



# Public Service Commission

## State of North Dakota

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October 3, 2014

Mr. Donn Steffen  
Environmental Manager  
Coyote Creek Mining Company  
204 County Rd. 15  
Beulah, ND 58523

Dear Mr. Steffen:

The Reclamation Division has reviewed Coyote Creek Mining Company's September 16, 2014 response to our August 25, 2014 technical review letter regarding the application for Surface Coal Mining Permit NACC-1302 for the Coyote Creek Mine. The following items must be satisfactorily addressed before the Reclamation Division will recommend Commission action on this permit application.

### **Section 1.5.3 – Surface and Coal Ownership Map**

1. As discussed with Coyote Creek Mining Company staff, please correct the surface lease status labels for North Dakota Department of Trust Lands ownership of Tracts 62, 63, 64, 65, and 66 on Section 1.5.3 (Surface and Coal Ownership Map) that incorrectly indicates that the surface for these tracts is unleased. (WTG/RLK)

### **Section 2.2 – Surface Water Hydrology**

2. Follow-up to Item No. 4: With the narrative that was added to Section 2.2.1, the following sentence does not seem necessary: *“To observe all headwater intermittent and ephemeral drainageways more frequently or to install and maintain instrumentation would be cost prohibitive and would not add materially to our knowledge of them given the variability of flows between years.”* Consider removing to provide better continuity between the general discussion on stream/drainage observations and the more specific stream flow information provided later in the narrative. (RLK)
3. Follow-up to our August 7, 2014 letter: In Section 2.4.4, please explain the rationale used for the bottom width assumptions (28 feet and 42 feet) for the main drainages with watersheds greater than 200 acres in size when calculating velocities for the proposed post-mining conditions. Please also discuss how the widths used in the modeling calculations compare to actual widths of the typical pre-mining drainage channels having similar sized watersheds. (JRD)
4. Follow-up to our August 7, 2014 letter: The drainage channel for watershed 06 shown on the Post-Mine Ephemeral Drain Map, Section 2.2.4.4, has a short segment located between CW-06-01 and

SP-06-01 that is substantially steeper than the average channel slope of 2.52 percent provided in the ephemeral drain summary. Please modify the proposed slope in the steep section so it is closer to the average slope. (JRD/RLK/BAJ)

5. Follow-up to our August 7, 2014 letter: Profiles of the pre- and post-mining drainage centerlines were added for four drainages in the western portion of the proposed permit area, with a statement in the Section 2.2.4 narrative that they are similar to the pre-mine state. However, the slope at the lower end of Profile 1 is quite a bit steeper than the pre-mine conditions. Please revise the statement accordingly and add a statement that this drainage will be farther evaluated before mining begins in this portion of the permit area.. (JRD)

### **Section 2.3 – Ground Water Hydrology**

6. Follow-up to Item 13 – Table 2.3.2.1 was revised to add a statement that the S. Unruh spring in Section 34, T143N, R89W, which had flows up to 3-5 gallons per minute in 2013, has insignificant contributions to Stock Pond DWR-NE34-1-143-89. However, the spring is located about 250 feet upstream of the pond. Considering the slope in this area and the closeness of the spring to the pond, it seems most of the spring flows would be reach the pond as indicated in Section 2.2.3.1 with the “spring-fed” comment. Also, Developed Water Resources narrative in the second paragraph on page 24 of Section 2.7.2 describes the premine stockpond in the NE1/4 of Section 34 as “likely having better water quality than most of the other stockponds in the permit because it is partially supplied by an old developed spring” (SPG-NE34-1-143-89). Please review and further explain what new information was obtained to warrant the recent change to Table 2.3.2.1. (JRD/BEB)

### **Section 2.4 – Pre-Mining Land Use and Vegetation**

7. Follow-up to Item No. 16 and 17: Sampling data is included in Section 2.4.11.4 for depressional wetlands WS-SW25-1-143-89 and WT-SE35-2-143-89 but wetland sample sites are not depicted for these two wetlands on the Pre-Mine Land Use and Vegetation Map, Section 2.4.3. Please revise to include all wetland sample sites so the information listed on the map is complete. (GAW)
8. Follow up to Item No. 21: The Reclamation Division continues to have concerns about the delineated width of the pre-mine wetlands which ultimately affects the pre-mine land use acreage. The AutoCAD file that was provided to the Reclamation Division incorrectly shows that linear wetland WS-NW6-2-142-88 is only about 7.5 feet wide but drawing in Section 2.4.11.3.b documents that the wetland is actually 24 feet wide. The CAD file incorrectly shows wetland WS-SW1-1-142-89 as only being 5 feet wide but the sample site drawing shows that it is actually 21 feet wide. Wetland WS-NE2-1-143-89 is depicted as being only 8 feet wide but the drawing in Section 2.4.11.3.b shows that it is actually 36 feet wide at the sample location. Similar width discrepancies exist with all of the sampled wetlands. Please review and revise to accurately depict the wetlands on the Pre-Mining Land Use and Vegetation Map, Section 2.4.3, and revise Tables 2.4.2, 2.4.11.1, 2.4.11.2 and 4.1.3 accordingly. This of course will also require changes to Section 4.1.2. And, as previously stated, the Reclamation Division requests re-evaluation of the wetland determination for the drainage way located in the S1/2 of the SW1/4 of Section 1 that is mapped 49B, Playmoor. It is also unclear why the lower reaches of the large watersheds in Sections 3 and 31 where woodlands exist are not considered wetlands when the extensive of drainage ways above these areas are considered seasonal wetland. This should be reviewed and revised or at a minimum explained. NDAC 69-05.2-08-08(1)(a)(5)(b) and NDAC 69.05.2-05-02. (GAW)

**Section 2.5.4 – Soil Volume Methods**

9. As discussed with Coyote Creek Mining Company staff, please remove the column titled "Saturation Percentage (SP)" in the page 1 table of Section 2.5.4 (Soil Volume) displaying the required soil respread thickness based on graded spoil properties. Saturation percentage was removed from the criteria of graded spoil properties used to determine soil respread thickness with amendments to NDAC 69-05.2-15-04(4) effective May 1, 1999, although an irrelevant reference to the criteria is retained in NDAC 69-05.2-15-04-4(a)(2)(b). (WTG)
10. As discussed with Coyote Creek Mining Company staff, please correct totals for the Summary by Landowner table in Section 2.5.4.1 (Soil Volume by Landowner) as necessary because multiple parcel ownership subtotals were inadvertently included in the summation calculations. (WTG)
11. Please define footnote 4 on page 2 of Section 2.5.4.1 (Soil Volume by Landowner) or remove it from the CCMC landowner entry on both tables. (WTG)
12. As discussed with Coyote Creek Mining Company staff, and as noted in a related deficiency for Section 2.5.7 (Projected Soil Respread Depth Map), please update Section 2.5.4.2 (Soil Respread Depth Table) to add ownership parcel acreage and corresponding soil data for portions of the SE¼ of Section 23 and the SW¼ of Section 24 (T143N-R89W) within the mining disturbance limit that are currently not included in Section 2.5.4.2 or depicted with projected soil respread depths on Section 2.5.7. (WTG)

**Section 2.5.7 – Projected Soil Respread Depth Map**

13. As discussed with Coyote Creek Mining Company staff, please make the following updates to Section 2.5.7 (Projected Soil Respread Depth Map) to improve its clarity: (a) label the overburden sample holes with a darker bold font and add a symbol and descriptor for the holes to the legend; (b) revise the line color for the mining disturbance limit for the first permit term to give the line a more prominent appearance; and, (c) add the fill pattern to the prebench boundary symbol in the legend. (WTG)
14. As discussed with Coyote Creek Mining Company staff, please update Section 2.5.7 (Projected Soil Respread Depth Map) to provide projected soil respread depths and glacial till thickness contours throughout the mining disturbance limit in the SE¼ of Section 23 and the SW¼ of Section 24 (T143N-R89W), and to depict and label overburden sample holes on which the projected soil respread depths are based where they have been completed. No overburden sample holes have been completed to date for federal coal ownership in the SW¼ of Section 24 so we assume that parcel to be projected at the 48 inch SPGM respread depth as described on page 2 of Section 2.5.4. (WTG)
15. As discussed with Coyote Creek Mining Company staff, please update Section 2.5.7 (Projected Soil Respread Depth Map) to depict and label overburden sample hole CC12069C in the NE¼NW¼ of Section 26 (T143N-R89W) on which 15.46 acre parcel of projected 24 inch SPGM respread depth is based. (WTG)

**Section 3.1 – Operations-General**

16. Please review Section 3.1 Operations- General in the electronic permit. Currently, clicking on Section 3.1.1.4 Coal Production Schedule in the table of contents opens Section 3.1.1.8.4 - Equipment

Hour Summary (incorrect version) and clicking on 3.1.1.5 - List of Equipment opens the Revegetation Cost Summary - Section 3.1.1.8.5 (incorrect version). The updated versions of these two documents are in the permit in their appropriate sections, but the Coal Production Schedule and the Equipment List are missing from the permit. Please reinsert the Coal Production Schedule and the Equipment List from the version of the application that was deemed complete. (ZAB)

### **Section 3.1.1 – Operations/Reclamation Narrative**

17. Follow-up to Item No. 44: NDAC 69-05.2-16-07(4) requires that the natural riparian vegetation on the banks of streams be restored or enhanced and that the profile be restored that approximates the pre-mine channel. Please revise the new paragraph added at the end of Section 3.1.1 to clarify where detailed information exists in the permit that properly characterizes the vegetation and stream channel profile where disturbance is planned so that the applicable performance standard can be determined. The general information presently provided in Section 2.4.2 and Section 2.2 is insufficient. (GAW)
18. A sentence in the first paragraph on page 2 of Section 3.1.1.1 – Soils Handling Narrative, states *If the permit area does not have a large amount of sodic spoil exposed, which would be expected based on Section 2.5.2, there will not be a shortage.* This does not agree with the information presented in Section 2.1.7, Section 2.5.4, Section 2.5.7 and Section 2.5.2. Please revise as appropriate. This item was included as Item 135 from the June 17, 2014, letter and does not appear to have been addressed in the deficiency response. (RLK)
19. Follow-up to Item No. 34: As previously requested, please add a discussion in Section 3.1.1.2 Mining Method Narrative, to clarify how the 2019 and 2023 pits in Section 6 will be mined as required by NDAC 69-05.2-09-01(1). The wording “box cut” is labeled on these pits but it is not clear where the overburden will be temporarily or permanently stored. And, as previously requested, please identify the coal removal subareas within these annual pit removal areas on the Pit Layout and Facilities Map, Section 3.1.3, as required by NDAC 69-05.2-09-02(3). (GAW)
20. Follow-up to item No. 38: Please review the legal description for Section 25 listed under the Legal Description of the 1st Incremental Bond Area in Section 3.1.1.8. Please correct the typographical error in E1/2W1/2E/12 to E1/2W1/2E1/2. Also please correct the typo in the title *Legal Description of 2st Incremental Bond Area/Worst Case Bond.* (ZAB)
21. Appears that the *Pit Layout and Facilities Map* depicts different associated disturbance limit than the disturbance and seeding boundaries shown in Maps 3.1.1.8.6, 3.1.1.8.7, 3.1.1.8.8. Please update the reclamation cost estimate using the area depicted in the *Pit Layout and Facilities Map* and make the necessary changes in the calculations. (FSE)

### **Section 3.1.3 – Pit Layout and Facilities Map**

22. Please place the colored, hatched layers that represent state land, federal coal, variance areas, etc. underneath all of the other layers of information that is depicted on the map. Much of the detailed, smaller font text and other important information such as the sediment pond and cultural resource site identification labels provided on the map are currently illegible because the hatching and, in some cases, the mining disturbance limit line covers up the information. Please revise to provide clarity. NDAC 69-05.2-05-02(1) (BEB/GAW)

23. Follow-up to Item No. 33, 34 and 40: Please revise the Pit Layout and Facilities Map, Section 3.1.3, to clearly depict the spoil placement areas as required by NDAC 69-05.2-09-02(3). It is not clear if spoil is planned to be placed on the steep slopes and wooded drainages located in the SE1/4 of Section 24. Please also revise Section 3.1.1.2, Mining Method Narrative, to discuss avoiding disturbance to the woodlands located beyond the coal removal boundary in the SE1/4 of Section 24 and discuss how Coyote Creek LLC will avoid or minimize disturbance to the steep slopes and woodlands in this area. This should include consideration given to using other mining methods (other than a dragline). (GAW)

### **Section 3.1.5 – Post Mine Topography Map**

24. Follow-up to Item No. 41: As previously requested, please revise the proposed postmine topography so that runoff from the northern portion of the SE1/4 of Section 36 will flow eastward and not over recreated steep slopes located in the S1/2 of the NE1/4 of Section 36. In other words, please modify the proposed postmining topography to restore the drainage pattern in this area as it presently exists. A recent site visit verified that this portion of the subwatershed flows to the east and not to the north. NDCC 38-14.1-24(3) GAW
25. Follow-up to Item No. 42: As previously requested in Item No. 169 of our letter dated June 17, 2014, please reduce the steepness of the slope in the drainageway located in the northeast corner of Section 25 commensurately with the proposed increased size of the watershed. A portion of this drainage way has slopes exceeding 16% which is higher than that which existed prior to mining and the watershed size is being increased from 44 acres to 63 acres (watershed CC-05). Please also revise the postmining topography of the land to be disturbed in the SE1/4 of Section 24 to include at least the same number of secondary drainages as were present prior to mining (16) to ensure that increased volumes of runoff is not being concentrated in fewer drainage ways. (GAW)
26. Follow-up to Item No. 41 and 42: A very steep slope (37.5%) is proposed in the bottom of a drainage way in the NW1/4 of Section 26 (CC-15). Please revise to reduce the steepness of the drainage bottom to ensure stability. (GAW)
27. Follow-up to Item No. 41 and 42: Please revise the drainage way proposed in the NE1/4 of Section 27 so that runoff from Section 26 will clearly pass through the drainage way and not over a steep slope. As currently depicted, the drainage way in NE1/4 of Section 27 does not line up with the drainage way in the NW1/4 of Section 26. (GAW)

### **Section 3.2 – Transportation Facilities**

28. Follow-up to Item No. 48: The original deficiency item requested more detail on the methods used to calculate peak discharges to the Coyote Creek box culverts. Please include the land use, curve numbers and time of concentrations for each watershed, and any other details or assumptions used in the modeling of the watersheds. (BAJ)

### **Section 4.1 – Post-Mining Land Use and Revegetation**

29. Follow-up to Item No. 62: Please revise the Post-Mining Topography and Land Use Map, Section 4.1.2, to delineate areas of “potential cropland” within each tract of reclaimed native grassland commensurate to that which existed pre-mining and revise Section 4.1.1 to mention that the soils handling plan will address SPGM respread depth on these potential cropland areas to ensure that the

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pre-mine capabilities of the land is being restored. Comparing average pre- and post-mining slopes does not fulfill the requirements of NDCC 38-14.1-24(2). The detailed soil survey shows that areas with important farmland soils have greater topsoil depths than typically is respread on reclaimed native grassland and this potential must be restored. (GAW/WTG)

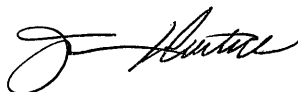
**Section 4.2.3 – Trees and Shrubs**

30. Follow-up to Item No. 59: Silver buffalo berry is listed twice in the Tall Shrub Woodlands planting mixture. It would appear that 5% of the mixture should be Silverberry rather than Silver Buffalo berry. Please review and revise as necessary. (GAW)

If any additional surface owner landowner preference statements have been received since the application was submitted, please include use preference statement and make any related updates to the permit application.

Also, the Commission's 120 day review remains suspended until a complete response to the above technical review items is received. If you have any questions, please contact our office.

Sincerely,



James R. Deutsch  
Director  
Reclamation Division

cc: Mercer County Auditor