



Public Service Commission

State of North Dakota

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May 16, 2016

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

Dear Mr. Volk:

The Reclamation Division has reviewed BNI Coal, Ltd.'s March 17, 2016 response for Bond Release No. 8 to Permit BNCR-8106 at the Center Mine. As you know, the Bond Release No. 8 application for 58.23 acres of tame pasture and right-of-way in the SE1/4 of Section 35, T142N, R84W, was submitted on August 11, 2014 and deemed complete on May 28, 2015. The notification letters were sent and the notice was published in the Center Republican and Bismarck Tribune for four consecutive weeks in June 2015. As you know, the bond release inspection was conducted on June 24, 2015; however, the approved post mine land use of tame pasture could not be evaluated during this inspection because the operator, with approval from BNI, had chemically burned down the tame pasture and seeded the field to canola, effectively changing the land use to cropland. Since the land use change was at the request of the surface owner, the technical review of the bond release application was put on hold until BNI could submit a new land owner preference statement along with a permit revision to change the post mine land use to cropland/hayland so the tract could be bond released as **hayland** using the vegetation data collected for tame pasture.

The Reclamation Division has conducted a technical review of the bond release application submitted on March 17, 2016 and the following items must be adequately addressed before we can recommend Commission approval of the application. The follow-up items refer to the technical items that were included in our May 14, 2015 completeness letter.

General:

1. Page 4.10-4 of the Permit, Backfilling and Regrading, states that the county road overpass located in a portion of the northeast corner of this tract will be removed after 2031 and the area will be reclaimed with an at-grade road. The Postmine Topographic Map, Attachment IX, in the bond release application clearly shows the elevation of the road on the south side of the overpass being 25 feet higher in elevation than the surrounding land. The right of way and appropriate buffer area should remain in the permit so that BNI can operate within the permit when the overpass is reclaimed. The Reclamation Division will not bond release this area until final reclamation has been achieved as outlined in the approved permit. (GAW)

Attachment III Legal Notice

2. Please revise the cover page of Attachment III to clarify the attached advertisement will be published once a week for four consecutive weeks. (ZAB)

Attachment IV Notifications

3. Insert copies of all the notification letters that were sent into Attachment IV. (ZAB)

Attachment V Soils Map

4. Follow-up to Item No. 1: The second sentence of the second paragraph on page 1 of Attachment VI, Tract History, states that "The tract can be viewed on Attachment V." Please depict the tract on Attachment V and label this Attachment as Attachment V in the map's Title Block. (GAW/ZAB)
5. The legend on Attachment V, Soils Map, states "Pre-mine Disturbed Soils Section 35". The word "disturbed" can be removed from this statement since all of the mapping units reflect undisturbed soils and this is understood. (GAW)
6. Please clarify the note at the lower left corner of Attachment V to indicate that the 3 letter map unit designations on Attachment V are from the 1975 NRCS Soil Survey and the whole word map designations are from the Bob Howey detailed survey in the permit. (GAW)

Attachment VI History of Tract

7. Please review the information provided on page 1 of Attachment VI and revise to provide clarity.
 - a. The tract name at the top of the first page of Attachment VI, Tract History, is labeled as the SE1/4 of Section 35-142-84 but this tract is identified as Tract 1 on the bond release application. The legal description is then provided in the second line at the top of the first page of Attachment VI, Tract History, with the township and range listed twice so this information is being duplicated in both the Tract and Location lines at the top of page 1 of Attachment VI. Please revise to provide clarity without duplication. (GAW)
 - b. It appears that Disturbance and Acres provide the same information and could be combined into one heading. Include the total acreage as well as the disturbed and undisturbed acreage. (ZAB)
 - c. Revise the Post Mining Land Use to state cropland/hayland because this tract is being bond released as **hayland** using tame pasture vegetation data. (ZAB)
 - d. Add Pre-Mine Land Use as a heading and list the pre-mine land use(s) of the tract. (ZAB)
 - e. To be consistent with the bond release application, please revise Bond Request to state: Phases I-IV Bond Release. (ZAB)
 - f. Follow-up to Item No. 2: Although the Law Liability narrative has been updated, 1975 is lined through in the heading for this section and all of the acreage is being applied to the 1973 and 1977 law periods. Revise to provide clarity. (GAW)
 - g. Remove the first paragraph of text referencing Revision 55 to Permit BNCR-8106 that was inserted directly under the heading Law Liability. This information belongs in the Management during Liability section. (ZAB)

- h. Remove the first four sentences in the second paragraph under Law Liability because this information is just repeating information from the top of the page. Retain the law liability narrative and move this narrative directly under the Law Liability heading. Also, review the July 1st 1973 initial disturbance date because it is not consistent with the initial disturbance date of 1974 listed in the Tract History, published in the newspaper notice and stated in the notification letters. (ZAB)
 - i. Revise the reference (See Figure 1 below) that follows the last sentence of the Law Liability narrative because Figure 1 is located 12 pages after the reference. Either change the reference to (See Figure 1, page 35) or leave the reference as is and move Figure 1 to page 2. Figure 1 clarifies the law liability narrative as intended, but it is also very helpful in understanding the stripping and mining sequence described in the Tract History that immediately follows the law liability narrative. (ZAB)
8. Follow-up to Item No. 2: A sentence in the first paragraph on page 2 of Attachment VI, Tract History, states that the southern portion of this tract was mined beginning in 1978 and ending in 1983. Please revise to clarify using precise language since as currently written, it appears that the south end of this tract is subject to our current reclamation requirements. The 1973, 1975 and 1977 mining laws apply to areas disturbed between July 1, 1973 and May 3, 1978, respectively, whereas the 1978 interim rules, 1979 rules and our current law apply to areas mined,(coal removal) and areas used in support of mining beginning May 3, 1978. Please review and revise to provide clarity. (GAW)
9. Please remove the following statement from the 1st paragraph on page 2. *“The success of the reclaimed ~~hayland tame pasture~~ cropland will be based on a comparison between the yields of the reclaimed area and climatically adjusted technical standard as well as ground cover.”* This statement belongs in the Evaluation of Reclamation Success narrative and *cropland* needs to be revised to *hayland*. (ZAB)
10. Please organize the narrative on page 2 of the Tract History so it is clear, concise and follows the logical sequence of stripping, mining, grade approval, respread and seeding. Paragraph 1 currently includes all the stripping and mining narrative. Paragraph 2 should include the grade approval narrative, references to the grade approval maps and documents in Attachment VII, and the disturbance associated with Pond 35-8 construction. Paragraph 3 should include all of the respread narrative including the Pond 35-8 embankment. Paragraph 4 should state the tract was seeded to the post mine land use of tame pasture; include the seeding dates and reference the Seeding Map Attachment VIII. Paragraph 5 should include the county road narrative and the last paragraph of the tract history must include that the tame pasture was chemically burned down and the tract was seeded to canola in the spring of 2015. (ZAB)
11. Please include Tame Pasture in the titles of Tables 1a and 1b on page 3 and remove the statements in parentheses because this information is provided in the narrative that immediately precedes the tables. (ZAB)
12. Although not required, please consider combining the seeding date narrative and the seed mix narrative on page 2 into one paragraph. This information could easily be combined into a few concise sentences similar to, *“In 1985, the southern portion of the tract was seeded to the **tame pasture** mix in Table 1a (Listed as Seeding 35-2 in BNCR 8106). The remainder of the bond release tract was seeded to the mix in Table 1b (Listed as the remaining balance of seedings in*

the S1/2 of Section 35 in BNCR 8106). The middle portion was seeded in 1986, the eastern edge along the county road was seeded in 1987 and the remaining portion in the north was seeded in 1989. A minimum rate totaling 40 pure live seeds, per square foot was used for all seedings. (See Attachment VIII – Seeding and Sampling Map.) It is not necessary to reference the map in every sentence. (ZAB)

Attachment VI - Management During Liability

13. Please revise the first sentence of the Management During Liability paragraph to past tense and include that the tract was seeded to the approved post mine land use of tame pasture and cut and baled annually until the spring of 2015. Remove the second part of this sentence, “*which was initiated within a year or two of seeding of the perennial seed mix (Attachment VII)*”, because it is unclear if the word initiated refers to revegetation or baling and it is unclear if the attachment is intended to refer to the seeding date or the seed mix. (ZAB)
14. BNI states that the perennial grass mixture planted on this tract was fertilized with 20 -100 lbs. of urea and dry ammonia as recommended by NRCS Conservation Practice 590, Nutrient Management. Therefore, if the tract was fertilized on a regular basis, then the unadjusted standards for this tract must be calculated using a high level of management rather than the median yield as required on page II-E-4 of our Revegetation Success Document. Please revise tables 2 and 3 accordingly and the adjusted and unadjusted standards calculated for this tract, and listed in the narratives in Attachment VI. (GAW)
15. Please include information on the management of the tract in 2015 and provide a detailed explanation of the land use change requested by the surface owner in 2015 and that BNI submitted a new land owner preference statement along with Revision 55 to Permit BNCR-8106 to change the post mine land use of the bond release tract from tame pasture to cropland/hayland. The bond release application was then revised so the tract could be bond released as **hayland** using the vegetation data collected for tame pasture. Also note that the landowner agreed in writing to use hayland data to represent areas that are being annually cropped. A sentence explaining the difference between hayland and tame pasture standards would provide additional clarity. (ZAB)

Attachment VI - Evaluation of Reclamation Success

16. Please revise the Evaluation of Reclamation Success narrative beginning on page 3 as follows. (ZAB/GAW)
 - a. Change the heading Evaluation of Data: Tame Pasture to Evaluation of Data: **Hayland**.
 - b. Remove the law liability narrative from the first paragraph of the Evaluation of Reclamation Success narrative and simply state that BNI will prove reclamation success on the entire tract under 1977 law. Remove the reference to Figure 1 since it is not relevant if the entire tract is proven under 1977 law.
 - c. Remove the remainder of this paragraph and insert the following revised statement from page 2, “The success of the reclaimed hayland will be based on a comparison between the yields of the reclaimed area and a climatically adjusted technical standard as well as ground cover.”
 - d. Change the tame pasture language to **hayland** in the narratives, standard discussion, figures, and tables on pages 3-10.

17. The Postmine Land Use table on page 4 of Attachment VI indicates that there are 272.95 acres of tame pasture and 4.59 acres of developed water resources. However, the postmine land use acreages listed in the Permit with Revision 55 indicates that there are 274.29 acres of tame pastureland and 3.25 acres of developed water resources. Please review and revise as appropriate. (GAW)
18. Follow-up to Item 6: The study and factor developed to account for the differences between hand clipped sampling and whole field mechanical harvest yield estimates appears inadequate. The plant height remaining after mechanical harvesting is not a complete measure of harvest efficiency which would also include mechanical losses of cut material that does not make it into the swath. Similarly, not all of the dry matter makes it into the bale during the mechanical baling process. The yields obtained by whole field harvest and reporting by producers to the ag statistics service would be subject to the mechanical losses as well as potential losses due to precipitation that may occur in the harvest process. The information provided appears to document a portion of the NRCS recommended harvest efficiency adjustment but is not a measure of the overall harvest efficiency. Please provide whole field harvest data for demonstrating reclamation success when using NDASS annual yield estimates for climatic correction or revise as appropriate. (RLK)
19. Follow-up to Item No. 6: New language has been added to page 8 of Attachment VI that states that BNI conducted a study in 2013 that shows hand sampling results in a 5.4% increase in yield verses machine harvest and a short write-up is provided as Figure 2. Please remove all references to this study from the bond release application. (GAW)

Attachment VI - Tract History - Hydrology

20. Please revise the first sentence of the Hydrology narrative in Attachment VI to more clearly and correctly state that the bond release applications must include documentation that the area is not contributing suspended solids to stream flow or runoff outside the permit area in excess of the standards in NDAC 69-05.2-16-04. We are aware that similar wording was used in the past; however the requirement to provide documentation is part of the bond application requirements found in NDAC 69-05.2-12-12. (RLK)
21. Revise the 3rd sentence in the first paragraph of the hydrology narrative on page 10 to state the tract **was** seeded to an approved perennial seed mix and change the following sentence on hay cuttings to past tense. Add narrative stating the land use was changed to cropland/hayland in 2015 at the request of the landowner and the tract was seeded to canola in the spring of 2015. (ZAB)
22. Revise the sentence in the first paragraph on percent cover to include the years 2009-2013 and indicate the tract was hayed in 2014 but not sampled. Also include that the tract was chemically burned down and no-till seeded to canola in the spring of 2015. The vegetative residue on a no-till field reduces sediment in runoff, which supports the last statement that practices on the tract have reduced the introduction of suspended solids in water downstream. (ZAB)
23. A summary of premine and postmine ground water hydrology needs to be provided for the bond release tract and surrounding areas. Commensurate with the reclamation law and rules, BNI has

expended a significant amount of time and resources into installing, sampling, and recording the data generated from its monitoring well network, and the hydrology portion of a bond release package should be structured as the concluding document where those collected data are described and analyzed. Data sources for this assessment are available in the record from the many ground water monitoring wells that surround the bond release tract in Section 35. At a minimum, active monitoring well series' to be included in the assessment are BNI 16, BNI 361, BNI 370, BNI 382, and BNI 81-64, and at a minimum the inactive or destroyed monitoring well series' also to be included in the assessment are BNI 360, BNI 362, and BNI 373. A thorough discussion should be provided that summarizes the premine and postmine water levels, direction of flow and water quality of the monitored units, including water level and water quality summaries of those listed wells that are screened in the post-mining base of spoils. (BEB)

24. The third paragraph states that "There have been no complaints about water well or water supplies from landowners of (sp) land users located within this bond release." This statement appears to imply that a water well or some other form of water supply exists within the bond release tract, which is doubtful because of the hayland land use of the bond release tract. Please review and if necessary, update with additional information regarding the stated "water well or water supply" or delete the statement if a water supply is absent or is unnecessary because of the postmine land use. (BEB)
25. Two paragraphs in the Hydrology section provide reference to subsections of the 1999 Groundwater Monitoring Annual Report of BNI Coal Center Mine by DS Atlantic Tribble & Richardson, however; that particular document generally provides baseline resource description and probable hydrologic consequence determinations for a large portion of the Center Mine that dates back almost two decades with the application for Permit BNCR-9702 and the report is not a post-mining hydrologic assessment but rather, appears to have been incorporated into the permit as a permit application document. This report can be generally referenced in the Hydrology section of the bond release submittal; however, it must be clearly stated in the narrative that it is not a bond release postmining hydrologic assessment. (BEB)

Attachment VI - Wildlife Assessment

26. Follow-up to Item 10: Please revise the pre-mine land use narrative in the first and second paragraphs of the Wildlife Assessment narrative in Attachment VI. The wildlife assessment narrative states that the pre-mine land use on the bond release tract was tame pasture but the pre-mine land use described in BNCR-8106 and elsewhere in the bond release application identifies the pre-mine land use as native grassland. (RLK/ZAB)
27. Revise the 2nd paragraph of the wildlife assessment narrative on page 11 to state the bond release tract was reclaimed to **tame pasture** but the post mine land use was changed to **cropland/hayland** at the request of the landowner in 2015. The tame pasture was chemically burned down and the tract was seeded to canola in the spring of 2015. (ZAB)

Attachment VI - Bond Reduction

28. Please make the Bond Reduction heading bold to separate it from the wildlife narrative. Revise the Bond Reduction statement on page 12 of Attachment VI for clarity as follows: "~~The area~~ representing Permit BNCR-8106 is under worst-case bonding for the consolidated bond area that

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includes Permits BNCR-8601, 9702, 8602 and 8202. ~~thus no~~ No monetary reduction is involved requested for the acres represented by this mining permit in this bond release." (ZAB)

Attachment VI – Figure 1 Law Liability Map


29. Currently, the undisturbed portion of the bond release tract is not delineated on Figure 1 Law Liability Map so it appears the undisturbed label applies to the entire south 1977 Law area. Please remove the undisturbed label or depict the undisturbed acreage on the map. (ZAB)

Attachment VI – Appendix A

30. A t-value of 1.341 was used when calculating sample adequacy for the production data included in Appendix A of Attachment VI but in each instance 15 samples were taken. The t-value 1.345 should be used for n-1 degrees of freedom. Please correct this error on each of the sheets in Appendix A. (GAW)

If you have any questions, please contact this office.

Sincerely,


for James R. Deutsch
Director
Reclamation Division

cc: Stephanie Paavola
Karene Hall