



# Public Service Commission

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*sent via email only*

July 11, 2024

Mr. Michael Berg  
Environmental Manager  
Coteau Properties Company  
204 County Rd. 15  
Beulah, ND 58523  
michael.berg@nacoal.com

Dear Mr. Berg:

The Reclamation Division has conducted a technical review of the application for Revision No. 29 to Permit NACT-0201, submitted on February 7, 2024. The following items must be adequately addressed prior to our office recommending Commission approval:

## **General**

1. Please include Revision No. 28 permit changes to Revision No. 29 so that the information provided is current and up to date. (GAW/AAC)

The following is a list of discovered missing documents:

Section 1.2.9 – missing pages 63-65  
Section 1.3.5 – pg 2 & 4  
Section 2.3.1 – 1, 9-12, 15-19  
Section 2.3.3.2 – map  
Section 2.3.3.3 – map  
Section 2.3.3.4 – map  
Section 2.3.5 – pg. 1-2  
Section 2.3.5.1 – pg. 1-2  
Section 2.3.5.2 – pg. 1; 5-7  
Section 2.3.5.3 – pg. 1; 3-5; 7-9; 12-14; 19-29  
Section 2.3.5.4 – pg. 2-3; 5; 8-9; 13-21  
Section 2.3.5.5 – ALL  
Section 2.3.7.1 – ALL  
Section 2.3.7.2 – ALL  
Section 2.5.6.2 – pg. 3  
Section 2.5.11 – Map  
Section 2.7.3 – pg. 2-16  
Section 3.1.1.2 – pg. 5; 8

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Section 3.1.1.3 – pg. 2-4; 6-7  
Section 3.1.1.4 – ALL  
Section 3.1.1.5 – ALL  
Section 3.1.3 – Map  
Section 3.2.1 – pg. 4  
Section 3.2.3 – pg. 1-3  
Section 3.3 Certification Letter – pg. 5  
Section 3.3.2 – Map  
Section 3.3.4 – ALL  
Section 3.3.40 – pg. 1-3 (missing a page); 9-15 (missing pages)  
Section 3.3.40.3 – MISSING  
Section 3.3.42 – pg. 1  
Section 3.3.51 – MISSING  
Section 3.3.51.1 – MISSING  
Section 3.3.52 – MISSING  
Section 3.3.52.1 – MISSING  
Section 3.3.53 – MISSING  
Section 3.3.53.1 – MISSING  
Section 4.1.2 – Map & Sheet 1  
Section 4.1.3 – pg. 1-2  
Section 4.2.2 – pg. 1  
Section 4.2.3 – pg. 1  
Section 4.4.2.2 – pg. 3  
Section 4.4.8 – MISSING  
Section 4.4.9 - MISSING

### **Section 2.2.8 – Stability Analyses of Reclaimed Drainage Channels**

2. Please update Section 2.2.8 (Stability Analyses of Reclaimed Drainage Channels) to include an analysis of stability of all proposed drainageways in Mine Area 3 that have a watershed of 40 acres or more in size. The model used should calculate the maximum velocities for various stretches in each drainageway from where it becomes clearly defined and extends to a point several hundred feet downstream of the proposed mining disturbance boundary. Please report velocities for any stretches where the slope increases and at locations where side drainages join the main drainageway. For the larger drainages (such as WAC-17 and WAC-12), please include velocity calculations for the more significant side drainages as well as the primary drainageway when determining velocities that would result from the 100-year, 6-hour storm event. This is needed to demonstrate that the proposed postmining topography will result in minimal soil losses from runoff and erosion as required by NDCC 38-14.1-24(3). Please also discuss if each reestablished ephemeral stream will have channel characteristics and a longitudinal and cross section profile similar to what existed prior to mining as required by NDAC 69-05.2-16-06(5). (GAW)
3. Please label all post-mine watersheds that are 40 acres or more in size on the Post-Mining Ephemeral Drainageways Map, Section 2.2.8.3. (GAW)

**Section 4.1 – Post-Mining Topography and Land Use Plans**

4. The polygons depicting potential post-mining prime farmland landscapes are obscuring the contours in Section 35 on Sheet 1 of Section 4.1.2 (Post-Mining Topography and Land Use Map). Please revise the map so that the contour lines are visible. (MLJ/SMN)
5. The drainageway between created wetlands CW-W15-03 and CW-15-04 has a segment of slope exceeding 7 percent. Please revise the contour lines in this drainageway in Section 4.1.2 (Post-Mining Topography and Land Use Map) to eliminate this steep segment to ensure drainageway stability. (GAW)
6. A segment of the drainageway in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 14 (below the symbol for stock pond SP-W14-03) has a segment of slope exceeding 6 percent. Please review and revise the contour lines in this drainageway (WAC-12) in Section 4.1.2 (Post-Mining Topography and Land Use Map) if the expected flow velocity is greater than 5 feet per second to ensure drainageway stability. (GAW)
7. The drainageway in the S $\frac{1}{2}$ NE $\frac{1}{4}$  of Section 14, WAC-13, appears to have an average slope exceeding 6 percent between the 1960 and 2060 contour elevations. Please review and revise the drainage gradient if the expected flow velocity is greater than 5 feet per second. (GAW)
8. A segment of drainageway between the 2016 and 2036 contour elevations in the NE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 14, WAC-16, has an 8 percent slope gradient whereas the drainageway gradient between the 1980 and 2040 contour elevations averages approximately 5.5 percent. Please review and revise the post mining topography in this area (NE $\frac{1}{4}$ NW $\frac{1}{4}$  and NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 14) if the expected flow velocity in the drainageway is greater than 5 feet per second. (GAW)
9. A segment of drainageway between the 2020 and 2080 contour elevations in the E $\frac{1}{2}$ NW $\frac{1}{4}$  of Section 10 (western portion of LS-01) appears to have an average slope gradient exceeding 6 percent. Please review the post mining topography in this area to ensure that the drainageway bottom has a gradient that provides for an expected runoff velocity of 5 feet per second or less. Perhaps a hill could be created near the center of the NW $\frac{1}{4}$  of Section 10 to provide a gentler ephemeral stream gradient and space for increased stream meandering in the E $\frac{1}{2}$  of Section 10. (GAW)
10. Runoff from a small watershed in the NW $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 10 is being directed over a 16 percent slope near the center of the E $\frac{1}{2}$  of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ . Please review and revise as appropriate. (GAW)
11. Postmining slopes exceeding 25 percent are proposed in the NE $\frac{1}{4}$  of Section 4 and NE $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 14 in Mine Area 3. In the NE $\frac{1}{4}$  of Section 4, two areas were identified with slopes ranging from 48.4 to 55.5 percent, and a 38 percent slope was identified in the N $\frac{1}{2}$  of Section 14. Please review and alter the topography to reduce slope steepness in these areas. The Reclamation Division is concerned with potential water erosion on reclaimed areas with slopes exceeding 25 percent. We are aware that Revision 29 does not propose topographic changes in Section 4 but believe this issue should be addressed at this time. (GAW)
12. The Reclamation Division is concerned with the length and uniform gradient of slopes exceeding 12 percent in the NE $\frac{1}{4}$ NW $\frac{1}{4}$  and NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 10 in swales where surface water runoff will accumulate. Please consider reducing slope length in this area to decrease the potential for

water erosion. Perhaps concave slopes, secondary drainages, diversions and/or terraces could be used in this and other areas to slow down surface water runoff and reduce the potential for erosion. Please attempt to reduce slope length to less than 300 feet on 21 to 25 percent slopes (200 feet when approaching 25 percent), to less than 400 feet on 18 to 21 percent slopes, to less than 600 feet on 12 to 18 percent slopes, and to less than 800 feet on 9 to 12 percent slopes. The Reclamation Division believes 400 feet at 21 percent and 400 feet at 9 percent is less prone to erosion than one continuous 800-foot slope at 15 percent provided the steeper gradient is at the upper reaches of the watershed. North facing slopes are generally more stable than south facing slopes, so south facing gradients should not exceed 21 percent. (GAW)

13. Section 4.1.2 (Post-Mining Topography and Land Use Map) shows cropland on very steep slopes (> 15%) in the N $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 4, T145N, R88W. Please either revise the land use boundary or the post-mining topography so that cropland is not depicted on areas that will have slopes greater than 9 percent. (GAW)
14. Section 4.1.2 (Post-Mining Topography and Land Use Map) shows cropland on steep slopes (14.1%) in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 3, T145N, R88W. Please either revise the land use boundary or the post-mining topography so that cropland is not depicted on areas with slopes greater than 9 percent. (GAW)
15. Please consider moving stock pond SP-W10-02 to an area not surrounded by steep slopes in the NW $\frac{1}{4}$  of Section 10 to minimize cattle related potential future erosion. Please also consider reclaiming two stock ponds in each quarter in the N $\frac{1}{2}$  of Section 10 to reduce the impacts of cattle trailing to water on steep slopes. (GAW)
16. Please consider moving stock pond SP-W14-03 downstream a few hundred yards to an area where the valley is wider to minimize potential future erosion that would be cattle related. (GAW)
17. Please consider constructing stock ponds in the NE $\frac{1}{4}$  and SW $\frac{1}{4}$  of Section 15 to facilitate prescribed grazing management alternatives during the revegetation responsibility period and after final bond release. (GAW)
18. Please consider swapping the location or size of created wetlands CW-W15-01 and CW-W15-04 to avoid placing a seasonal wetland on the quarter line between the NW $\frac{1}{4}$  and SW $\frac{1}{4}$  of Section 15 where a property boundary and fence may need to be constructed. (GAW)
19. Cropland (hayland) tracts in the SW $\frac{1}{4}$  of Section 11 will not necessarily need to be managed as hayland during the revegetation responsibility period given the slope gradients proposed with Revision No. 29. Please review and revise if warranted. (GAW)
20. The legend in Section 4.1.2 (Post-Mining Topography and Land Use Map) indicates that Coteau is planning to plant replacement  $\frac{1}{4}$  acre shrub plantings and the map contains many small elliptical, purple-colored circles that were previously identified as shrub plantings. It appears the woodland replacement plans approved with Revision No. 24 were not properly carried forward. The Post-Mining Topography and Land Use Map with Revision No. 24 had a pollinator plot symbol in the legend that was a purple-colored elliptical circle. Please revise the legend symbol and map consistent with what was approved with Revision No. 24. (GAW)

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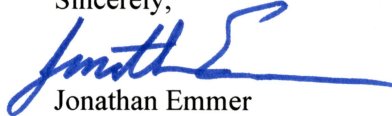
21. The legend in Section 4.1.2 (Post-Mining Topography and Land Use Map) includes the terminology “proposed” rangeland reference areas without a symbol for these sites. Please review and revise to clarify if the reference areas depicted are “proposed” or approved. (GAW)
22. Please review the tree and shrub planting locations in Section 4.1.2 (Post-Mining Topography and Land Use Map) and revise, if necessary, to ensure each site in Mine Area 3 continues to possess the desired slope and aspect characteristics. (GAW)

**Consolidated Bonding Plan**

23. Once the deficiencies above have been adequately addressed, the Reclamation Division will request that the consolidated bonding plan be reviewed and updated to incorporate the changes proposed in Revision No. 29. (SMN, JWE)

If you have any questions, please contact this office.

Sincerely,



Jonathan Emmer  
Director  
Reclamation Division

cc via email only: Mark Wallen (mark.wall@nacoal.com)