

FREEDOM MINE
THE COTEAU PROPERTIES COMPANY

August 21, 2024

Mr. Jonathan Emmer
Director Reclamation
Division Public Service
Commission 600 East
Boulevard Avenue
Department 408
Bismarck, ND 58505-0480

Dear Mr. Emmer:

Revision 29 to Permit NACT-0201 has been uploaded to Permit Services. Deficiencies listed in your July 11, 2024, letter have been addressed, with responses listed below. All changes have been tracked in track changes and highlighted in green.

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

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Revision 29 Technical 1 Response Letter

Coteau Properties Company
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Coteau Properties Company, a subsidiary company of The North American Coal Corporation

Section 2.5.11 – Map
Section 2.7.3 – pg. 2-16
Section 3.1.1.2 – pg. 5; 8
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

All recently approved Revision 28 information has been included in Revision 29 to Permit NACT-0201 as requested. Permit NACT-0201 is now up to date and current.

Section 2.2.8 – Stability Analyses of Reclaimed Drainage Channels

- 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)

Coteau is unaware of any regulator changes to the NDCC or the NDAC since the renewal of this permit earlier this year. Please provide documentation showing watersheds of 40 acre are required to demonstrate compliance with NDCC 38-14.1-24(3). These changes which are being suggested would cause a dramatic restructuring of all PHCs within the state and would require NDAC revisions. Reviewing watersheds in 40-acre tracts may not be the best approach, as the impacts from these areas are already accounted for in the cumulative totals.

- 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)*

Please see previous response.

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)*

The polygons depicting potential post-mining prime farmland have been arranged so as not to obscure the contour lines.

- 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)*

The drainageway between wetlands CW-W15-03 and CW-15-04 was revised.

- 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)*

The drainageway in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 14 was revised.

- 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)*

The drainageway in the S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 14 was revised.

- 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)*

The drainageway in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 14 was updated.

- 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)*

The topography has been adjusted slightly in this area to reduce the gradient from the 4.9 percent it was shown at.

- 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)*

The slopes of the watershed were adjusted slightly, however only this area of the mine had some very steep slopes in the pre-mining state.

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)*

The slopes of the watershed were adjusted slightly, however only this area of the mine had some very steep slopes in the pre-mining state.

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)*

The topographical slopes were adjusted by adding secondary drainages, more concave slopes and broke slope grades.

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)*

Contours were revised to less than 9 percent in cropland.

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)*

Contours were revised to less than 9 percent in cropland.

15. *Please consider moving stock pond SP-W10-02 to an area not surrounded by steep slopes in the NW¼ of Section 10 to minimize cattle related potential future erosion. Please also consider reclaiming two stock ponds in each quarter in the N½ of Section 10 to reduce the impacts of cattle trailing to water on steep slopes. (GAW)*

Stockpond SP-W10-02 has been moved as requested. No additional stockponds were added to the N ½ of Section 10 as Coteau believes the water sources to be adequate based on similar reclaimed sites.

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)*

Stockpond SP-W14-03 has been moved downstream to help minimize potential future erosion.

17. *Please consider constructing stock ponds in the NE¼ and SW¼ of Section 15 to facilitate prescribed grazing management alternatives during the revegetation responsibility period and after final bond release. (GAW)*

Stockponds have been added as requested.

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 NW¼ and SW¼ of Section 15 where a property boundary and fence may need to be constructed. (GAW)*

Wetlands have been changed as requested.

19. *Cropland (hayland) tracts in the SW¼ 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)*

Coteau has reviewed the cropland (hayland) tracts in Section 11 and have decided to keep them designated as hayland as this would provide diversity on the landscape. These areas will possess cropping capabilities if a change to the post-mine land use is decided at a later date.

20. *The legend in Section 4.1.2 (Post-Mining Topography and Land Use Map) indicates that Coteau is planning to plant replacement ¼ 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)*

Section 4.1.2 (Post-Mining Topography and Land Use Map) legend and map have been updated to show the small elliptical, purple-colored circles as pollinator plots as approved with Revision 24.

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)*

The legend has been updated to say “approved” rangeland reference areas, and a symbol has been added as well.

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)*

Coteau has reviewed the tree and shrub planting locations and believe them to be adequate. The locations are similar to what would typically be seen on the landscape under natural conditions.

23. Section 4.1.3 (Pre- and Post-Mining Land Use Comparison Table) has been updated as requested in an email from Mr. Guy Welch.

Acreages should now reflect what is in Permit NACT-0201.

Additional Updates

Section 4.4.2.2 Design Parameters for Post-Mining Wetlands, has been updated to reflect the swapping of wetlands CW-W15-01 and CW-W15-04 in Section 15.

Mr. Jonathan Emmer
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Section 4.5.2.1 Design Parameters for Post-Mining Stockponds, has been updated to reflect the addition of stockponds in Section 15.

If you have any questions, please contact this office.

Sincerely,

THE COTEAU PROPERTIES COMPANY

/s/

Mark Wallen
Environmental Specialist

MAW
Enc.

Uploaded via Permit Services