



# Public Service Commission

## State of North Dakota

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July 30, 2008

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

Dear Dr. Volk:

The Reclamation Division has reviewed BNI's March 19, 2008 deficiency responses and changes to the application for Final Bond Release No. 6 to Surface Coal Mining Permit BNCR-8106 for the Center Mine. The following items were noted during our recent review and field inspection that need to be addressed before the application can be approved:

### Attachment VI – Hydrology

1. Follow-up to December 10, 2007 deficiencies #15 and #17: The recommended changes to the Hydrology section have been made in the Section 25 Hydrology narrative, although the same narrative referencing *"No degradation of surface water quality and ground water quality..."* as well as *"It is also well established that the hydraulic conductivity (permeability) of the mine spoil and the undisturbed sediments of the Sentinel Butte Formation is very low..."* narrative is still included in the submittal under the Section 36 Hydrology narrative. Please review and if appropriate, make the same changes for the Section 36 narrative that have been made for the Section 25 narrative, or update both of the narratives so that the information presented corresponds with the Post-Mining Hydrologic Assessment that was completed for the Center Mine by DSAtlantic Tribble & Richardson (Impacts of Mining on Groundwater Resources). (BEB)
2. Follow up to item 18, original item number 26: If Pond 25-3 will be retained as a permanent water impoundment the requirements of NDCC 38-14.1-24(7) must be adequately addressed. This includes providing a water balance/budget for the pond. Table 7A does show that water levels of the pond are relatively stable; however, it does not show that there is adequate quantity for the number of animals which will be using it or its intended purpose. It needs to be shown that there will be adequate water. Water samples are also required to show the water quality of the impoundment is suitable for its intended use. Simply stating that cattle drink from the pond does not satisfy the requirement for providing water quality data for the pond. The lab results can be

interpreted based on criteria found in a NDDH published report "Interpreting Your Water Test Reports" or an NDSU Extension publication AS-954 (June 2008) entitled "Livestock and Water". Again please provide a water budget/balance and water quality data showing the impoundment meets its intended use. (MDB & WTG)

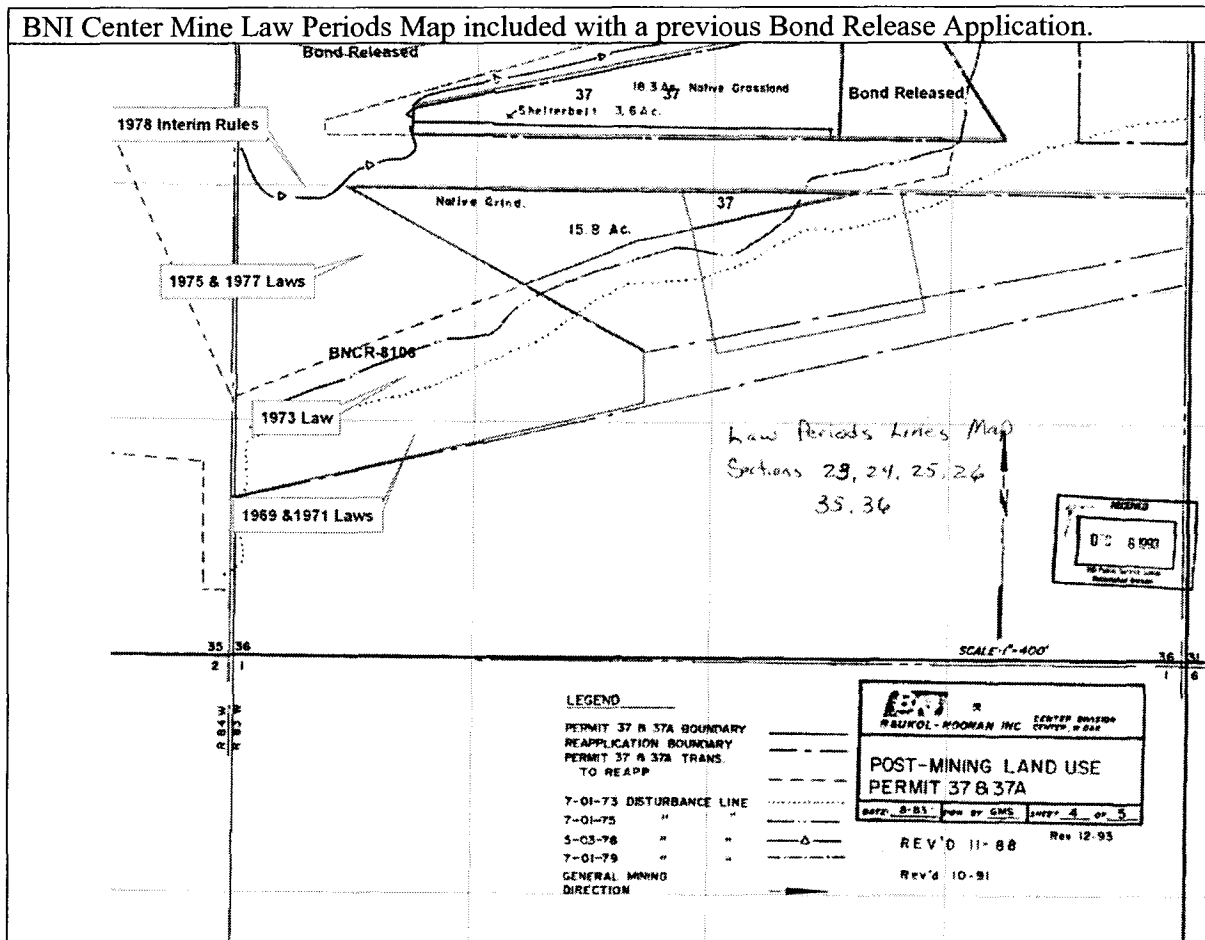
3. Sediment Pond 25-3 is still functioning as a sediment pond as there are SPGM stockpiles within the watershed and the NDPDES discharge point has not been release by the State Health Department. The permit will need to be revised to address how water management for the stockpiles will be controlled and the permit will need to be updated to address any changes that will be needed for Pond 25-3 to converted it to a developed water resource. These issues will need to be addressed in the permit prior to final bond release approval or the pond area should be deleted from the proposed bond release area. NDCC 38-14.1-24 (7). (GAW)

#### **Attachment VI – Section 25**

4. In the Revegetation Success narrative, please discuss using NDASS values for hayland with greater than 25% alfalfa in 2004 and less than 25% alfalfa in 2005. Ground cover data shows that there was greater than 25% alfalfa in both years, but the production data does show there was less than 25% alfalfa in 2005. This issue needs to be clearly explained in the bond release application. (GAW)
5. A sentence in the paragraph at the top of page 6, Attachment VI, states that since the post-mine land use is hayland there are no cover values. Please revise the sentence to clarify that there is no specific ground cover standard for hayland. (GAW)
6. At the beginning of the Wildlife Assessment section, please mention the pre-mining land use(s) of the bond release tracts and if any important habitats, i.e. wetlands, woodlands, native grassland on the bond release tract were impacted by mining activities. Please mention if any wildlife enhancement features were installed or constructed. It appears to us that Pond 25-2 is functioning as a seasonal wetland given the vegetative cover established in the pool area of the pond. (GAW)

#### **Attachment VI – Section 36**

7. Follow-up to Items No. 1 and No. 3 of the December 10<sup>th</sup> letter: Maps on file at our office (see attached map) show that the extreme northwest portion of the SW¼ of Section 36 was mined under the 1978 interim rules. Therefore, a portion of this tract is subject to the 1977 law and 1978 interim reclamation rules. Please state this in the history section and revise the language in the Methods for Revegetation Success, Production/Cover and Diversity and Seasonality sections of the permit accordingly. Update Attachment V to show that a portion of the area is also subject to the 1977 law and show the 1978 interim rules boundary. See attached map. (GAW)



8. Follow-up to Item No. 7 in the December 10<sup>th</sup> letter: In the History section, please clarify if 7 inches of topsoil and 8 inches of subsoil were respread on all areas of the tract, including those areas subject to the older reclamation laws, and those areas seeded prior to 1984. Please mention if any SPGM was salvaged from the pre-1975 law areas and if none was salvaged from these areas then was less SPGM respread on the post-1975 law areas to allow for some material to be respread on the pre-1975 law areas. Discuss why SPGM was respread on the pre-1973 law areas if the regulations did not require that SPGM be salvaged and respread. If the pre- and post-1975 law areas were reclaimed with the same SPGM respread depths and seeded to the same native grassland seed mixtures, please discuss why the pre- and post-1975 law areas were separated for the purposes of demonstrating revegetation success and summarize the applicable revegetation success standards for each law period. (GAW)
  
9. Follow-up to Item No. 14: In the application, please explain why the 2004 and 2005 south reference area (SO1) production data, Tables 8A and 9A, were not separated by growth form as required by the Revegetation Success Standards Document. (GAW)

10. Follow-up to Original Item No. 40 and subsequent items No. 11 & 13: The Reclamation Division is concerned with the ecological condition of native grassland reference area SO1. It is not possible to determine range condition of the site because production was not sampled by species, according to the data included in the bond release application. However, the reference area discussion on page 15 of Attachment VI states that reference area SO1 is in low good condition (60%). PSC inspection reports from 2004 and 2005 indicate that the ecological condition of the site had deteriorated, due to the abundance of Kentucky bluegrass. This office insisted that the reference area in Section 13 be officially added to the permit after sweet clover invaded reference area SO1 in the late 1990's. Even though we are concerned with the ecological condition of both reference areas, we believe the production standard for this bond release should be based on yield data from both silty reference areas. In addition, the application should openly and clearly discuss the ecological condition of the reference areas and make the case that the reference areas yields are reasonable given the growing conditions in years being used to demonstrate revegetation success even though species composition has fluctuated over time. Please include reference area production data for all available years to show that reference area yields are reasonably good considering the growing conditions for the years being used to demonstrate revegetation success. Compare the yield data from the reference areas with NRCS expected yields. In addition, discuss how management of the reference areas has been similar to the reclaimed land. Data in the permit shows that the silty reference area B13 yielded 2,299 lbs/acre in 2005 which should be expected given the precipitation received in 2005, but reference area SO1 only yielded 1542 lbs/acre in 2005. We also know that the silty reference (Amor Soil) at the Glenharold Mine located approximately 12 miles north of this tract of land yielded 1426.7 lbs/acre in 2004 and 2168.4 lbs/acre in 2005. In addition, the January to September 2005 Palmer Drought Index shows that Oliver County was moderately to very moist (see [http://www.ncdc.noaa.gov/oa/climate/research/2005/sep/drought\\_indicators.html#palmer](http://www.ncdc.noaa.gov/oa/climate/research/2005/sep/drought_indicators.html#palmer) so reference area SO1 should have yielded more than 1,542 lbs/acre in 2005). NDAC 69-05.2-08-08 (2) (c), NDAC 69-05.2-22-07, NDAC 69-05.2-12-12 and PSC Revegetation Success Standards Document Sections II-D and III-D. (GAW)
11. Follow-up to Original Item No. 40, subsequent Item No. 11. Please include actual reference area ground cover data for the years being used to demonstrate revegetation success. (GAW)
12. The first two sentences in the Production/Cover narrative on page 18 of Attachment VI states that in 2004 and 2005, "the adjusted standard for the Reference areas was 1,698 lbs/ac and 1632 lbs/ac...." These sentences are misleading as the adjusted standard is for the reclaimed area not the reference area. The adjusted standard is calculated using reference area data. Please edit accordingly. (GAW)
13. Table 16 is labeled "pre-law". This is incorrect as most if not all of the area was mined after 1969, and is subject to North Dakota's reclamation law. Please edit accordingly. (GAW)

14. Please edit the first sentence in the Diversity and Seasonality narrative on Page 19 of Attachment VI, to clarify that no specific seasonality and diversity standards apply to lands subject to North Dakota's 1978 interim rules. (GAW)
15. A map in an earlier bond release seems to indicate that a portion of Section 36 was originally in Permit 37, but the application indicates the area was initially permitted under Permit No. 4. Withdrawn bond release application No. 1 to BNCR-8106 also seems to indicate that some of Section 26 was also part of Permit 37 – the May 3 1978 map shows the Permit 37 line. Please check into this and update the narratives if necessary. (GAW)
16. During the July 8<sup>th</sup> inspection of the bond release tracts, Canada thistle was noted growing on the embankment of Pond 25-3. This must be controlled prior to final bond release approval. (DKM)
17. During the July 8<sup>th</sup> inspection of the bond release tracts, gully erosion was noted above the inlet side of the culvert located directly upstream of Pond 25-3. This erosion must be repaired and stabilized prior to final bond release approval. (DKM)
18. Trash racks need to be installed on the risers of Ponds 25-2 and 25-3 prior to final bond release. (DKM)

Also, we plan to have a staff engineer review the current condition of the discharge pipe on Pond 25-2 in the near future. If there are concerns with that pipe and related matters, we will let you know following that review.

If you have any questions, please contact this office.

Sincerely,



James R. Deutsch  
Director  
Reclamation Division