



Public Service Commission

State of North Dakota

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July 28, 2010

Mr. Joe D. Friedlander
Environmental Manager
Coteau Properties Company
204 County Rd. 15
Beulah, ND 58523

Dear Mr. Friedlander:

The Reclamation Division has completed its technical review of the application for Revision 8 to Surface Coal Mining Permit NACT-0201 for the Freedom Mine. The following deficiencies were noted and need to be addressed prior to the Reclamation Division recommending Commission approval of the revision.

Section 1.0 – Introductory, Legal, Financial, Compliance, and Related Information

1. In Section 1.3.3, Schedule of Violations, please remove the information for the Indian Head Mine since it has been totally bond released for more than 5 years and no longer needs to be listed. (SAS/MDB)
2. Compliance information is not provided in Section 1.3.3, Schedule of Violations, for the two mines operated as the wholly-owned subsidiaries of North American Coal, namely the Eagle Pass Mine (Dos Republicas Coal Partnership) and for the Five Forks Mine (Five Forks Mining, L.L.C.). NDCC 38-14.1-14(1)(g) requires the information for any violations "...incurred by the applicant in connection with any surface coal mining operation...". It appears the compliance information for these operations should be provided since both operations are listed in Section 1.3.2 and North American Coal is the operator for both mines. (SAS)
3. In Section 1.5.1, Permit Area Surface and Coal Interests, please update the mailing addresses for Arthur and Hertha Reinhardt (Tract 72) and Robyn Wonnemberg (Tract 81) as the addresses provided in the permit are incorrect. Revision notices mailed by the Reclamation Division to these addresses were returned. (MDB)

Section 2.0 – Environmental Resources Information

4. In Section 2.2.4, Surface Water Probable Hydrologic Consequences, the PHC discusses increased flows and volumes of various watersheds; however, it does not include a discussion of decreased flow volumes, some of which are fairly significant such as those in watersheds WAC-01 and WAC-08. A decrease in volume can also adversely affect downstream landowners by diminished water supplies for domestic, agricultural, industrial or other uses. Please discuss any downstream effects due to decreased flow volumes in the previously mentioned watersheds per NDAC 69-05.2-08-04 (4)(c). (MDB)
5. As proposed on the post-mining topographic map, many of the secondary drainages in the initial pit areas have longer steeper slopes than what occurred prior to mining. Please provide calculations in Section 2.2.4, Surface Water Probable Hydrologic Consequences, showing that the velocities on these drainages are not erosive for a high intensity short duration storm event, such as the 25-year, 6-hour event. (JRD)
6. Please revise the narrative in Section 2.2.7 to eliminate the reference to special monitoring for Harmony Lake and water quality sampling at Lake Sakakawea because these monitoring requirements were removed from the Consolidated Surface Water Monitoring Plan with Revision 6 to Permit NACT-0401. (BEB)
7. The following tract surface ownerships listed in Table 1 in Section 2.5.6.1 do not agree with Section 1.5.1. Please correct as needed for the following tracts: 3, 4, 6, 14 (misspelled also?), 17, 20, 21, 23, 25, 26, 34, 42, 54, 61, 63, 74, 86, 105, 106, and 107. Most of these tracts appear to have been purchased by Coteau but several tracts list only one owner in one section of the permit and more than one owner in the other section of the permit. (SAS)

Section 3.0 – Operations Plans

8. In Section 3.1.1.2, Mining Methods Narrative, please include a narrative detailing the plans for the equipment pad/water load-out/scoria stockpile area located in the E½ of Section 36 and the W½ of Section 31. (MDB)
9. In Section 3.1.1.3, Reclamation Procedures and Schedule, please update the projected Reclamation Time Schedule as necessary. (MDB)
10. The post-mining topography and material balance is based on 5,212 acres (page 5 of 3-1-1-3) which represents the first 20 years of mining, but the area slope comparison was done on 5,428 acres (page 9 of 3-1-1-3). The latter map for the slope analysis (Section 3.1.5) shows it was based on the line of disturbance. Please explain and/or correct as necessary. (SAS)

11. Please update Section 3.1.1.5, List of Equipment, to include the addition of the 937 shovel and trucks per NDCC 38-14.1-14(2)(g). (MDB)
12. Please depict and label on the Pit Layout and Facilities Map, Section 3.1.3, the recently-constructed West Antelope Creek crossing that is located in the N½ of Section 26, T145N, R88W. (BEB)
13. The actual pits that have already been mined need to be depicted on the Pit Layout and Facilities Map, Section 3.1.3, by the year of mining. (JRD)
14. A future overburden stockpile is depicted within 500 feet of an occupied dwelling in the SE¼ of Section 33 on the Pit Layout and Facilities Map, Section 3.1.3. Please provide a written waiver from the owner of the dwelling to allow mining operations with 500 feet of the occupied dwelling per NDAC 69-05.2-04-01.4(2) or relocate the overburden stockpile such that it is not within 500 feet of an occupied dwelling. In addition, a 500-foot setback is depicted around two cultural resource sites, 32ME293 and 32ME742, but a haul road is depicted crossing through these sites. The Pre-Mining Topography and Existing Structures Map, Section 3.1.2, indicates that these are abandoned farmsteads and the Cultural Resources Section indicates that these sites are not significant. Please correct as necessary. (MDB)
15. Several overburden stockpiles are shown outside the disturbance boundary in Sections 10, 12, 14, 22, and 33. Please justify disturbing additional lands for stockpiling overburden. NDAC 69-05.2-13-05. (MDB)
16. Please indicate somewhere in the permit the location of the cross-section reference map for the cross-sections that are provided on Sheets 1 and 2 of Section 3.1.6, or alternatively re-label the Post-Mining Topography Development Map of Section 3.1.9 to indicate that this map now contains the cross-section reference locations. (BEB)

Section 4.0 – Post-Mining Land Use and Revegetation

17. In Section 4.1.2, Post-Mining Topography and Land Use Map, it appears a large portion of the overburden stockpile in the SE¼ of Section 31 will be left as hill (generally 20 to 40 higher than the pre-mine contours), including a small portion that is located outside of the mine disturbance boundary. It also appears that part of the haul ramp in the NW¼ of Section 31 is not being completely filled in to serve as a large drainage through this area. Please modify the post-mining topography in these two areas to remove some of the excess material in one area and to place additional fill in the other. (MDB)
18. Since much of the post-mining cropland will be located on the upland areas above the steep slopes, please indicate how farmer access will be provided to these cropland areas. Considering the large equipment that many farmers currently use, we are concerned that farmer access may not be possible on some of the section lines that are

typically used for access. Some modifications to the post-mining topography along the section lines (such as the north-south section line between Sections 25 and 26) appear necessary to provide suitable access to some of the reclaimed cropland. (DKM)

19. Please revise the Post-Mining Topography and Land Use Map, Section 4.1.2, to show how the post-mine topography will accommodate the proposed post-mine created wetlands. In some instances, the size and shape of the proposed wetland basins cannot be created on associated disturbance areas without significant topographic changes. For example, it appears that significant topographical changes would need to be made in the drainageways in the S $\frac{1}{2}$ of Section 31 and the NE $\frac{1}{4}$ of Section 8 to accommodate the proposed wetlands and these areas are outside of the mining disturbance boundary as depicted on the map. Please revise to show how the post-mine topography will accommodate the proposed created wetlands. The topography outside of the mineral removal or mining disturbance boundary should not be altered solely to accommodate a wetland. NDAC 69-05.2-09-13 & NDCC 38-14.1-14(2)(f). (GAW)
20. Please revise the Post-Mining Topography and Land Use Map, Section 4.1.2, to lower or relocate the hill that is proposed on the section lines between Sections 3, 31 and 36. Post-mining slopes along this east-west section line need to be reduced to ensure the reclaimed cropland tracts proposed in the SW $\frac{1}{4}$ of Section 31 and NE $\frac{1}{4}$ of Section 3 are accessible by farm equipment and trucks. Since it appears this hill will be created as a result of prebenching operations to the southwest, some of this material can instead be placed further to the north or south so not to create a steep sloping hill on the section line. (JRD)
21. As proposed on the Post-Mining Topography and Land Use Map, we do not believe it is appropriate to locate reclaimed cropland, including potential prime farmland, in the two drainageways that converge in the NE $\frac{1}{4}$ of Section 6. (This tract is currently owned by Donald and Caroline Boeckel.) These drainages have large contributing watersheds and it would not be practical to farm through the drainage bottoms and adjoining areas. We recommend Coteau consider placing this cropland acreage in the upland area in the W $\frac{1}{2}$ of the SE $\frac{1}{4}$ of Section 6 which is also currently owned by Donald and Caroline Boeckel. (JRD)
22. In Section 4.1.2, please move proposed created Wetlands CW-W36-04, CW-W31-02 and CW-W35-02 off of the section line rights-of-way. (GAW)
23. Wetlands in the NE $\frac{1}{4}$ of Section 8 will be affected by associated disturbance activities (Pond P-W08-02) according to the Pit Layout and Facilities Map, but this acreage is listed, labeled and depicted as Not Disturbed (ND) wetland acreage. Please review and update as necessary to eliminate the inconsistency. (GAW)

24. The residential land located near the center of Section 3, Tracts 3, 4 and 5, is shown on the Post-Mining Topography and Land Use Map but Table 4.1.3, Pre- and Post-Mining Land Use Comparison Table, indicates that residential land is not going to be reclaimed on these tracts. The Pit Layout and Facilities Map indicates most of the residential land is being disturbed by mining activities. Please review and correct as necessary. (GAW)
25. The woodlands associated with the drainageway (West Antelope Creek) in the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 26 are not shown on the Post-Mining Topography and Land Use Map and it appears these woodlands are outside of the associated disturbance boundary according to the Pit Layout and Facilities Map. If these woodlands are not going to be disturbed, they should be shown on the Post-Mining Topography and Land Use Map. Please review and revise as necessary. (GAW)
26. Page 6 of Section 4.1.5 states that Coteau will plant 5 acres of woodlands on each quarter of land in Section 36 except for the SW $\frac{1}{4}$; however, there does not appear to be 5 acres of woodlands being replaced in the NE $\frac{1}{4}$ of Section 36. Please revise the Post-Mining Topography and Land Use Map accordingly. (GAW)
27. Please revise the western snowberry symbol on the Post-Mining Topography and Land Use Map, Section 4.1.2, so that these plantings can be distinguished from the woodlands. The symbol was changed from what was previously approved and the new symbol is much more difficult to distinguish. (GAW)
28. Please review the woodland symbol depicting the woodland in the SE $\frac{1}{4}$ of Section 31 on the Post-Mining Topography and Land Use Map. It appears that the woodland boundary is in one location and the fill pattern is in another location. Please make the necessary corrections. (GAW)
29. Please label the native grassland land use in at least every section on the Post-Mining Topography and Land Use Map to provide clarity. This land use is not labeled in Sections 2, 3, 4, 25, and the S $\frac{1}{2}$ of Section 32. Also, the color used for the labels and land use boundaries needs to be bolder to make the map easier to read. (GAW)
30. The native grassland that is currently located south of the topographic disturbance boundary in the southwest portion of the cropland/hayland in the NE $\frac{1}{4}$ of Section 4 is too steep to accommodate the proposed land use change. Please retain the pre-mine land use in this area. (GAW)
31. Coteau states in Section 4.4.1 that rock-check dams may be placed across the drainage bottoms to create mesic pockets. It has been our experience that simply placing rocks in the bottom of the drainage does not necessarily aid in erosion prevention as the water filters through the rocks it erodes the materials under and around the rock check dams, creating erosion on the down slope side of the dams. It

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is recommended that a shallow trench actually be excavated and rocks of various sizes be placed into the trenches which seem to lessen the erosion effect. (MDB)

As part of your response to these items, please include the AutoCAD file of the post-mining topography proposed by this revision. Enclosed are copies of the letters that we have received from advisory committee members. If you have any questions, please contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Deutsch". The signature is fluid and cursive, with a large initial "J" and "D".

James R. Deutsch
Director
Reclamation Division

Enclosures

cc: Mercer County Auditor w/o encl.

m/Freedom/0201/Revisions & Renewals/No. 8/tech1_7-28-10