



Public Service Commission

State of North Dakota

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October 31, 2008

Dr. Jay Volk
Environmental Services Supervisor
BNI Coal, Ltd.
2360 35th Ave. SW
Center, ND 58530-9499

Dear Dr. Volk:

The Reclamation Division has conducted a technical review of the applications for Bond Release No. 1 to Permit BNCR-8006, Bond Release No. 7 to Permit BNCR-8106, Bond Release No. 1 to Permit BNCR-8202, and Bond Release No. 8 to Permit 37. These applications request final bond release for tracts in Sections 23 and 26, T141N, R84W, at the Center Mine. The following items must be satisfactorily addressed prior to further action on the applications:

Miscellaneous

1. Please review and update the various maps and other documents that are part of the attachments so they have the correct orientation in the pdf format. Many of these documents need to be rotated so they are displayed properly when opened. (JRD)
2. Prior to bond release approval, BNI will need to change the format of the applications and provide three copies of each individual bond release application that contains all of the necessary information for the areas in each permit. The vegetation data demonstrating revegetation success can be combined by surface ownership for land uses that are included in more than one permit, but the bond release applications need to be separated by permit. Information presently included in Attachments I-XIV that is not relevant to a particular bond release application should be removed as appropriate. (GAW)

Application Forms

3. The tract number listed on the bond release application form dated August 18, 2008, appears to be incorrect for the 85.50 acres being requested for release by Bond Release No. 8 to Permit 37. The application form describes the acreage as Tract 1, although it is described as Tract 2 in all of the other documents and correspondence related to the bond release application. Please submit a corrected application form that describes the acreage as being located in Tract 2. (WTG)

III. Section 26

Attachment I. – Legal Description

4. The title block is partially missing and the attachment number and part of the information within the box cannot be read. Please correct. (SAS & GAW)

Attachment V – Aerial Photo

5. The font and color (purple) of the acres shown on the aerial photo are very difficult to read. Please change the format of the number to make them more readable. (SAS)
6. Please include a map that depicts the post-mine land uses and conservation practices (field windbreaks, grassed waterways, etc.) for the bond release tract. (GAW)
7. The label designating the right-of-way should be “public roads” or “road right-of-way” since that is the correct post-mining land use. (SAS)

Attachment VI – Tract History...Success

8. Please add a heading at the top of page 1 of Attachment VI as “Attachment VI – Tract History, Data and Reclamation Success” for all 4 bond release applications so that this information is present when printed. (GAW)
9. Page 1 lists 3.33 acres as a “compost site” in the Post-Mining Land Use listing. Since “compost site” is not a defined post-mining land use and since this area is actually part of the public road right-of-way, this acreage should be included in the road right-of-way listing. The use of the 3.33 acres as a compost site should instead be discussed in the History of Tract section of this attachment. (SAS)
10. Please include a breakdown of the post-mining land uses by permit number on page 1 for better tracking of the land uses for future bond releases for Permits BNCR-8106 and 8202 (Bond Release 1 for Permit BNCR-8006 will release all acreage in that permit). (SAS)
11. The ROW land use should also be changed to Public Roads or Public Road Right-of-Way in the History of Tract discussion since the bond release boundary goes to the centerline of the road. (SAS)
12. The History of Tract discussion on page 2 needs to address the use of fertilizer on the reclaimed land before and during the time period that yield measurements were taken. At a minimum, this information should be provided for 2001 through 2005 and it needs to include the type of fertilizer used and the rates of application for each crop and year. (JRD)
13. The initial discussion of the unadjusted cropland standard on page 2 should indicate that the 26.4 bu/ac number is for spring wheat. Although this is clarified later on in the discussion, this should be noted when the figure is first used in the narrative. (JRD)
14. The climatic correction factor methodology described in the last paragraph on page 3 is for hayland areas only; it is not an approved method for small grains. The method described should have the word “hayland” inserted before the word “yield” in the second sentence. Another sentence should then be added to state the following: “For small grain crops, the

climatic correction factor is determined by dividing the NDASS average small grain yield for the current year for the county by the calculated long-term average county yield listed on page II-C-20 in the PSC's procedural guidelines." (SAS)

15. Footnote #5 for Table 3 on page 6 is incorrect. Hay yields are based on the 15-year average NDASS reported yields, not wheat. Please correct. (SAS)
16. On page 7 in the last line of the discussion for "**Shelterbelt Effectiveness**", the word "mot" should be "not". Please correct. (SAS)
17. On page 4, please discuss and include the supporting data for determining the average bale weight for each year that bale counts are being used to demonstrate revegetation success. Page III-D-3 of the guidelines states that a minimum of 5 bales or at least one truck load of 6 or more bales should be weighed to obtain average bale weight. Also, the discussion on the measurements of bale stacks and average bale weights need to indicate if the farmer used the same baler in 2003, 2005 and 2007. (GAW & JRD)
18. In the paragraph discussing hay yields on page 5 of Attachment VI, please discuss how the bale counts for 2005 were obtained. Table 3 indicates that 222 bales were harvested from 100 acres, however, 2005 NAIP aerial photography that was taken in July shows 142 bales in the hay fields that total 115.4 acres. This equates to a yield of 0.8 tons/acre assuming the bales weigh 1,300 lbs each. If the count using the 2005 NAIP map is correct, the weighted yield is not high enough to meet revegetation success standards. Please provide documentation that clearly shows the number of bales in 2005. Based on the density and spacing on the 2005 NAIP photo, it does not appear that bales had been removed from the fields at the time the photo was taken. Incidentally, the 2003 NAIP aerial photo shows 219 bales in fields comprising 108.8 acres, 1.3 ton/acre assuming each bale weighs 1,300 lbs. The 2005 photo we used for the bale count is attached to this document. (GAW)
19. The easternmost strip was planted to field peas in 2005, but the yield information was not included in the calculations in Table 3, nor discussed on page 5. Please include a discussion about this crop on page 5 and justify why the yields from this strip are not being used in the 2005 yield calculations. While we realize the NDASS did not publish average pea yield data for Oliver County in 2005, please provide any available information to make a demonstration that the 2005 pea yield on this strip was similar to other pea yields on comparable undisturbed lands near the Center Mine. (GAW & JRD)
20. Policy Memo No. 20 requires that the operator demonstrate revegetation success on variance areas at the time of final bond release, please discuss how the data as presented demonstrates revegetation success of the variance areas. (GAW)
21. In Table 3, please add a column between the **Adjusted Standard** and **Acres** that provides the values for the **Reported Yield/Adjusted Standard** since this is an important number for the method being used to demonstrate reclamation success. This addition will help clarify the relationship between the **Acres** and the calculated **Production Ratio**. The same column should also be added to the yield table in Attachment XI. (JRD)
22. The first paragraph of the Shelterbelt Revegetation Success section states that shelterbelt data collection occurred in 2002, 2007 and 2008; however, only data from 2008 has been included

- in the bond application. Based on this statement BNI should either provide the 2002 and 2007 data or modify the statement to only refer to the 2008 data. (GAW)
23. In the application, BNI states that vigor, competition and erosion control “can be assessed at the time of the bond release inspection” in the conclusion statements for these parameters for the reclaimed shelterbelts. Please add a short discussion in the narrative that demonstrates these revegetation parameters have been met based on recent field observations. (GAW)
 24. Although there are no specific revegetation success standards for voluntary conservation tree plantings, the bond release application must include information stating whether or not the tree plantings have established and whether they are functioning as intended. Please include the necessary information in the application. (GAW)
 25. The bald eagle is incorrectly mentioned as a threatened and endangered species on page 14 of Attachment VI. Please correct. (GAW)
 26. The wildlife report is referred to on page 13 as “biannual” rather than a “biennial” report. Please correct. (SAS)
 27. There seems to be an inconsistency between the bonding amount listed in the last line on page 14 (\$25,679,734.00) and the consolidated bond amount on file with the Reclamation Division (\$25,008,439.00). Please verify the correct bond amount. (SAS)
 28. If the bonding amount discussion for this bond release tract remains in this attachment, please indicate this in the title of the attachment for easy reference. (SAS)
 29. In the discussion on page 12, please refer to the data that documents that the lands subject to this bond release are not contributing suspended solids to streamflow or runoff outside the permit area in excess of the requirements set by NDAC section 69-05.2-12-12(7)(c). Successful operation and termination of NDPDES discharge points is evidence that effects on surface water resource by mining discharges were minimized during mining operations and reclamation. Also, please discuss water quality data for discharges from ponds and samples from surface water sampling sites, downstream of the bond release area, and compare the water quality data to that of up gradient surface water sampling site SBC at Center. (WTG & BEB)
 30. The post-mining hydrologic assessment, *Impacts of Mining on Ground Water Resources* is referenced in the Hydrology section of the bond release submittal and therefore is considered an integral part of this bond release application. Section 3.3.1 which describes the Resource Description of the assessment study area is mislabeled in two places in regard to the Township and Range for 10 sections of land (Sections 1-10). The sections are labeled as being located in T141N, R83W, but the correct location is T141N, R84W. Please commit to updating the PHA in the near future. (BEB)
 31. Since the post-mining hydrologic assessment was added to the permit several years ago, please provide an updated summary of current groundwater levels and quality from the bond release tracts focusing on general trends and any significant departures (including improvement) in data from the post-mine hydrologic assessment that has already been

submitted and approved. Please derive this analysis from information obtained from active monitoring wells remaining within and adjacent to the bond release tracts. (BEB)

32. Please indicate in the narrative if there have been any water well or other water supply complaints from landowners or land users within or adjacent to the bond release tracts and the outcome or resolution if any complaints were filed. (BEB)
33. Please revise the statement indicating that no special backfilling of mine excavations was needed to minimize adverse effects on groundwater flow and quality. NDAC 69-05.2-16-13(1) clearly states that “backfilled materials **must** be placed to minimize adverse effects on ground water flow and quality”. (BEB)
34. Hydrology narrative on page 13 states that there have been no effects of mining operations on the essential hydrologic functions of the identified alluvial valley floor within portions of Square Butte Creek. Utilizing data from the remaining alluvial monitoring wells and other sources please refer to specific information that substantiates this statement. (BEB)

Attachment VII – Contour Map

35. The “Right-of-Way” indicated on the map should be renamed “Public Road Right-of-Way” since that is more specific and infers the total right-of-way. Please revise the label accordingly. (SAS)

Attachment IX – Grade Approvals

36. Please revise the Grade Approval Map (Attachment IX) to clearly depict the SPGM respread thicknesses of each grade approval area within the bond release tract. It may be necessary to remove the respread year label to improve the map legibility. In its current state, there are several areas for which SPGM respread thicknesses are not defined. Also, please provide the revised map as a .dwg file that can be used in a geographic information system so this information can be compared to the soil probing data that is collected. (WTG)

Attachment X – County...Change

37. Do not include “.../Compost Area Zoning Change” in the title of this attachment since it only deals with the road easement. As mentioned earlier, the narrative in Attachment VI should briefly discuss the composting area that is within the road easement. This title change should also be made in the “**List of Attachments**” in part IIIa. (SAS)
38. Please include a letter of concurrence from the Oliver County road supervisor indicating that Oliver County officials are satisfied with the way that the county road on the west and south sides of Section 26 has been built and maintained. (SAS)
39. If the width of road right-of-way along the west side of Section 26, north of the curve, is greater than 33 feet from the center of the section line, please include documentation from Oliver County that authorized the wider easement. (SAS)

Attachment XI – Supporting Production Data

40. Please provide a replacement copy of the 2003 crop weights (page 1) so it clearly shows all of the hand written numbers that should be on the original document. Also, provide a written statement from the person(s) that recorded these numbers and those for 2005 verifying that these are true and correct weights of crops harvested from the E½ and SW¼ of Section 26. (JRD)
41. The wheat data near the bottom of page 2 indicates that the tare weight of the truck for three loads was 58,640 pounds which would cause the overall wheat yield to be decreased by about 9 bushels. Since the previous tare weight listed was only 29,050 pounds, is this an error on the field sheet? Please review and explain. (SAS)
42. Bale counts for the 2005 hay yields and the average bale weight are needed in this attachment. Please include this data and explain how the number of bales was counted in 2005. (SAS)
43. Please include data showing the cropping history in Section 26 for 2002 and 2004 in order to show which strips had been cropped prior to taking yield measurements in 2003 and 2005 respectively. This information is needed to determine that the correct management factors were used in the 2003 and 2005 yield calculations. (SAS)

Attachment XII – Supporting Shelterbelt Data

44. Please provide a map of adequate scale which delineates the reclaimed shelterbelt in the bond release tract as requested in item 1 on page II-G-3 of the revegetation guidelines. (SAS)

Attachment XIII – Maps Illustrating Crop Species Planted

45. Please provide additional maps illustrating the various crops planted in 2002, 2004, 2006 and 2007. These maps will relate to the supplemental yield data provided for 2004, 2006 and 2007 and the 2002 map would provide the cropping history for the year prior to the first year of data that is used to demonstrate reclamation success. (SAS)

IV. Section 23

Attachment V – Aerial Photo and Soils Map

46. The arrow for BNCR-8106 is pointing to the Permit 37 area outside the proposed bond release tract. Please change the arrow to point at the BNCR-8106 bond release area. (SAS)

Attachment VI – Tract History...Success

47. Please add a heading at the top of page 1 of Attachment VI as “Attachment VI – Tract History, Data and Reclamation Success” for all 4 bond release application so that this information is present when printed. (GAW)
48. Please breakdown the previous partial bond releases instead of just listing the total acres that have received partial release (40% for 4.4 acres, 70% for 74.4 acres). In addition, please list the previous bond release information for each permit area and identify the areas on a map. (SAS & GAW)

49. Page 1 indicates a total of 51.11 acres of undisturbed lands in the “**Disturbance**” heading yet only 22.81 acres of native grassland are listed as undisturbed in Permit BNCR-8106. Please discuss the land use(s) for the other 28.3 acres of undisturbed land and the permit(s) where it is located. (SAS)
50. The legal description of the bond release area in Section 23 of Attachment VI incorrectly identifies a portion of the area as being in the SW¹/₄ of the NW¹/₄ of Section 23. Please correct. (GAW)
51. In the narrative near the top of page 2 of Attachment VI, please specifically state which seed mixtures were seeded on the tame pastureland and identify the year (revegetation initiation date) that a particular mix was used so that one can determine which areas were seeded with which mix using Attachment VIII. (GAW)
52. The reference to “Attachment 10” beneath the table on page 2 should refer to “Attachment X”. (SAS)
53. Page 4 lists the hayland yield in 2006 as “0.1.03 ton/ac” in the last paragraph. Please correct. (SAS)
54. Pond 23-6 was assigned Discharge Point No. 009 for reclamation areas by the North Dakota Department of Health NDPDES Program on September 12, 1997. BNI reported a discharge from the pond as recently as April 2004. Please describe the status of Pond 23-6 as an NDPDES discharge point, and provide documentation if it has been released as a discharge point, or describe your plans to have it released as a discharge point. (WTG)
55. In the discussion on page 6 please refer to the data that documents that the lands subject to this bond release are not contributing suspended solids to streamflow or runoff outside the permit area in excess of the requirements set by NDAC section 69-05.2-12-12(7)(c). Successful operation and termination of NDPDES discharge points is evidence that effects on surface water resource by mining discharges were minimized during mining operations and reclamation. Also, please discuss water quality data for discharges from ponds and samples from surface water sampling sites downstream of the bond release area, and compare the water quality data to that of up gradient surface water sampling site SBC at Center. (WTG & BEB)
56. The tame pastureland ground cover values listed in Table 6 for 2003 and 2005 do not correspond with the data in Appendix B. Please update the table accordingly. (GAW)
57. Table 7, Water Depth of Ponds 23-6 and 23-7, shows that sediment Pond 23-7 has been either been dry or has only held a minimal amount of water over the past 7 years. NDCC 38-14.1-24.7 requires that the pond be of adequate size for its intended purpose, be designed to achieve stability, have water quality suitable for its intended purpose and below NDPDES discharge limitations and hold water at a reasonably stable level. Please address each of these requirements for Pond 23-7 and its intended use. Also, please include water quality data from permanent Pond 23-6 indicating that the water is suitable for its intended purpose as a livestock watering source. (GAW, SAS & BEB)
58. If BNI plans on retaining Ponds 23-6 and 23-7 as permanent structures, a revision to Permit BNCR-8106 must be submitted to retain the ponds as permanent structures, and include plans

that comply with the requirements of NDAC 69-05.2-16-12 for permanent impoundments. Please include routing calculations to show that the ponds fifty-year, six-hour precipitation event can be safely discharged from the spillway(s) as required by NDAC 69-05.2-16-09(9). If the pond capacity is greater than 12.5 acre-feet, a conditional water use permit must be obtained from the State Water Commission. (BAJ)

59. Since the post-mining hydrologic assessment was added to the permit several years ago, please provide an updated summary of current groundwater levels and quality from the bond release tracts focusing on general trends and any significant departures (including improvement) in data from the post-mine hydrologic assessment that has already been submitted and approved. Please derive this analysis from information obtained from active monitoring wells remaining within and adjacent to the bond release tracts. (BEB)
60. Please indicate in the narrative if there have been any water well or other water supply complaints from landowners or land users within or adjacent to the bond release tracts and the outcome or resolution if any complaints were filed. (BEB)
61. Please revise the statement indicating that no special backfilling of mine excavations was needed to minimize adverse effects on groundwater flow and quality. NDAC 69-05.2-16-13(1) clearly states that “backfilled materials **must** be placed to minimize adverse effects on ground water flow and quality”. (BEB)
62. Hydrology narrative on page 8 states that there have been no effects of mining operations on the essential hydrologic functions of the identified alluvial valley floor within portions of Square Butte Creek. Utilizing data from the remaining alluvial monitoring wells and other sources please refer to specific information that substantiates this statement. (BEB)
63. The second paragraph of the Wildlife section on page 8 states that “ample” amounts of undisturbed native grassland remains. Since native grassland is species specific, please explain how it was determined that an ample amount of undisturbed native grassland exists for the various indicator species. (GAW)
64. The bald eagle is incorrectly mentioned as a threatened and endangered species in the last paragraph on page 9 of Attachment VI. Please correct. (GAW)
65. The Bond Reduction narrative on page 10 of Attachment VI states that both permits are under worst-case bonding and that no monetary reduction is being requested; however, the Bond Release Application form SFN 19813 shows that \$71,261.90 is being requested. Please revise to indicate that a bond reduction is being requested for Permit 37 which is bonded on a per acre basis, not on the worst case basis. (GAW & SAS)
66. The mean yield for the hayland in 2005 is listed as 125.0 grams on page 13. However, the values listed on the table do not support that number. Please review and correct as necessary. (GAW)
67. On the hayland cover table on page 21, lines 2 and 8, both show a bare hit and line 68 shows 2 bare hits; however, the qualified cover column shows 10 hits. Please explain or make the necessary corrections. (SAS)

68. In the tame pastureland cover tables on pages 26-27, western wheatgrass and sideoats grama are not counted towards cover; however, both are perennial and not detrimental to the approved post-mining land use. In addition, the cover values in the table on page 28 include dandelion as qualified total cover when it is a detrimental species. Please explain or revise these statements even though the cover requirement is exceeded for both years. (SAS)
69. In the table on pages 29-30 for the tame pastureland cover, western wheatgrass is counted for cover in one instance (line 9 for example) but not in another instant (line 22). Also, sideoats grama is not counted. Please explain or make the appropriate corrections. (SAS)

Attachment VII – Contour Map

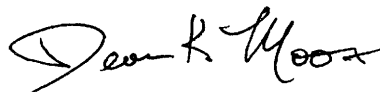
70. No SPGM respread is depicted within the “top hat” area that was used for several soil stockpiles and a pond. Please show any locations where soil was respread in this area. (SAS)
71. Please correct the title of Attachment VII (Grade Approval/Soil Depths Map) for Permit BNCR-8106 BR#7 (Tract 2) and Permit 37 BR#8. As submitted, it incorrectly reads “Permit 37 BR#1”. (WTG)

Other

72. As noted in the September 18th inspection report, the bare areas on the embankment and emergency spillway of Pond 23-6 and vehicle trail to the west of the embankment need to be stabilized prior to bond release approval. Due to the heavy use by livestock, we recommend placing scoria or other surfacing material on these bare areas. In addition, a head cut in the drainage between Pond 23-6 and 23-7 needs to be stabilized before bond release approval. (DKM)
73. Please include a discussion of the metrological tower that has been placed on the bond release tract in Section 26. The discussion should include who constructed the tower, its purpose and indicate that the tower is not mining related and that minimal surface disturbance has occurred. (DKM)

If you have any questions, please contact this office.

Sincerely,



for James R. Deutsch
Director
Reclamation Division

Attachment (2005 NAIP photo)