockpiles are shown on the pre-mining contour map in the application. Since it appears that overburden will need to be removed and stockpiled in addition to topsoil, please list the estimated tons of overburden/waste that will need to be removed per year on the application form. If the overburden varies across the area, a range can be used.

2. Certification of Applicant Form: Please verify that Simon Contractors does not have any environmental violations at its other mining operations in South Dakota and other states.

3. Operating Plan, Mining Method and Type (SDCL 45-6B-6(8 (b) and (c)): On page 1 of the Operating Plan, in the second paragraph under “Mining Method and Type”, Simon Contractors state that there will be no tailings dams, waste dumps, or ore stockpiles. Please note that the overburden stockpiles mentioned in this section can be considered waste dumps, and the limestone stockpiles mentioned in this can be considered ore stockpiles, so this statement is false and needs to be corrected to state that there will only be no tailings dams.

In addition, in the same paragraph, Simon Contractor’s mentions that a wash plant and washing ponds could be added in the future to remove limestone fines from specific products to meet customer demand. However, Simon Contractors needs to also address the disposal of fines from the wash ponds and the disposal of fines and other waste material from the crusher until the wash plant and ponds are constructed.

Also, in the fourth paragraph on page 2 of the “Mining Method and Type” section, Simon Contractors states that since this an existing quarry, true pre-mining contours do not exist. They may not exist in the quarry, but true pre-mining contours do exist in the undisturbed area around the quarry. Therefore, please modify this statement and address the pre-mining contours in the undisturbed area around the quarry.

Finally, in paragraph 5 on page 2 of the same section, please include a narrative explaining in detail the mine sequences shown on the 2021-2022 Mine Sequence map, the 2023-2042 Mine Sequence map, and the 2042-2085+ Mine Sequence map included in Appendix A of the Operating Plan. Also, since the 2023-2042 sequence map shows the current limestone stockpile area being eventually mined, please discuss how the stockpile area will be moved and show the new stockpile location on a map.

4. Operating Plan, Unsuitable and Previously Mined Land (SDCL 45-6B-7(5)): In this section, Simon Contractors states the Department of Agriculture and Natural Resources determined the lands within the proposed Loring Quarry mine permit boundary do not constitute special, exception, critical, or unique lands. Please add a state that there are no significant historic, archaeologic, geologic, scientific, or recreational features at the Loring Quarry except for the Mickelson Trail.
5. Operating Plan (SDCL 45-6B-32(1), (2), and (4)): Simon Contractors is required to address subsections 1 and 2 of this statute in the Operating Plan regarding the completeness of the mine permit applications, the submittal of the reclamation surety, and the payment of the \$1,000 fee. Also, subsection number 4 should be addressed in the Operating Plan instead of the Reclamation Plan since it addresses potential impacts during the mining operation. As part of this subsection, please address any potential impacts to the overhead powerline shown on the Map of the Affected Area.
6. Operating Plan, Minimizing Adverse Impacts (ASRD 74:29:07:02(7) and (8)): Please address how the location of the limestone stockpile area and overburden and topsoil stockpiles will facilitate reclamation and minimize impacts. Also, in your discussion of

minimizing waste from the mining operations, please include overburden placed into stockpiles and the crusher fines.

7. Operating Plan and Reclamation Plan Appendices A: Maps (SDCL 45-6B-8, SDCL 45-6B-10(5), and ARSD 74:29:02:04(2), (3), and (4)): There are some duplicate maps and cross sections in the Operating and Reclamation Plans. Simon Contractors should consider combining all maps under one map tab for the mine permit application to eliminate the duplicate maps.

Please show on a map all areas of the Loring Quarry mined prior to July 1, 1971.

Also, please submit a mine plan map showing all of the following mine facilities:

- Existing limestone quarry;
- Western and eastern quarry expansion areas;
- Limestone stockpile area as required under ARSD 74:29:02:04(4);
- Topsoil and overburden stockpiles;
- Buildings;
- Roads;
- Proposed mine permit boundary;
- Proposed permitted affected area;
- Buffer zones around the Mickelson Trail and drainages;
- Streams and drainages

I have enclosed an example map that you can use as a template in developing the mine plan map. Also, you should be aware that Simon Contractors is required to identify mine facilities for the entire permitted affected area outlined in gray on the maps included in Appendix A. Simon Contractors should ensure that all potential quarry areas, stockpiles, and other mine facilities that may be needed during the life of the mine permit are identified on the mine plan map. If there are areas within the permitted affected area that will not be disturbed during the life of the mine permit, they should be removed from the permitted affected area. This may also impact the acreages quoted throughout the mine permit application.

Regarding the pre-mining and post-mining plan view contour maps in Appendix A of the Operating and Reclamation Plans, "Proposed Disturbance Area" needs to be changed to "Proposed Permitted Affected Area" which is the correct term. Also, contour lines need to be shown in the extreme northern end of the proposed mine permit boundary. Finally, streams and drainages need to be shown on the contour maps. This is important since it appears that what Simon Contractors identifies as Cold Brook in the eastern end of the quarry is within the disturbance area. This contradicts what the company states in the Operating Plan that Cold Brook will not be disturbed.

Finally, on the mine sequence maps in Appendix A of the Operating Plan, please show the existing quarry and western and eastern quarry expansion outlines. It would also be helpful to show arrows on the maps showing mine progression.

8. Reclamation Plan, General Description (ARSD 74:29:07:18): Please give details on the experience the individuals who developed the reclamation plan have in developing reclamation plans.
9. Reclamation Plan, Grading (ARSD 74:29:07:04): Please discuss locations where stockpiled overburden and crusher fines will be placed after mining is completed and how it will be graded. Also, please discuss whether the floor of the quarry will consist of limestone, shale, or other material.
10. Reclamation Plan, Refuse Disposal (ARSD 74:29:07:13): ARSD 74:29:07:13, which covers building and structure removal, needs to be added to the list of statutes and regulations addressed in this section and in the Regulatory Cross Reference Table.
11. Reclamation Plan, Topsoil Salvage (SDCL 45-6B-7(11), SDCL 45-6B-40 and ARSD 74:29:07:07(2, 3, 5, 6, and 8)): The topsoil replacement estimates in paragraph 4 under “Topsoil Salvage” on page 3 of the Reclamation Plan are not correct. In the “General Description” on page 1 of the Reclamation Plan, Simon Contractors states that approximately 80 acres west of the Mickelson Trail and approximately 30 acres east of the trail will be disturbed. Assuming four inches of topsoil will be applied over this acreage, I come up with a total of 43,022 cy of topsoil needed for the west area and 16,133 cy for the east area. This is much more than Simon Contractor’s 10,000 cy and 6,000 cy estimates in paragraph 4. Please review the topsoil application estimates and make the required revisions based on the estimated disturbed acreage and estimated topsoil application depth.

Also, in the same paragraph, Simon Contractors states that there will be adequate topsoil for reclamation. However, there is no statement on how much topsoil will be salvaged to support this statement. In the Soil Survey, soil suitability salvage depths and volumes for the entire area within the proposed mine permit boundary are summarized in Addendum Table 1-2 in the survey. A similar table can be created for all areas that will be disturbed by Simon Contractors during the life of the mine.

Please address whether there will be excess topsoil and if a topsoil deficit is expected. If excess topsoil will be present, please address ARSD 74:29:07:07(6). If there will be a topsoil deficit and there will not be enough topsoil to complete reclamation, please address the need for topsoil substitutes and/or amending overburden as required under ARSD 74:29:07:07(3) and (8).

In addition, please address whether there will be any temporary distribution of stockpiled topsoil or other suitable material to enhance stabilization of affected lands during period

of interim reclamation and temporary cessation of operations as required under ARSD 74:29:07:07(2).

Finally, please submit proof that the Custer County NRCS office was consulted during development of the topsoil stockpile seed mix. Simon Contractors mentions that the seed mix is used on South Dakota DOT projects, but it does not mention if the Custer County NRCS office was consulted.

12. Reclamation Plan, Hydrologic Balance and Water Resources Map (SDCL 45-6B-33(4), SDCL 45-6B-41, ARSD 74:29:02:11(1, 2, 3, 4, 5, 7, and 8), ARSD 74:29:07:08(3) and (6), and ARSD 74:29:07:09 and 10): In the first paragraph under “Hydrologic Balance” on page 4 of the Reclamation Plan, Simon Contractors states that Cold Brook (an intermittent drainage) runs roughly from north to south across the northern portion of the Loring Quarry. After reviewing other stream information from this area, it appears Cold Brook may actually flow west to east along the south end of the proposed mine permit boundary as shown on the enclosed Example Mine Plan Map. The drainage described in the paragraph appears to be an unnamed intermittent drainage and not Cold Brook. Please verify the correct stream and drainage names around the Loring Quarry and make any revisions to the Water Resources Map.

Also, a portion of Cold Brook flows through the southern portion of the eastern quarry expansion area which is circled on the enclosed Example Mine Plan Map. It appears that this portion of the stream will be disturbed during mining and will need to be diverted. In addition, it appears a portion of an unnamed tributary just to the north of the quarry, which is also circled on the enclosed map, will be disturbed during mining in the western quarry expansion area and will need to be diverted. Please address whether Cold Brook and the unnamed tributary will be disturbed during mining. If they will be disturbed, please address the stream diversion requirements on ARSD 74:29:07:10 and how these drainages will be reconstructed during final reclamation.

Also, Simon Contractors generally addressed stream diversions in the Hydrologic Balance section, but it did not address whether surface runoff diversions will be needed to divert stormwater around disturbance at the quarry. Therefore, please address whether surface runoff diversions will be needed, and if so, please address each subsection of ARSD 74:29:07:09.

In the second paragraph under “Hydrologic Balance” on page 4 of the Reclamation Plan, Simon Contractors mentions that visits to assess flows in Cold Brook after certain storm events were recorded and photo documented. Instead of being made available for review, the results of these visits and associated photographs need to be included in the mine permit application.

Regarding the Water Resources Map, please show existing culverts and any planned culverts, drainage flow paths, and current and any planned stormwater and stream

diversions. Also, please show the outlines of the current quarry, quarry expansion areas, and other mine disturbance on the map. In addition, a grass lined ditch is shown on the Water Resources Map just to the southeast of the quarry adjacent to the Mickelson Trail. This ditch is also shown as a drainage ditch in the SWPPP. Please address whether this is a diversion ditch, and if it is, what area of the quarry drains into it and whether it flows into what is identified as Cold Brook in this section.

Please submit geologic cross-sections and a more detailed geologic map of the immediate quarry area instead of the overall Black Hills. Since Simon Contractors identifies the quarry as in a “Dome of Madison”, it should also identify the extent of the limestone deposit, how it was pushed up (fault or fold), and where those structures are located. There should be data from drill holes, wells logs, and the existing quarry highwalls to help to identify the expected geologic cross sections of the area.

Simon Contractors states the Madison formation is dry in this area. However, immediately adjacent to the quarry, there is an artesian well with a water depth of 17 feet. When the company starts mining the southern and eastern portions of the quarry expansion area, what is the barrier to prevent water from entering the quarry? Also, the Madison Formation is a karstic formation in this area. What are the impacts to water flows in this area or potential pathways for groundwater discharge from the mine as a result of the karstic formation?

Finally, please submit a more detailed potentiometric map of the Minnelusa formation in this area. We realize it won't be perfect as there are only two wells, but since water levels are so near surface only a short distance away, this would be valuable information.

13. Reclamation Plan, Spoil Piles, Weeds (SDCL 45-6B-43 and ARSD 74:29:07:14 and 15): Instead of providing a link, the South Dakota State University Extension 2020 Weed Control documents needs to be printed out and included with the mine permit application. Also, in the second paragraph of this section, Simon Contractors states weed control may be required during all phases of the mining operation. Since field bindweed, which is a noxious weed, has been noted in the mine area, this statement should be changed to “weed control **will** be required during all phases of the mining operation. Simon Contractors also needs to address how it will begin to control field bindweed this year.

Also, Simon Contractors needs to address in this section each subsection of ARSD 74:29:07:14 for the overburden to be removed and stockpiled and crusher fines since these materials are considered mine spoil.

14. Reclamation Plan, Landowner Consultation (SDCL 45-6-44 and ARSD 74:29:06:02(4)(b): Simon Contractors is required under SDCL 45-6B-44 to consult with adjacent landowners to the mine permit boundary during development of the reclamation plan. The instrument of consultation can consist of a written receipt from the adjacent landowners stating that they received a copy of the reclamation plan.

Also, in the second paragraph in this section on page 6 of the Reclamation Plan, Simon Contractors states no commitments from public agencies are required. ARSD 74:29:06:02 (4)(b) required these public agency commitments where appropriate. Please explain why Simon Contractors believes these public agency requirements are not required or appropriate for this mine permit application. Please note that the South Dakota Department of Game, Fish, and Parks is regarded as a public agency and any commitments to work with them on bat habitat along the quarry highwalls is required to be addressed under this regulation.

15. Reclamation Plan, Reclamation Choices, Operator Requirements (SDCL 45-6B-45(1), ARSD 74:29:06:01, ARSD 74:29:07:01(1) and (3), ARSD 74:29:07:19(1, 2, and 3), and ARSD 74:29:07:20(1 and 2)): In the second paragraph of this section on page 7 of the Reclamation Plan, Simon Contractors states reclamation will be considered successful when the reclaimed area reaches 70 percent desirable perennial vegetation as compared to the undisturbed woodland and upland grazing locations in the baseline survey. However, if the 70 percent you are referring to is from ARSD 74:29:07:19(3)(d), you must understand that Simon Contractors is required to achieve a tree stand density of at least 70 percent of the undisturbed woodland in the baseline survey five years after planting for a forest postmine land use, not 70 percent of the perennial vegetation established after final reclamation is completed. DNR will evaluate the understory grasses and other vegetation during a final inspection to determine if the vegetative cover is diverse and self-sustaining and there are no erosion issues, but the main criteria for bond release will be if the tree stand density meets the 70 percent requirement. Please revise the success criteria in this paragraph so that it meets the requirements of ARSD 74:29:07:19(3).

In addition, Simon Contractors needs to include additional information in this section to address the forest planting requirements in ARSD 74:29:07:19 (1) and (2). Specifically, the company needs to include information to show that ponderosa pine trees are physiologically suited for this site. In the "Revegetation" section of the Reclamation Plan, the company only addresses the physiologically of the grasses in the seed mix approved by the NRCS. Simon Contractors also needs to include information to show that the proposed 100 ponderosa pine seedling per acre planting rate mentioned in the "Revegetation" section of the Reclamation Plan is at a rate that can reasonably be expected to yield mature timber stand density appropriate for ponderosa pine. Even though the NRCS does not have this information, Simon Contractors can check with the UF Forest Service to see if it has suggested planting rate information for ponderosa pine. Finally, please discuss typical forest slopes in the quarry area and compare those to the reclaimed slopes for the mining operation.

Also, in the fourth paragraph of this section, Simon Contractors states that typical forest suage in the surrounding would be grazing and recreation and that livestock grazing will be allowed on reclaimed lands until the plant community is firmly established. Please note there is no mention of grazing or recreation uses under the forest planting

requirements mentioned in ARSD 74:29:07:19. At this time, there are two postmine land uses mentioned in this section, forest and grazing.

Simon Contractors needs to clarify what postmine land use the quarry will be reclaimed to. It appears after reviewing the mine permit application that grazing may be a more appropriate postmine land use than forest. The seed mix developed by the Custer County NRCS is identified as for range planting. Also, the Soil and Vegetative Surveys states that the area is primarily used for cattle grazing. In addition, the soils identified in the Soil Survey are primarily used for grazing. At the very least, Simon Contractors should consider a combined forest/grazing land use. If Simon Contractors changes the postmine land use to grazing or mixed forest/grazing, please address subsections 1, 2 and 3 of ARSD 74:29:07:19 and submit information to show that the reclaimed land will have the capability to support a livestock carrying capacity equivalent to that of the surrounding area or a reference area. Also, please address whether the proposed final slope will be appropriate for a rangeland/grazing land use and if fencing the area will be necessary until a vegetative cover is established that will support grazing.

DANR will withhold its concurrence on the postmine land use until our questions and concerns listed in this section are addressed and Simon Contractors informs us that it clearly understands what requirements will need to be met before the reclamation bond is released if it commits to a forest land use.

Finally, please include a statement in this section which states Simon Contractors understands reclamation required by the approved reclamation plan must be completed prior to final and full bond release.

16. Reclamation Plan, Concurrent and Interim Reclamation (ARSD 74:29:06:02(4)(d), ARSD 74:29:07:01(2), ARSD 74:29:07:04(3), and ARSD 74:29:08:01 and 02): In this section and through the reclamation plan, Simon Contractors states that concurrent reclamation will occur at the end of mining in the western quarry expansion area at the end of mining. Please note that this is a description of final reclamation instead of concurrent reclamation. Concurrent reclamation is reclamation conducted during the mining operation, not when mining is completed. During the past few years, the South Dakota Board of Minerals and Environment have expressed concerns over the lack of reclamation progress at the Rapid City and Madison Quarries covered under Mine Permits 14 and 444. As a result, Simon Contractors is required to submit a detailed concurrent reclamation plan for the current quarry, the western and eastern expansion areas, and any other disturbed areas of the quarry that integrates the mine plan and reclamation plan. The concurrent reclamation plan also needs to include estimates of timelines and acreage to be reclaimed at any one time. The concurrent reclamation timetables could be integrated with the mine sequence maps in Appendix A of the Operating Plan. Simon Contractors should also identify any areas within the current quarry which will no longer be used and could be reclaimed.

Also, please submit an interim reclamation plan that may be needed for areas other than topsoil stockpiles.

17. Reclamation Plan, Critical Resources (SDCL 45-6B-92 and ARSD 74:29:07:02:(3) and (4)): Critical Resources are addressed in both the Operating and Reclamation Plans. Simon Contractors may want to combine the Critical Resources section in the Reclamation Plan with the Minimizing Adverse Impacts section in the Operating Plan.

Also, the following critical resources need to be addressed:

4. Water – Please address potential impacts to domestic well 67605 in which baseline sampling was required. Also, please address impacts to Carroll Creek outside mine permit boundary;
 5. Visual Resources – In paragraph 3 under “Minimizing Adverse Impacts” on page 4 of the Operating Plan, Simon Contractors mentions the viewshed from the nearby residence should not be impacted based on viewshed modelling. Please submit the results from the viewshed model;
 6. Soils – Please address whether the Rapidcreek cobbly loam and other soils mentioned in the soil survey are highly erosive have low vegetation potential and mitigation measures if they are;
 8. Air Quality – Please address any air quality impacts including fugitive dust to nearby receptors including residences and recreation areas;
 9. Noise – Any noise impacts to nearby receptors including residences and recreation areas; and
 10. Land Designated as Special, Exceptional, Critical, or Unique – Please address the department’s determination the area was not eligible for the Preliminary List of Special, Exceptional, Critical, or Unique Lands in this section.
18. SDCL 45-6B-7(12) and ARSD 74:29:02:08: Please address how the \$125,000 lump sum for drilling, shooting, and sloping highwalls was determined. Is this based on a specific drilling depth and explosive costs? Also, please make any adjustments to acreages and topsoil application costs based on comments in this letter. In addition, please submit dimensions of the calcium dust shed and the scale house.

DANR will calculate a reclamation bond for the quarry and will send a draft copy to Simon Contractors for review and comment prior to a final bond amount is determined. Please note that Simon Contractors will be required to submit the reclamation bond prior to the issuance of the reclamation after a final bond amount is determined.

19. ARSD 74:29:02:01: Please update the Regulatory Cross-Reference table and regulatory references in the applicable sections of the Operating and Reclamation Plans as requested throughout this letter

We also have the following technical comments:

1. Operating Plan, General Description, Page 1: In the first paragraph, Simon Contractors states the Loring Quarry is located approximately five miles south of Pringle. The quarry is actually approximately four miles southwest of Pringle which is closer to the general location listed in the baseline reports. It is also the general location used in the Request for Determination of Special, Exceptional, Critical, or Unique Lands application. Therefore, please change the general location to four miles southwest of Pringle.
2. Operating Plan and Reclamation Plan Maps: It would be helpful if Simon Contractors could submit shapefiles of the various maps in Appendix A. The shapefiles would help in our bond calculation and acreage determinations.
3. Reclamation Plan, Hydrologic Balance, Page 4: In the first sentence of the first paragraph under "Hydrologic Balance" on page 4 of the Reclamation Plan, please change "...are not expected to impact surface" to "...are not expected to impact surface **water**".
4. Reclamation plan, Appendix B – Ground Water Monitoring Results: In the Water Sampling Results Summary table, please change the October sampling date from 10/11/21 to 10/12/21 to match the date on the Midcontinent Labs data sheets. Also, add the November sampling results to the table since data from this date are included in the Midcontinent Labs data sheets.
5. Appendix C, Reclamation Plan, NRCS Seeding Plan: During the development of the seed mix, was a cover crop with an annual species such as sterile wheat or annual rye considered to help establish a vegetative cover until the other self-sustaining grass species are established?
6. Technical Revisions (ARSD 74:29:03:16): Simon Contractors should seriously consider adding the following to the list of technical revisions:

Adding contiguous affected land within the permit area when the total of such additions does not exceed 20 percent of the originally permitted affected land area.

This technical revisions category would allow Simon Contractors to add permitted affected acreage within the mine permit boundary for unplanned quarry or other mine facility expansions without a more complex mine permit amendment.

Simon Contractors should also be aware of the following general comments and questions concerning the permit application:

1. ARSD 74:29:01:04: The information requested in this letter must be filed with the Custer County Register of Deeds office with the mine application which is already on file for public review. Proof of filing, such as a letter from the register of deeds office, is required to be submitted.

2. ARSD 74:29:01:10: The department will begin drafting a summary document for the permit application after we receive Simon Contractor's response to this letter. We will provide the summary document to Simon Contractors for review and comment at a later date.

If you have any questions, please feel free to contact our office.

Sincerely,

\S/

Eric Holm
Engineer III
Minerals and Mining Program
Telephone: (605) 773-4201
FAX: (605) 773-5286
E-mail: eric.holm@state.sd.us

cc: Mike Lee, Simon Contractors

Enclosure