



Public Service Commission

State of North Dakota

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February 8, 2010

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 completeness review of the application for Revision No. 30 to Surface Coal Mining Permit No. BNCR-9702 for the Center Mine in accordance with NDAC 69-05.2-05-01(2). This revision proposes to add 676.48 acres to the permit extending the permit boundary further west in Sections 21, 29, and 32 and converts the permit document into an electronic format. The following items must be satisfactorily addressed before the Reclamation Division can deem the application complete. Please note that our rationale for many of the items is based on the requirement in NDAC 69.05.2-05-02(1) that information be presented clearly and concisely.

General

While we appreciate BNI's effort to convert Permit BNCR-9702 to an electronic format with Revision 30, the organization of the revision changes has made our review a challenge. Please make the following changes to the electronic permit submittal. (All)

1. In the conversion of a paper to electronic permit format, the reference to binder volumes for the paper permit should be abandoned. Retaining a reference to binder volumes with the electronic permit creates arbitrary and distracting divisions in the organizational structure. We suggest that you organize the electronic permit according to the permit's four parts of I - Legal and Financial, II - Extended Mine Plan, III - Environmental Resources, and IV - Operation Plan. Our previous reviews of permit revisions have referenced sections within these parts rather than volumes. We therefore see no benefit to retaining a volume reference in the electronic permit.

2. We believe that the Revision 30 electronic permit submittal requires fundamental restructuring. The first step in that process should be creating a separate DVD for the electronic version of the approved permit without binder volume references. The DVD for the Revision 30 submittal should build upon the approved permit by adding a revision list of changes in I. - Legal and Financial, similar to the hyperlinked instructions for Revision 30, but without volume references. The Revision 30 changes should be incorporated directly into the approved permit, rather than providing hyperlinks to standalone sections that are changed. All updates, additions, modifications, or deletions anywhere in the permit revision should be clearly marked by underscore or strikethrough in text (unless the entire section is replaced and noted on the page footer), with page footer on added sections or appendices, or revision number and date on plates.
3. Hyperlinks created to link referenced sections, appendices, or plates of the permit are the most useful tool of electronic permitting for anyone reviewing the permit. Absent a hyperlink, the reviewer must navigate to a main page of the permit to view a referenced document, and navigate a return to the document of primary interest. Aside from hyperlinks on the main pages to sections, appendices, or plates, there do not appear to be any hyperlinks elsewhere in the permit. Please insert hyperlinks throughout the permit for any references to sections, plates, or appendices.
4. Consideration should be given to consolidating maps that currently consist of various parts or sheets (e.g., pre-mine land use) into a single map of the entire permit area.
5. The use of bookmarks to break long narratives or sections in subsections is strongly encouraged.
6. BNI is proposing to permit the entire S½ of Section 29; however, no mining (coal removal) will take place on this tract according to the Extended Mine Plan Map, Plate 2.1. NDAC 69-05.2-05-08(1) states that the "permit area shall be no larger than a logical pit sequence and include lands used for activities incidental to coal extraction". The Landowner Notification Map, Plate 1.3-1, does show that a portion of the south side of this tract will be used to store overburden but we question whether it is necessary to permit the entire S½ of Section 29 for use as a stockpile location given the requirements of NDAC 69-05.2-05-08 (1) and the requirements of NDAC 69-05.2-13-05 to minimize disturbances on lands where coal is not removed. Please provide the details of any disturbances proposed in these areas and clearly depict the anticipated disturbance boundary on the appropriate maps as required by NDAC 69-05.2-09-02. Please provide the justification for permitting the entire S½ of Section 29. (GAW)

Newspaper Notice

7. Please revise the public advertisement to clearly state that the purpose of this revision is to add 676.48 acres of land and indicate the location (at least to the quarter section) of the lands being added. The newspaper notice heading should be "Notice of filing a revision to add area to an existing surface coal mining permit" not a "Notice of application for

permit to engage in surface coal mining and reclamation activities". The advertisement should indicate if any operations will be within 100-feet of the outside right-of-ways of any section lines or public roads and if so, those specific areas must be identified or specified in the notice. (GAW)

8. The surface and coal ownerships for Section 21 contain duplicate entries for Jeanette Lange and Virginia Miller. Please correct. (SAS)
9. Please modify the newspaper publication notice map in Appendix 1-1 to improve the permit boundary legibility, and to clearly identify the acreage being added to the permit. The permit boundary line type and the hatching for the acreage added as used on the Landowner Notification Map (Plate 1-3.1) would be suitable for use on the newspaper public notice map. (GAW, WTG, SAS)

Section 1.9 – Surface and Coal Ownership

10. The ownership listing for Section 22 is incomplete on pages 1-12 and 1-13. Please include the ownerships for the E $\frac{1}{2}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$. [NDCC 38-14.1-14(1)(b) and NDAC 69-05.2-06-01(1)(a)]. (SAS)
11. The contiguous ownership for the NW $\frac{1}{4}$ of Section 23 is missing. Please supply the necessary ownership information. [NDCC 38-14.1-14(1)(b) and NDAC 69-05.2-06-01(1)(a)]. (SAS)

Section 1.10 – Areas Unsuitable for Mining

12. Please update Section 1.10, Areas Unsuitable for Mining, to address whether the lands being added with Revision No. 30 contain any areas designated as unsuitable for mining as required by NDAC 69-05.2-06-05, or where mining is prohibited for compliance with NDCC 38-14.1-07. It is not clear where the discussion about the current use of the buildings is in the permit. (GAW)

Plate 1-1 – Permit Boundary

13. Please add a written metes and bounds description and plate showing the surveys of the additional land. (MSK)
14. Please use NAD 27 coordinates to identify the Point of Beginning for all surveys. (MSK)

Appendix 1-2

15. Please include copies of the federal coal lease for the NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 32. (SAS)

Section 3.1 – Topographic Information

16. Please revise the Limit of Mining Boundary on Plates 3.1-1 and 3.1-2 to coincide with the areas intended to be mined. The pre-mine area slope map should extend to the permit boundary in Section 21 as mining will continue to the west according to the Extended Mine Plan. (MSK)

Section 3.2 – Geology

17. The drillhole numbers that are depicted on the new Drillhole Location Map of Plate 3.2-1 are not legible at any scale. Also, there are at least four different shaped and colored symbols associated with the drillholes on the map but there is no legend or index on the map to describe what the varying symbols represent. Please consider increasing the font size of the drillhole numbers or eliminate the bolded text so that the drillhole numbers can be read, and provide a map legend to distinguish the differing symbols at the drillhole location sites. (BEB, WTG)
18. The Drillhole Location Map of Plate 3.2-1 depicts only one drillhole located within the NW $\frac{1}{4}$ of Section 32, T142N, R84W. Based on BNI's revised Extended Mining Plan Map and other information provided with Revision 30, it appears that it is your intention to mine this quarter-section, and information derived from drillholes at a minimum density of one drillhole per 40 acres is required. Please address this apparent data gap in the NW $\frac{1}{4}$ of Section 32. [NDAC 69-05.2-08-05(2)]. (BEB)
19. Coal analysis information for Revision 30 that is provided at the end of Appendix 3.2-3 and before Plate 3.2-1 provides coal analysis for only one drillhole, No. 09-102. All other data that is provided for the remaining 16 new/relevant drillholes in that section is overburden analysis information. Please provide the coal analysis information for the remaining new drillholes as required by NDAC 69-05.2-08-05(2) (d). (BEB)
20. NDAC 69-05.2-08-05(2)(f) requires the submission of a thickness isopach map that depicts overburden thickness to the top of the deepest seam to be mined. The current OB thickness isopach map that is provided in Plate 3.2-4 depicts overburden thickness down to the top of the Hagel A seam. Assuming BNI is planning to remove coal from the Hagel B seam, a replacement or additional map needs to be provided that depicts overburden thickness to the top of the Hagel B seam unless BNI can provide reasonable rationale that the map is unnecessary. (BEB)
21. We have noted that the new Drillhole Location Map of Plate 3.2-1 that is replacing the existing drillhole location map has eliminated the cross-section reference portion of the replaced drillhole location map. Please incorporate the cross-section reference locations (A-A', B-B', C-C') into the new Drillhole Location Map so that the location of the cross-sections is observable, or provide that information on another map. [NDAC 69-05.2-08-05 (2) (e)]. (BEB)

22. Several of the new maps that are provided in the geology section with Revision 30 such as the Drillhole Location Map, Overburden Isopach Map, Structural Contour Map and perhaps others, have the sections and section numbers depicted in yellow and all of those maps are set on a white background. The section numbers in particular are difficult to read on these maps and we ask that you please consider changing the color of the sections and section numbers so that the information presented on the map is more visible. (BEB)
23. NDAC 69-05.2-08-05 (2)(g) requires that all coal crop lines of the coal seams to be mined be depicted on a map or maps. The previous Overburden Isopach Map and Structural Contour Maps provide that information, although those maps are now being replaced in Revision 30 with maps that do not provide that information. Please incorporate the coal crop line location information into the new maps or provide that information on some other map in the geology section of the permit. (BEB)

Appendix 3.2-2 – Chemical and Physical Analyses of Overburden

24. Please rotate page 31 (overburden analysis) to the correct orientation in Appendix 3.2-2. (WTG)

Section 3.3 – Groundwater

25. Please explain what changes have been made to Section 3.3 Groundwater with Revision 30. Based on a comparison with the approved permit, it does not appear that any changes have been made with this section for Revision 30, but the entire section is being replaced. Is it being replaced because of the addition of Section 3.3.4, and if so, why is this added section titled as 3.3.4? (WTG, MSK)
26. Plate 3.3-1 represents the Location Map of Active Piezometer Nest which replaces the Location of Groundwater Monitoring Nests, which was also Plate 3.3-1. The new map has eliminated the inactive/removed/destroyed monitoring well locations that were on the original map and those inactive wells that were eliminated need to be shown on the new map as well, or the locations provided on a different map. Groundwater data has been collected for many years on most of the inactive wells and as new areas at the Center Mine come available for bond release, the submitted hydrologic data of those wells along with a location map will be reviewed for post-mine hydrologic assessment and a location map of those wells is required. Generally, active monitoring wells are depicted on a map in one color and the inactive/removed/destroyed wells are depicted on the same map in a different color. Please restore all of the wells into the new map, or provide a different map with inactive well locations. (BEB)
27. The Water Well Location Map in Plate 3.3-5 is not being revised or replaced with Revision 30; however, the permit boundary that is depicted on this map needs to be updated to show the new permit boundary that is proposed with Revision 30. Please revise. (BEB)

28. The Sheet Sand Potentiometric Surface Map of Plate 3.3-4 is a map that is not being revised or replaced with Revision 30; however, the proposed new permit boundary with Revision 30 needs to be shown on the map. Please revise. (BEB)
29. Plates 3.3-2 and 3.3-3 represent potentiometric surface maps for the Kinneman Creek and Hagel seams, respectively, and are both being replaced with new maps with the submission of Revision 30. The potentiometric surface maps for both of these hydrostratigraphic units need to depict the revised permit boundary, section lines and numbers, north arrow, and the location of Square Butte and Hagel Creeks if possible so that the location perspective of the potentiometric contours, and the location perspective of the monitoring wells used to generate the maps can be viewed. (BEB, WTG)

Section 3.5 – Pre-Mining Land Use

30. Please update Section 3.5, Pre-Mining Land Use, to account for the acreage being added with Revision 30. A few pages and a plate are being added to Appendix 3.4-2, but the information is incomplete for compliance with NDAC 69-05.2-08-08 and our pre-mine inventory guidelines. It is not clear why page 3.5-7a, Table 3.5-2a and Plate 3.5-1D are listed under Appendix 3.4-2 of the Revision 30 changes. Likewise, prime farmland sections are listed under Appendix 3.6-1 rather than Section 3.7. This is very confusing. (GAW)
31. Please create a comprehensive Pre-Mine Land Use Map, Plate 3.5-1A-D, for the entire permit area. The Reclamation Division allowed BNI to use separate Pre-Mine Land Use Maps when Permits BNCR-8704 and BNCR-8901 were consolidated and new acreage was added with Permit BNCR-9702. When acreage was added to this permit with Revision 8 (Sections 6, 7 & 31), we required that Plate 3.5-1B be updated rather than including a separate plate as is being proposed with this revision. (GAW)
32. Please discuss if the existing land uses of the land being added with Revision 30 have changed within the past 5 years. (NDAC 69-05.2-08-08 (3) (a). (GAW)

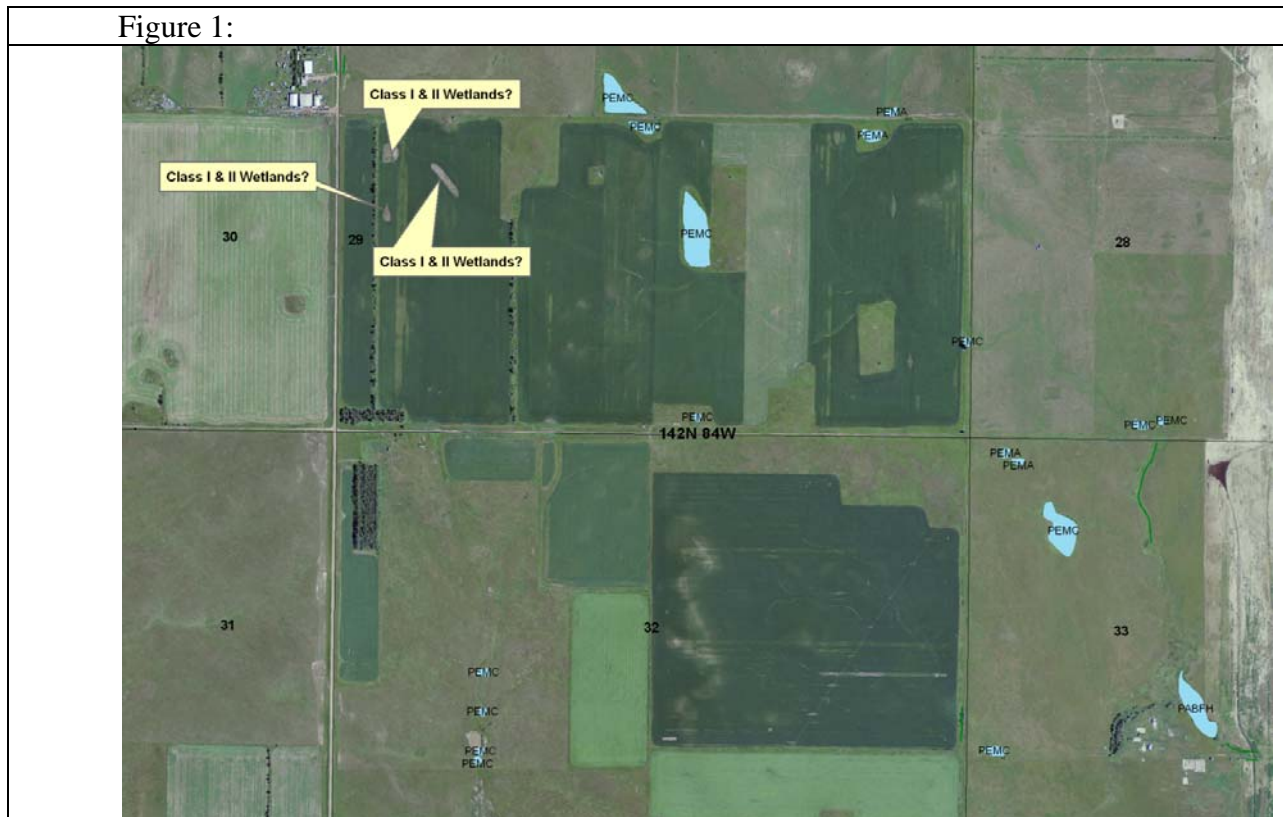
Section 3.6 – Pre-Mining Vegetation

33. Please update Table 3.6-2, the potential productivity by soil map unit, to account for the land being added with Revision 30. There are several soil mapping units for the addition area that are not listed in Table 3.6-2. In addition, ecological site mapping units were identified on the native grassland being added, but only range sites are shown in Table 3.6-2. Please provide the information required by NDAC 69-05.2-08-08 (3) and NDCC 38-14.1-14(2)(a)(3). (GAW)
34. The National Wetlands Inventory identifies several freshwater emergent wetlands in the S $\frac{1}{2}$ of Section 29 and in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 32 but only one of these features is identified as a wetland by BNI. Please include a discussion regarding the evaluation of these features and about consulting NRCS during the wetland inventory and

identification process as required by our guidelines. These additional NWI wetland features are delineated in Figure 1 below. (GAW)

35. The 2009, 2005 and 2003 NAIP aerial imagery shows what appears might be temporary wetlands in the cropland in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 29. Please review and discuss as necessary to clarify. These features are identified in Figure 1 below. (GAW)

Figure 1:



36. Please include an assessment of the surface water quality of the Class III wetland Revision 30 area as described in the revegetation guidelines and as required by NDAC 69-05.2-08-07(3). (GAW)
37. Please include and reference (both in the native grassland narrative in Section 3.6 and in methodology Subsection 3 of Appendix 3.6-1) where the ecological sites are delineated on a map as required by NDAC 69-05.2-08-08(1) (as amended January 1, 2009) and show the locations where sampling was conducted on each tract of native grassland. (GAW)
38. In Subsection 3 of Appendix 3.6-1a, please thoroughly discuss the methodology used to determine the ecological site similarity index. Describe how total annual yields were estimated on tracts that had been grazed during the growing period and how the sample sites were selected. The narrative in Subsection 3 of Appendix 3.6-1a states that the major ecological site(s) within each tract containing native grassland were sampled, but

that is not the case. The native grassland in Tracts 1 and 2 were not sampled. Please explain. (GAW)

39. Please include a description of each soil mapping unit delineated on the native grassland being added with Revision 30 as required by NDAC 69-08-08 (1)(a)(3). (GAW)
40. Please include a description of the water conditions in the pre-mine wetlands as required by NDAC 69-05.2-08-08(1)(c)(5). (GAW)
41. Please include a detailed narrative describing the nature and variability of the vegetation of all of the ecological sites found on the Revision 30 area. Describing the plant community's departure from the Historic Climax Plant Community (HCPC) using the NRCS's established Plant Communities and Transitional Pathways would be one way to meet this regulatory requirement. [NDAC 69-05.2-08-08 (1)(d)]. (GAW)
42. Please remove Appendix 3.6-1a, proposed to be added with Revision 30, from Appendix 3.6-1 Pre-Mining Vegetation Data (pages 165-191) in the approved permit since the Revision 30 material was inserted into the approved permit. (WTG)

Section 3.10 – Fish and Wildlife Resources

43. The Fish and Wildlife Habitats Map, Plate 3.10-4, must be delineated on aerial photographs in accordance with NDAC 69-05.2-08-15. (GAW)
44. Please include the methodology used to complete the Section 32 song bird survey, and provide an estimated species population density. (GAW)
45. Please discuss if the area being added to the permit contains any high value fish and wildlife habitat (i.e. native grassland, woodlands, shelterbelts, etc.) or any habitats of unusually high value such as important streams, wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protections, migration routes and wintering areas as required by NDAC 69-05.2-08-15. (GAW)

Section 3.12 – Cultural Resources

46. Please provide the letter of acceptance or other documentation from the SHPO indicating that the cultural resource report (2003) for the S½ of Section 29 is acceptable. In addition, please update the Cultural Resource Summary Table in Section 3.12 to indicate that Site 32OL343 is no longer located outside the permit boundary. (DKM)

Section 4.1 – Mining Operations and Waste Disposal

47. Please update Plate 4.1-1 to depict the pit sequencing for all areas (not just those areas that will be mined in a 5-year period) in the permit that will be mined as required by NDAC 69-05.2-09-02(4). We recommend changing the title on the map to the "Pit

Layout and Facilities Map” and also show the location of haul roads, sedimentation ponds, stockpiles and other support facilities. (JRD)

48. Please update the permit term coal production schedule in this section as required by NDAC 69-05.2-09-01. (WTG)

Section 4.2 – Existing Structures

49. Please update this section’s narrative and associated plate (map) to address the lands being included with Revision 30. (GAW)

Section 4.4 – Blasting Plan

50. Please update the Blasting Map and narrative to include the entire permitted area. (MSK)

Section 4.11 – Suitable Plant Growth Material Removal and Replacement

51. Please update this section to provide the suitable plant growth material volumes by ownership for the acreage added with Revision 30, as required by NDAC 69-05.2-09-11-5. (WTG)

Section 4.12 – Post-Mine Land Use and Revegetation

52. Section 29 is not included in Table 4.12-1 and the total acres in this table do not equal the current permit acres plus what is being added to the permit with Revision 30. Please make the necessary corrections. (SAS)
53. Please add a discussion in Section 4.12.2 (including the pre- and post-mine comparison table) on the pre-mine and post-mine land uses for the area being added to the permit in Section 29 similar to what was done for the other tracts. This should be added even though the area will not be mined but only used for support activities. Please place the discussion on page 4.12.2-8 prior to the discussion on Section 31. (SAS, WTG, & GAW)
54. The Post-Mining Land Use Map, Plate 4.12-1, which was used to update Revision 30, is not the currently approved version but an earlier version. Please update this map to the current approved version of this map. (GAW)

Appendix 4.12-1

55. Page 4.12-1-21-2 is the signature page for the Virginia Miller preference statement for Section 21. Please include the first page of this preference statement. (SAS)

56. Preference statements for the following surface owners were not included in the revision application. Please include these preference statements or indicate that statements were not received from these surface owners on page 4.12.1-1.

- The remainder of the surface owners in Section 21;
- Arnold Torgerson for the SE¼ of Section 29; and,
- John Yantzer for the SW¼ of Section 29 plus the N½ and SW¼NW¼ of Section 32. (SAS)

57. Several surface owners within the NW¼ of Section 32, T142N, R84W, have noted in their Land Owner Preference Statements in Appendix 4.12-1 that they wish to have the existing pre-mine water well left intact and usable and/or restored or saved. We have been unable to find documentation in the permit revision that states BNI's intention to either not disturb this resource or to replace the resource if it is disturbed or destroyed. Please address water supply replacement issues for this well and any other wells that have not been addressed to date in Section 3.3.2.3 and in any other permit section(s) providing data as related to pre-mine developed wells and replacement plans. (BEB)

Section 4.13 – Fish and Wildlife Resource Protection and Enhancement Plan & Fish and Wildlife Monitoring Plan

58. Please update the Fish and Wildlife Resources Protection and Enhancement Plan to include a discussion of the enhancement measures that will be used during the reclamation phase on the land being added with Revision 30 to develop aquatic and terrestrial habitat as required by NDAC 69-05.2-09-17 (1) (d). If the plan does not include enhancement measures, valid justification must be included in the permit explaining why enhancement is not practicable. (GAW)

Section 4.14 – Reclamation Cost Estimate for Bonding Purposes

59. Please update the worst case bond associated with Permit BNCR-9702 to reflect the additional area and mining, including all maps and spreadsheets to reflect the additional area and mining proposed by Revision 30. (MSK)

In addition to the above list of “completeness” deficiencies, we noted the following “technical” deficiencies in the application. These can either be addressed at this time or wait until we conduct a more thorough technical review after the application is deemed complete.

Section 2.1 – Extended Mine Plan

1. Please remove the boundary denoting Permit BNCR-9401 from the area that has not yet been permitted to the south of current Permit BNCR-9401, similar to how the area is shown west of Permit BNCR-9702 in Sections 19 and 20. (MSK)
2. Please revise the Limit of Mining Boundary to coincide with the areas actually intended to be mined. For example, in the N½ of Section 28 and in Section 21, mining is still

shown well beyond the current Limit of Mining Boundary. As currently depicted the Limit of Mining Boundary tends to infer that a final highwall will be located in that area. (MSK)

Section 3.4 – Surface Water

3. Please modify the watershed boundary line types on Plates 3.4-2 and 3.4-3 to show the boundaries as dashed lines as indicated in the map legend. (MSK)

Section 4.8 – Cultural Resources Protection Plan

4. The Cultural Resources Protection Plan narrative information that is provided in Section 4.8 does not pertain to other items in the Reclamation Section (4.8) and should be relocated to the Cultural Resources Section of the permit in Section 3.12. Please relocate these sections. (BEB)

Section 4.12 – Post-Mine Land Use and Revegetation

5. The surface owners of the area being added in Section 21 and most of the surface owners of the area being added in the NW¼ of Section 32 request that their property be returned to its pre-mine land uses, according to their landowner preference statements. However, BNI is proposing to reclaim the cropland and native grassland in Section 21 to hayland and all of the native grassland in the NW¼ of Section 32 (which is comprised mainly of soils poorly suited to cropland) to cropland. Please provide the rationale for changing the post-mine land use from what the landowner has requested or revise Section 4.12-2 to comply with the landowner's preference statement. (GAW)

If you have any questions, please contact this office.

Sincerely,



James R. Deutsch
Director
Reclamation Division