



Public Service Commission

State of North Dakota

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September 10, 2013

Jay M. Volk, Ph. D
Environmental Manager
BNI Coal, Ltd.
2360 35th Avenue SW
Center, ND 58530-9499

Dear Dr. Volk:

The Reclamation Division has reviewed BNI Coal, Ltd.'s July 8, 2013 changes to the application of Revision No. 12 to Permit BNCR-9401 at the Center Mine submitted in response to our June 13, 2013 technical review letter. The following items must be satisfactorily addressed before the Reclamation Division will recommend Commission action on the revision application. Please note that most items are in follow-up to numbered items in our June 13, 2013 letter although some new items are included as the result of other changes made to the revision application by BNI.

Section 3.3 Groundwater

1. Follow-up to item No. 3: The June 13, 2013 deficiency requested that the General Drainage Map (Plate 3.4-1) be linked with the provided text regarding Hagel Coal Seam depth compared with topographic elevations of Hagel Creek and Square Butte Creek; however, a link to Appendix 3.4-1 was requested in the deficiency which was incorrect and is our mistake. Please re-direct the Appendix 3.4-1 link that was added to the text to Plate 3.4-1, which is the correct location of the General Drainage Map. (BEB)

Section 3.4 Surface Water

2. Follow-up to item No. 8 (original item No. 50): The last sentence added to the narrative in Section 3.4.3 regarding potential changes in post mine runoff quantities needs to be revised because it provides no indication of how the landfill may influence the post mine runoff from the permit area. (RLK)

Section 3.5 Pre-mining Land Use

3. Follow-up to item No. 9: In the introductory sentence to the Revision 12 Acreage table on page 3.5-2, please change Section NE4 5-141-83 to NE4 Section 5-141-83 for better clarity. (ZAT)
4. Follow-up to item No. 15: In Table 3.5-3 the cropland acres listed for Section 8 Minnkota under the Norde Lunde Survey tabulation exceeds the total number of acres originally permitted in Section 8 and acreage provided in Appendix 4.12-3. Also the Section 5 Minnkota acreage appears to be substantially less than the cropland acres remaining in Section 5 and the acreage provided in Appendix 4.12-3. Please review and revise as appropriate. (RLK)
5. Follow-up to item No. 20: Please revise Table 3.5-6 to include the woodland types of Woodlands 1-7. The N/A description in the table states that the woodland types of these woodlands were not specified but the species information in Appendix 3.6-1 clearly shows that Woodlands 1, 2 and 6 are deciduous woodland communities, while woodlands 3, 4, 5 and 7 are tall shrub communities. Please update Table 3.5-6 accordingly so that information for the permit area is consolidated and complete as required by NDAC 69-05.2-05-02. (GAW)
6. Follow-up to item No. 23: Since low shrubs have been added to Table 3.5-6, please add low shrub to the second sentence on page 3.5-9, paragraph three. The sentence should read similar to, "These are classified as low shrub, tall shrub, or deciduous vegetation communities." (ZAT)
7. Follow-up to item No. 27: As a result of changes made to the Revision 12 acres and Table 3.5-1 (adding woodlands), Table 3.5-8 on page 3.5-12 needs to be adjusted. The Section 5 total acreage should be 18.58 and the Total Acreage should be 19.21 to be consistent with the totals on the pre-mine land use table. Also, please change the range number from 84 to 83 in the land descriptions for Sections 5 and 32 in the first sentence of the tame pasture narrative on page 3.5-12. (ZAT)

Plate 3.5-1 Pre-Mine Land Use

8. Woodlands #17 - #23 that were added in the latest submittal need to be depicted and labeled on Plate 3.5-1, Pre-Mine Land Use. (ZAT)

Section 3.6 Pre-mining Vegetation

9. Follow-up to item No. 42: The second paragraph on page 10 of Section 3.6, Pre-Mine Vegetation, states that woodland plant density and herbaceous understory samples were taken in 2010 and 2011 but data is included in Appendix 3.6-3 showing that additional sampling occurred in 2013. Please review and update as necessary. (GAW)

Plate 3.6-1 Ecological Sites Map

10. Follow-up to Item No. 46: Please revise Plate 3.6-1 to delineate the mapping unit boundaries of each ecological site listed on the map. This includes the sampled sites in NW¼ of Section 8, NW¼ of Section 5, and the sites in Figure 2 embedded within Plate 3.6-1. (GAW)

Plate 3.6-2 Woodlands

11. It appears that woodlands 18 and 19 are labeled incorrectly on Plate 3.6.2 as this plate identifies woodland 18 as a small tall shrub community and 19 as a larger low shrub community but Table 3.5-6 indicates that woodland 18 is a low shrub community (0.1 acres in size) and woodland 19 as a tall shrub community (0.01 acres in size). Please review and correct as necessary. (GAW)
12. Please revise Plate 3.6-2, Woodlands, to clarify where woodland samples were taken. It appears that the colored circles may depict sample locations but this symbol is not identified in the map legend. Please review and revise accordingly. (GAW)
13. Please revise Plate 3.6-2, Woodlands, to depict Woodland No. 3 on the map. A red font "No. 3" is shown on the map but the woodland location is not depicted. (GAW)
14. Please revise Plate 3.6-2 to depict the location of the stockpond that is labeled east of the butterfly ash pit. (GAW)
15. A partial sentence at the bottom of Plate 3.6-2 states "found in [Appendix 3.6-1] and #8 - #16 can be found in [Appendix 3.6-3]". Please clarify what is meant by this incomplete sentence. (GAW)

Appendix 3.6-3 Woodland Density and Cover Data

16. Follow-up to item No. 44: Please provide an assessment of the relative abundance of low shrub species not considered woodlands in the native grassland and tame pastureland land uses. No low shrub species are listed in the native grassland similarity index sheets in Appendix 3.6-4 but the Reclamation Division is aware that western snowberry is quite prevalent in the native grassland being added with Revision 12. Please revise as necessary to fulfill the requirements of NDAC 69-05.2-08-08(1)(d). (GAW)
17. A sentence in the first paragraph of Appendix 3.6.3 states that there are two woodland community types but all three community types are listed. Please correct this inconsistency. (GAW)

18. The Low Shrub Vegetation Type, Table 1 of Appendix 3.6-3, states that a 2 meter by 2 meter quadrant was used but the species density calculations indicate that a 4 meter by 4 meter quadrant was used (16 m²). Please review and revise accordingly. (GAW)

Appendix 3.10-2 Fish and Wildlife Monitoring Plan, Correspondence, KDK Wildlife Study Report (2010), and Minnesota Power Whooping Crane Study (2008)

19. Follow-up to item No. 62: Appendix 3-10-2 is entitled “Baseline Wildlife Inventory/Monitoring Plan, Map, and Correspondence, KDK Fish and Wildlife Study Report (2010), Minnesota Power Whooping Crane Study (2008)”. Please consider entitling this Appendix as the Fish and Wildlife Resources Report (2010) as listed at the top of page 1 of Section 3.10-2 and include bookmarks for the various sections within this appendix. (GAW)
20. Follow-up to item No. 62: Please change the wording “Wildlife Monitoring Plan” from the bookmark section of Appendix 3.10-2 to “Baseline Wildlife Inventory Plan” to avoid confusion with BNI’s Wildlife Monitoring Plan which is in Section 4.13 of the permit. (GAW)
21. Follow-up to item No. 69: Please revise the Significant Ecological Communities discussion that begins on page 21 of Appendix 3.10-2 to clarify if the deciduous woodland in the Revision 12 addition area is a “Significant” Green Ash Upland Woodland Ecological Community according to NDNHI. (GAW)
22. Follow-up to item No. 69: Please revise the last full sentence on page 21 of Appendix 3.10-2 to clarify whether or not any buckbrush communities in the study area meet the height requirements to achieve the Significant Ecological Community status. (GAW)
23. Follow-up to item No. 69: Please revise the sentence in the third paragraph on page 23 of Appendix 3.10-2 that states “The current mining plan appears to minimize any disturbance in these communities”. Significant Ecological Communities should be avoided and NDAC 69-05.2-09-17(1) and NDAC 69-05.2-13-05 requires minimizing disturbance and using the best technology currently available. Please review the current mining plan and make a definitive assessment on BNI’s plans to minimize disturbances to significant ecological communities. (GAW)

Appendix 3.10-9 Grouse and Pheasant Data Tables

24. Follow-up to Items 72, 73 and 74: Please revise Tables 1, 2, 3 and 4 to include average observation values for the approved study area. Refer to Appendix 3.10-2 to determine the area that the approved study area encompasses. (GAW)

Plate 4.1-1 Pit Layout and Facilities Map

25. Plate 4.1-1, Pit Layout and Facilities Map, depicts two parallel pink lines that appear to be a road passing through the NW¹/₄NE¹/₄ of Section 5 but this feature is not identified in the legend. Please review and clarify what this feature is representing. (GAW)

Section 4.5 Transportation Plan

26. Follow-up to item No. 81: Please remove any references to using subsoil for haul road construction in Section 4.5 because the Reclamation Division has determined that it is not appropriate to use subsoil for haul road construction in BNCR-9401 for the following reasons: (WTG/FSE)
- a. Option 1 of Policy Memorandum No. 17 (salvage and respread all available suitable plant growth material) is the method that will be used for SPGM removal and redistribution in BNCR-9401.
 - b. Subsoil loss is predictable as spoil and subsoil are comingled during haul road construction and road surfacing material is removed from the subsoil stockpile during haul road reclamation.

Section 4.6 Surface Water Management Plan

27. Follow-up to item No. 79: Pond 5-7 is proposed in a wooded draw within 100 feet of an intermittent stream. Please provide justification for the location and need for this pond. The Pit Layout and Facilities Map and the Surface Water Management Plan map indicate that the only new mining related disturbance planned in the 35.9 acre watershed is a haul road. NDAC 69-05.2-16-04(1)(d) clarifies that the disturbed area (requiring control with a sedimentation pond) shall not include areas in which only diversion ditches, sediment ponds or roads are installed ... and the upstream area is not otherwise disturbed by the operator. Furthermore, sufficient justification has not been provided to affect lands within 100 feet of an intermittent stream (NDAC 69-05.2-16-20). The requirements of NDAC 69-05.2-09-17(1) and NDAC 69-05.2-13-05 also require minimizing disturbance to important habitat and the use of the best technology currently available. We do not believe BNI has demonstrated a need for the pond, nor has there been a showing that the referenced requirements are being met. Please review and revise the fifth paragraph on page 4.6-1 accordingly. (GAW)
28. Follow-up to item No. 79: Please revise the sentence in the fourth paragraph on page 1 of Section 4.6, Surface Water Management Plan, to clarify how many acres in the watershed above proposed Pond 5-7 are already disturbed and how surface water runoff is presently being controlled from this area. Please indicate that a portion of this watershed is outside of the permit area (butterfly ash cell) and if water management for this area is controlled inside or outside of the existing permit area. Please revise the Surface Water Management Plan map, Plate 4.6-1, to depict the water management features for this existing disturbed area. (GAW)

Plate 4.6 Surface Water Management Plan

29. Please revise Plate 4.6-1, Surface Water Management Plan to show the surface topography of the area located west of the permit boundary in Section 5 and the whole watershed of proposed Pond 5-6 as required by NDAC 69-05.2-09-09(1)(a)(1). Please also show the ephemeral or intermittent stream route above and below Pond 5-6. (GAW)

Plate 4.10-1 Post Mining Topography

30. Plate 4.10-1, Post Mining Topography map, depicts prime farmland being reclaimed on land that was not disturbed according to the 2012 Center Mine Annual Map or that is not projected to be disturbed in the future. Please revise to depict reclaiming prime farmland on areas that were disturbed. (GAW)

Section 4.12 Revegetation and Post Mining Land Use

31. New language in the second paragraph of page 1 of Section 4.12 states that all sediment ponds will be retained as permanent structures except for Pond 5-7. MSHA Pond 5-6 is not shown on the Post-Mining Land Use Map, Plate 4.12-1, and a portion of this pond impacts this permit. Please revise the sentence to clarify that Pond 5-6 will also be removed. (GAW)
32. The second sentence in the third paragraph on page 1 of Section 4.12 has been revised to past tense. It now reads that there was reasonable likelihood the land use would be achieved which implies that something has changed and that it is no longer likely that the proposed land use will be achieved. In addition, the sentence is incomplete. Please revise as necessary. (GAW)
33. New language at the end of the second paragraph on page 4.12-1 states that five sediment ponds will be left as post-mine ponds, but only four are listed and shown on the Post-Mine Land Use Map. Please review and revise as necessary. (GAW)
34. The last sentence on page 1 of Section 4.12 states that management of the cropland in this permit is classified as average. Please clarify how the management of the cropland can be classified as average if the cropland is not yet reclaimed. This sentence appears to be referring to the management of the pre-mine cropland. (GAW)
35. The first sentence of the last paragraph on page 1 of Section 4.12 states that prime farmland will be reclaimed in its original location if possible. Plate 4.10-1, Post-Mining Topography map shows that prime farmland is to be reclaimed on land that was not disturbed according to the 2012 Center Mine Annual Map or that is not projected to be disturbed in the future. Please revise to show reclaiming this acreage where it was disturbed as written and account for Pond 5-3 which is located on an area where prime farmland was disturbed. (GAW)

36. Follow-up to Item No. 88: Please revise the location of the conservation woody planting because Pond 5-7 may not be constructed (see related deficiency listed as the first item under Section 4.6), and additional land (native grassland) should not be disturbed for a conservation tree planting. The Reclamation Division is not opposed to converting tame pastureland acreage that was previously disturbed to a conservation tree planting. (GAW)
37. Follow-up to item No. 89: Please change the native grassland acreage to 46.51 and change the woodland acreage to 3.55 for Section 5 on Table 4.12-1 Post Mine Land Use. This will result in a native grassland total on the right of 100.5 acres and a woodlands total on the right of 3.58 acres. No other acreages or totals change. As noted on the table, 1.5 acres of woodlands were mitigated with a shelterbelt located outside of Section 5; therefore, the woodland acreage in Section 5 needs to be reduced. **Please note:** If you choose to adjust this acreage with a different land use than native grassland, please be advised that we used the revised numbers above to review and reconcile acreages found in Appendix 4.12-3. Several deficiencies for those tables are included below along with specific acreage adjustments that will not be valid if this deficiency is resolved in a different manner than suggested. You may wish to review the deficiencies for Appendix 4.12-3 before revising Table 4.12-1. (ZAT)

Section 4.12-1 Revegetation Methods

38. Follow-up to item No 90: Please revise the Perennial Grassland Seed Mixture, Table 4.12-1 to include native forbs pursuant to the requirements of NDAC 69-05.2-22-01, NDAC 69-05.2-13-05 and NDAC 69-05.2-13-08(6). BNI's comment that they feel forbs will re-establish through succession because of direct respreading is incorrect because no direct respreading operations are proposed in this permit. (GAW)
39. Follow-up to item No. 93: Please review paragraph one on page 3 of Section 4.12-1. (ZAT)
- a. Please combine the first sentence with the fragment that follows, similar to "...9401, which will be located...".
 - b. Please revise the fourth sentence that reads, "*Woodlands (#1, #7-#9, & #14-#23) in Section 5 are planned to be reclaimed as a large planting near the location of pre-mine woodland #9.*" This statement is inconsistent with the Post Mine Land Use Plate 4.12-1. We suggest revising this statement to be less restrictive and similar to, "Woodlands #1 and Woodlands #7 through #23 or any portions of them that are disturbed and reclaimed will be reclaimed in their original location or combined into a larger planting near the location of pre-mine woodland #9." Modifying this statement as indicated will make the narrative of Sections 3.5, 4.12, 4.12-1 and 4.12-2 very similar and consistent with Plate 4.12-1.

Section 4.12-2 Determining Reclamation Success

40. Follow-up to item No. 95: Please discuss how the existing native grassland range site reference areas are being managed to improve ecological condition. The condition of the two silty range site reference areas have deteriorated to such an extent that it is now questionable whether they should be used to demonstrate revegetation success. (GAW)
41. Follow-up to item No. 95: Please clarify if the language at the bottom of the table on page 3 of Section 4.12-2 has something to do with the Table, B13 North Silty Reference Area. There are no spaces between the table and the verbiage but the information in the paragraph has nothing to do with the reference area. Please review and edit to clarify the intent of the wording at the bottom of the table. (GAW)

Plate 4.12-1 Post Mining Land Use

42. Follow-up to item No. 89: Table 4.12-1 indicates there are 0.3 acres of wetlands post mine. Narrative in the permit indicates the Class II wetland located in the SE¼ of Section 5 will be destroyed by the construction of ash cell 4, and that it will be replaced in Section 5; please depict the location of this reclaimed wetland on Plate 4.12-1 Post Mine Land Use Map. (ZAT)

Appendix 4.12-3 Land Use Discussions

43. Please number the pages to Appendix 4.12-3. (WTG)
44. Follow-up to Item No. 102: Please revise the third paragraph on page 2 of Appendix 4.12-3 to clarify that the Dakota Skipper is a Candidate species to the Threatened and Endangered Species Act, not a potential candidate species, and that the flight time survey was for this species. It appears the words "Dakota Skipper" was added but then lined through rather than the word "potential". Please revise accordingly. (GAW)
45. Follow-up to Item No. 103: Please revise the new narrative on page 2 of Appendix 4.12-3 regarding Spraupe's pipit to state whether suitable habitat for this species exists in the permit area. BNI states that this has been revised but it is not clear which paragraph was revised. (GAW)
46. Follow-up to item No. 104: The response to this deficiency was not completed or the change was not saved. Please revise the second to last paragraph on page 3 of Appendix 4.12-3 by updating the name of Appendix 3.6-1 to Range Descriptions and Historical Data. (ZAT)

Please note that deficiencies in the four follow-up to items No. 105 and No. 106 below are based on suggestions made to correct Table 4.12-1 Post Mine Land Use in follow-up to item No. 89 in

Section 4.12 above. We suggest that BNI review that deficiency prior to preparing responses to the following four items.

47. Follow-up to item No. 105: Update the pre and post-mine land use acreages on the Section 5 original permit table in Appendix 4.12-3 to be consistent with acreage changes made to Table 3.5-1 Pre-Mine Land Use and Table 4.12-1 Post-Mine Land Use. (ZAT)
 - a. Change the **pre-mine** native grassland acreage to 252.71; change the **pre-mine** woodland acreage to 2.0 acres; retain the other pre-mine acreages and the total should remain at 345.5 acres.
 - b. Change the **post mine** woodland acreage to 0.5 (1.5 acres of woodlands were mitigated outside of Section 5 and this is discussed in the narrative). Change the **post mine** wetlands from zero to 0.3, to be consistent with the narrative and Plate 4.12-1. Change the **post mine** native grassland to 23.93 acres and change the **post mine** industrial acreage to 295.37 as shown on Table 4.12-1. Retain the other acreages as listed and the post mine total remains at 345.5 acres.
48. Follow-up to item No. 105: Update the pre and post-mine land use acreage on the Section 5 Revision 12 acreage table in Appendix 4.12-3 to be consistent with acreage changes made to Table 3.5-1 Pre-Mine Land Use, Table 4.12-1 Post-Mine Land Use and Plate 4.12-1, Post Mine Land Use. (ZAT)
 - a. Change the **pre-mine** native grassland acreage to 4.57; change the **pre-mine** woodland acreage to 3.05; and change the **pre-mine** tame pasture acreage to 18.58. ROW remains at 0.94 and the pre-mine total remains at 27.14 acres.
 - b. Add conservational planting as a land use heading, insert zero for pre-mine acres and 0.57 acres for post mine acres.
 - c. Change the **post mine** woodland acreage to 3.05; change **post mine** tame pastureland acreage to zero; and change the **post mine** native grassland acreage to 22.58 to account for the conservational planting. ROW remains at 0.94 and the post mine total remains at 27.14 acres.
 - d. Place all acreage tables for Section 5 together and label. Scrolling from page to page to review and calculate acreages is time consuming and inefficient. Place the Revision 12 acreage table at the beginning of the Revision 12 narrative, just below the original permit acreage table.
49. Follow-up to item No. 105: In Appendix 4.12-3, the following changes need to be made to the Section 8 acreage tables to be consistent with how information is listed in Table 4.12-1 Post Mine Land Use. (ZAT)
 - a. Section 8, Minnkota Power: Change the **pre and post** mine cropland acreage to 7.0 acres and change the **pre and post** mine ROW acreage to 2.6 acres.
 - b. Section 8, Schmidt: Change the **post mine** cropland to 2.2 acres and the ROW to 0.3 acres.
 - c. Place all acreage tables for Section 8 together and label. Scrolling from page to page review and calculate acreages is time consuming and inefficient. Place the Revision 12 acreage table at the beginning of the Revision 12 narrative, just below the original permit acreage tables.

50. Follow-up to item No. 106: Update the **post-mine** land use acreage on the Section 32 table in Appendix 4.12-3 to be consistent with the new acreages on Table 4.12-1 Post-Mine Land Use. Change the tame pasture acreage to zero and change the native grassland acreage to 0.71. The other acreages and totals are correct. (ZAT)

Section 4.13 Fish and Wildlife Resource Protection, Enhancement, and Monitoring Plan

51. Follow-up to Item No. 110: Please revise the Fish and Wildlife Monitoring Plan to include a detailed protocol that will be used when conducting annual surveys for Sprague's pipit. (GAW)
52. Follow-up to Item No. 111: Please include a discussion about recent consultations with the Commission and State Game and Fish Department before selecting indicator species that will be monitored to assess the effects of surface mining on fish and wildlife resources. NDAC 69-05.2-09-17(1)(e). (GAW)

Please contact this office if you have any questions.

Sincerely,



James R. Deutsch
Director
Reclamation Division

cc: Oliver County Auditor