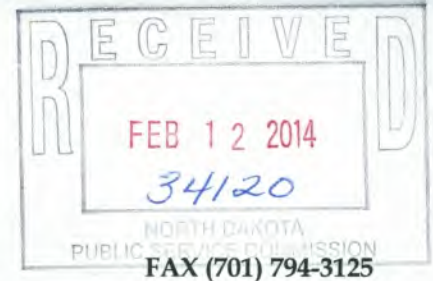


PHONE (701) 794-8734



AN ALLETE COMPANY

2360 35<sup>TH</sup> AVENUE SW CENTER, ND 58530-9499  
MINING LIGNITE AT THE CENTER MINE SINCE 1970

February 12, 2013

Mr. Jim Deutsch, Director  
Reclamation Division, NDPSC  
Department 408  
600 East Boulevard Avenue  
Bismarck, ND 58505-0480

RE: Application for Permit BNCR-1101

Dear Mr. Deutsch,

This submittal contains a response to your letter to us dated January 21, 2014. In this letter you listed technical deficiencies that must be addressed before the permit application for BNCR-1101 can be approved. Below is a listing of the deficiencies followed by our response:

**General**

1. It was noted that a number of maps and plates (Blasting Map, Reclamation Variance Areas, etc.) were not updated to reflect the latest revised mine plan for the permit. Please update all the affected maps and plates accordingly. Please also consider using a consistent method for indicating changes made in the permit. Whether the method is underscoring or color for new text, strikethrough of deleted text, or a combination of line and color, it should be consistent throughout the permit to avoid confusion and improve clarity. (FSE)

*For this round and subsequent rounds, we will highlight the portions of the permit that have been revised. For Technical Response 3 the changes will be highlighted in yellow.*

**Plate 1.9-1 Surface and Coal Ownership**

2. Follow-up to item No. 3: As required by NDAC 69.05.2-08-02(1)(a), and as noted in similar deficiencies for Appendix 1.9-1 (Ownership Information (within Permit Boundary)) and Appendix 1-2 (Certified Copies of Leases and Assignment

Documents), please update Plate 1.9-1 when BNI has resolved the undetermined coal ownership that currently totals 200 percent interest in the NE¼ of Section 20, T141N, R83W, on Plate 1.9-1. (WTG)

*Our attorney is currently reviewing judgments in this case relating to the mineral ownership and associated mineral discrepancies of this tract.*

#### **Appendix 1.9-1 Ownership Information (within Permit Boundary)**

3. Follow-up to item No. 6: As required by NDCC 38-14.1-14(1)(c)(2), and as noted in similar deficiencies for Plate 1.9-1 (Surface and Coal Ownership) and Appendix 1-2 (Certified Copies of Leases and Assignment Documents), please update Appendix 1.9-1 when BNI has resolved the undetermined coal ownership that currently totals 200 percent interest for the NE¼ of Section 20, T141N, R83W, on page 43 of Appendix 1.9-1 and provide addresses for all of the coal owners of record. (WTG)

*Our attorney is currently reviewing judgments in this case relating to the mineral ownership and associated mineral discrepancies of this tract.*

#### **Appendix 1-2 Certified Copies of Leases and Assignment Documents**

4. Follow-up to item No. 7: As required by NDAC 69-05.2-06-03(1), a certified copy of the coal lease with Great Northern Properties for Section 7, T141N, R83W, should be included in the application prior to permit approval or submitted separately with a trade secret request as discussed between your attorney and the Commission's general counsel. (WTG/DKM)

*No updates were added at this time with regards to this lease.*

5. Follow-up to item No. 10: As required by NDAC 69-05.2-06-03(1), please provide either a certified copy of a surface lease executed by Kasper and Donna Kraft for the SW¼ of Section 16, T141N, R83W, or court order issued pursuant to the Surface Owners Protection Act authorizing the Commission to issue a mining permit. This parcel will need to be removed from the permit application prior to Commission action if neither instrument conveying right of entry is obtained. (WTG/DKM/JRD)

*No updates were added at this time with regards to this lease.*

6. Follow-up to item No. 11: As required by NDAC 69-05.2-06-03(1), and as noted in similar deficiencies for Plate 1.9-1 (Surface and Coal Ownership) and Appendix 1.9-1 (Ownership Information (within Permit Boundary)), please update Appendix 1-2 when BNI has resolved the undetermined coal ownership that currently totals 200 percent interest in the NE¼ of Section 20, T141N, R83W, and provide certified copies of coal ownership leases with the coal owners of record. (WTG)

*Our attorney is currently reviewing judgments in this case relating to the mineral ownership and associated mineral discrepancies of this tract.*

7. Follow-up to item No. 12: As required by NDAC 69-05.2-06-03(1), please provide a certified copy of the surface lease with Robert Reinke for the E½SE¼ of Section 31, T142N, R83W. Although we agreed to accept the purchase option agreement executed by Mr. Reinke for completeness approval purposes, Commission approval of the permit application cannot occur until a certified copy of a consent statement executed by Mr. Reinke is provided in the application. Alternately, if the actual purchase by BNI Coal has been completed, the necessary documents can be provided showing that BNI Coal is the owner. (WTG/DKM/JRD)

*The lease with Robert Reinke is included with this submittal. Appendix 1-2 Certified Copies of Leases and Appendix 1.9-1 Ownership Information (within Permit Boundary) have been updated.*

#### **Appendix 1.5-2 Landowner Notification Letters**

8. Please resend landowner notification letters to all surface owners who will be affected by the proposed new mine plan and schedule. The Landowner Notification Map (Plate 1.5-2) that was originally mailed with the notification letters depicted coal removal in the west mine area occurring from 2018 through 2032 but the revised pit layout and facilities map now depicts this area to be mined from 2015 through 2020. Likewise, no disturbance was depicted in Section 9 or the northwest corner of Section 16 but the revised mine plan now depicts coal removal in these areas from 2020 through 2024. Proposed Haul Road B was not depicted on the original map so disturbance associated with this corridor was not depicted. Please resend notification letters that include a map depicting the types and approximate timeframes of disturbance planned as required by NDCC 38-18-06. (GAW/FSE)

*The Landowner Notification Letters and Maps were updated with the current mine plan and re-sent to all the surface owners. Copies of the letters can be found in Appendix 1.5-2. Please note that with the boundary change to BNCR-1101, Kathleen Windhorst no longer has land within the permit boundary. Therefore a notification letter was not sent to her.*

#### **Appendix 1-7 Approval Documents**

9. Follow-up to item No. 124: I now available, please insert documentation in Appendix 1-7 indicating that the Oliver County Board of County Commissioners has approved BNI's plans to close roads and section line trails, and has also approved the alternative relocation route. (GAW)

*The Publication Notice for the Country Road Closure and an Article about the Country Road Closure from the Center Republican have been added to this section.*

#### **Plate 1.8-1 Permit Boundary BNCR-1101**

10. Please revise Plate 1.8-1 to clearly depict the permit boundary around the Great River Energy tower in Section 8 and the cemetery in Section 18 in a manner similar to the remainder of the permit boundary. The permit boundary is identified around the

perimeter of the proposed permit area with a dark blue line so this same line color should be shown around these features. (GAW)

*Plate 1.8-1 Permit Boundary map was updated so the exception areas of the cemetery and the GRE tower are the same color as the permit boundary. The permit boundary color was changed to magenta to match the rest of the permit maps.*

### **Plate 3.1-1 Pre-Mining Topography**

11. Please increase the line width or use a more contrasting color for the mining disturbance boundary on Plate 3.1-1 to make the line more distinguishable from the contour lines shown on the map. (RLK)

*The color of the mining disturbance line was changed to provide better contrast as requested.*

### **Section 3.3 Groundwater**

12. Follow-up to item No. 22: The updated response provided projected pit water inflow volumes for both the Hagel coal seam and the underlying Sheet Sand hydrostratigraphic unit; however, only information was requested for the Hagel coal seam because, based on BNI's coal removal plan in the permit area, the Sheet Sand aquifer should not be intercepted or excavated during planned mining and reclamation operations. Unless BNI is projecting upward gradient flow into the pit bottom from ground water derived from the Sheet Sand aquifer, the pit water inflow volumes calculated for the Sheet Sand aquifer below depth of mining can be eliminated from the narrative. (BEB)

*The Sheet Sand aquifer information was removed from the fourth paragraph of Sect. 3.3*

13. Follow-up to item No. 25: In addition to the examples provided of higher concentrations of some chemical constituents in the base of spoils saturated zone in Permit BNCR-9702 compared with pre-mine Hagel seam water quality, it is recommended that BNI provide additional examples of reclaimed spoils water quality from BNCR-9702 that has stabilized or improved over time. Providing additional examples of where higher initial concentrations of TDS, sulfate and other chemical constituents have improved since the initial flush of recharge water to the spoils saturated zone will support other PHC predictions of minimal changes to water quality off-permit and minimal changes to water quality within the reclaimed spoils blocks inside the permit area over time. (BEB)

*Discussion of Well 159R stability was added to the second paragraph of pg 1-6.*

14. The first paragraph in the narrative of Section 3.3 describes the conveyance of Square Butte Creek and Hagel Creek at Nelson Lake. It may be more appropriate in this particular context to use the word confluence instead of conveyance. Please review and revise as appropriate. (BEB)

*The wording was changed to confluence instead of conveyance.*

15. Narrative in the second paragraph on page 1-2 describes springs and seeps in the permit area and also provides a link to Plate 3.3-4 which the narrative describes as being the Spring and Seep Map. However, Plate 3.3-4 is the Certified Well Location Map, so please re-direct the link to Plate 3.4-4, which is the Spring/Seep & Surface Water Monitoring Location map. (BEB)

*The plate was changed to direct to Plate 3.4-4*

16. Please describe in the ground water narrative BNI's methods and procedures for decommissioning ground water monitoring wells and abandoned water supply wells for those wells that will be mined-through and are screened below depth of mining, i.e., below the base of the Hagel coal seam. (BEB)

*Decommissioning of water supply wells, which are screened below the lowest mineable elevation, were discussed in the third paragraph of pg. 1-7.*

### **Section 3.4 Surface Water**

17. Follow-up to item No. 32: Plate 3.4-1 (General Drainage Map) shows that portion of the watershed of Hagel Creek and SCS Dam No. 5 Creek within the permit and adjacent area. Please clarify the second paragraph on page 2 of Section 3.4 to indicate the drainage areas are shown for the permit area. The current narrative tends to imply that the entire watersheds are depicted. (RLK)

*The clarity of what portion of the watershed was discussed on page 2 of Section 3.4.*

18. Follow-up to item No. 33: The first sentence of the Surface Water Quality narrative does not seem necessary as a result of the text added as the second sentence. Please consider removing the first sentence for clarity. (RLK)

*The first sentence of Surface Water Quality narrative was removed for clarity.*

19. In the second and third paragraphs of the Surface Water Quality narrative beginning on page 4 of Section 3.4, the water quality data presented in the narrative does not agree with the information in Appendix 3.4-1. Please update the discussion of baseline data to include additional sample events at the respective sites as appropriate. Also consider stating in the text what years of sample data are being summarized in the narrative. (RLK)

*The data was updated to reflect Appendix 3.4-1; also sampling dates were added to narrative.*

20. Follow-up to item No. 36: Please revise the last paragraph in the surface water narrative for clarity. It would be more correct to refer to the livestock water quality criteria published by the NDSU Extension Service as recommendations or guidelines for livestock water supplies rather than standards. Also, please cite the NDSU publication by title and publication number. (RLK)

*The NDSU Extension Service document along with publication number was added and narrative reworded.*

21. Follow-up to item No. 37: In the last sentence of the third paragraph of the water quantity narrative, please correct the word “reduced”. Also, the first sentence should be corrected to state that the stream flows in March and April coincide or are in response to spring runoff events. The sentence added regarding the monthly mean flow for April 2011 should be clarified by revising the sentence to note that the monthly mean flow recorded for April 2011 and April 2009 are the two highest on record for the Square Butte Creek gauging station. It is not clear what is meant by the sentence “The same applies for reduced flows during freeze up conditions.” In the second to last sentence the phrase “...due to springs and seep feeds...” is unclear and perhaps “...due to springs and seeps...” would be more clear. (RLK)

*The word “reduced” was added to the third paragraph. Also stream flow response timeline was added to the paragraph, along with discussion on spring/seep conditions regarding flow rates on streams.*

22. Follow-up to item No. 38: Please review and revise the Usable Pre-mining Water Supplies narrative to be more clear and logical. Please move the sentences related to reclamation and landowner preference (first, second, and fourth sentences) from the first paragraph to the fourth paragraph where the discussion seems to relate to preference statements and leads in to Table 3.4-2. Also, the first sentence needs to be revised to clarify that landowners have an opportunity to request land use changes for consideration during reclamation such as converting some pre-mine pastureland acres to cropland in the post-mine setting. The second sentence informing the reader that the landowner preference statements describe the land use changes requested and the water features within a land tract needs to be revised for clarity. The fifth sentence does not appear relevant to the first paragraph. (RLK)

*This paragraph was re-worked for clarity and logic. Discussion on premine conditions along with landowner preference statements were updated and changes were made per request.*

23. Follow-up to item No. 38: Please revise the second paragraph of the Usable Pre-mining Water Supplies narrative for clarity. The purpose, evaluation and examples used to describe the pre-mine use of the springs and seeps cannot be reasonably discerned from the narrative. Please reinsert the first sentence that has been struck-out and revise as appropriate for clarity. The paragraph makes little sense without identifying that the springs and seeps shown on plate 3.4-4 were evaluated for their potential to provide a water supply or contribute to downstream water features on a variable and seasonal basis. The reference to Appendix 3/6-5, Wetland Drawings/Methodology seems out of context in the second sentence. The narrative in the appendix appears to be focused on the influence of groundwater seeps on wetlands rather than developed water resources. References are made in the paragraph to “these springs” and “this stream” without clearly identifying the feature(s) in the preceding narrative. The apparent conclusion or summary statement added as the last sentence is not supported by the information presented in the narrative. Perhaps the paragraph could make a summary about the

current utilization of springs and seeps such as the number of developed springs, the typical flow rate and identify any with particularly higher observed flow rates. (RLK)

*Pre-mine spring/seep contribution to downstream water features were discussed in regards to on-site evaluations, such as flow rates and amount of springs/seeps combining to a watershed.*

24. Follow-up to item No. 38: A sentence in the third paragraph states that “BNI will not be mining through any of the intermittent stream channels, therefore no effects will be seen in functionality of these streams in concern of pre-mine usages such as livestock watering.” This statement is an oversimplification of the potential effects the planned mining and associated disturbance will have on intermittent streams particularly in regard to the springs/seeps that contribute to the intermittent flow and linear wetlands occupying such channels. In addition, the conclusion that there will be no effects on the functionality without some post mine enhancements contradicts statements made in the Probable Hydrologic Consequences narrative. (RLK)

*Discussion on the PHC of springs/seeps being mined through and the overall function of the stream channel were updated.*

25. Follow-up to item No. 39: In the first paragraph of the Usable Pre-mining Water Supplies narrative, a sentence indicates Hagel Creek is classified as an intermittent stream but Plate 3.4-1, General Drainage Map, identifies the Hagel Creek segment near the permit area as perennial. Also, the flow records provided in Appendices 3.4-3 and 3.4-4 appear to support a perennial flow classification. Please review and revise as appropriate. Also, please clarify the sentence in regard to Hagel Creek (identified as an intermittent stream) as being a water source used by Minnkota’s generating facility for cooling water and other industrial purposes. (RLK)

*Hagel Creek was updated to a perennial stream in regards to flow data. Added was the discussion of Hagel Creek and Square Butte Creek which maintain or aid in the cooling process of Minnkota Power.*

26. Follow-up to item No. 40: Please revise the first full paragraph on page 3 of Section 3.4, Surface Water. The first sentence does not make sense. It appears that the beginning of the sentence is identifying to the reader that the investigation and classification for streams in the permit area is discussed in Appendix 3.4-9. After the sentence identifying the classifications being used, it would be helpful to explain that the classifications assigned to the streams were based on field investigations conducted during 2012 following several years with high precipitation and a corresponding high water table, or other appropriate wording. The narrative could go on to say that the initial surveys that began in 2009 indicated less extensive intermittent stream flow. The Administrative Code citation added to the second to last sentence seems to contradict what is said in the first part of the sentence. It would be helpful if the sentence was completed by indicating that the appendix describes the current (2012) condition and the long term flow classification that is anticipated under near normal precipitation patterns. (RLK)

*This paragraph was reworded with an approach to discuss the way high precipitation years and abnormal high water table for classifying stream systems. As stated BNI will be updating this stream classifications, along with spring/seep inventory for a "normal" classification, through ongoing field investigations.*

27. There appears to be two versions of Table 3.4-2 (Potential Effect on Developed Water Resources) on pages 7 and 8 of Section 3.4. Please remove the outdated version of the table. (RLK)

*Once final draft is approved, the outdated version will disappear.*

28. Follow-up to item No. 41: Please revise the second paragraph in the probable hydrologic consequence narrative to clearly and accurately describe the information that is actually in the permit application as it relates to the contribution of spring/seep flow to other water features. A sentence in the second paragraph states: "These water features were looked at from their spring/seep input as to what contribution these springs/seeps play in the functionality of the water feature." Information on the contribution of springs and seeps to the functionality of individual water features is not readily found in the permit. The next sentence in the paragraph appears to say that the estimated flow rates from the springs and seeps are listed in Appendix 3.4-7. (RLK)

*The spring and seep contribution was added from Appendix 3.4-7, and an example was discussed in Section 8, T141N, R83W with spring/seep maintaining DWR's downstream, compared to overall flow.*

29. Follow-up to item No. 42: A sentence in the third paragraph of the probable hydrologic consequences section states as follows: "The contribution to wetlands from any water source is tough ...." For this narrative it would be appropriate to indicate that the pre-mine springs/seeps would be eliminated in the area where coal is removed and possibly nearby adjacent areas. As such, the replacement features would need to be designed based on expected surface flows. Please revise the paragraph for clarity. (RLK)

*The paragraph was updated with narrative indicating that the spring/seeps would be removed and flows would be diminished. And downstream water features will need to be designed for expected flows from surface (overland) flows.*

30. Follow-up to item No. 45: Please correct the overlapping text that appears in the legend on Plate 3.4-5. Also, please either retitle the plate or edit the permit's Table of Contents and Section 3 home page as necessary so the plate's title and reference are accurate and consistent. (RLK/ZAB/WTG)

*The overlapping text in the legend of Plate 3.4-5 has been corrected. Also the title in the title block of this plate has been revised to be consistent with the Section 3 home page and table of contents, and now reads "Lentic Wetlands, Lotic Wetlands, and DWR Locations."*

31. Follow-up to item No. 52: The "Avg. Sulfates" column is blank on pages 6 to 9 of the wetland, springs and surface water tables in Appendix 3.4-1. Please revise as appropriate. (RLK)

*This column was used for the discussion about Premine DWR's found on page 14 of Section 3.5. It is an average sulfate level for each DWR based on samples that had been taken.*

### **Section 3.5 Pre-Mine Land Use**

32. Follow-up to item No. 57: The first paragraph on page 14 of Section 3.5 states that results for samples taken from DWR's are recorded in Table 3.4-1, but the table contains information on physical features of DWR's in the permit area. The reference and link apparently should be to Appendix 3.4-1. Please correct as necessary. (RLK)

*The link and the text found in the first paragraph on Page 14 of Section 3.5 have been corrected to direct to Appendix 3.4-1 for samples taken from DWRs. A statement and a link have been added to the beginning of this paragraph describing that Table 3.4-1 contains the premine condition and physical features of each DWR.*

33. Follow-up to item No. 57: In the Developed Water Resource narrative in Section 3.5, please include a brief narrative and reference to Table 3.4-1 (Pre-Mining Developed Water Resource Conditions) that provides detailed information on the size and condition of the pre-mine developed water resources in the permit area. (RLK)

*A statement and reference to Table 3.4-1 have been added to the first paragraph on page 14 of Section 3.5.*

34. Follow-up to item No. 61: Please correct the recent revision in the first paragraph of the Gravel/Scoria Pits narrative in Section 3.5 which states the scoria pits are in Section 4. The Gravel/Scoria pits are in Section 24. (ZAB)

*This error has been corrected in the 2<sup>nd</sup> paragraph on page 15 of Section 3.5. The number was incorrectly shown as being deleted.*

35. Follow-up to item No. 64 and 71: Please correct the second sentence in the second paragraph on page 8 of Section 3.5 which incorrectly identifies linear wetlands as lentic and depressional wetlands as lotic. (ZAB)

*The second sentence in the second paragraph on page 8 has been corrected. This sentence now identifies linear wetlands as lotic and depressional wetlands as lentic.*

36. Follow-up to item No. 80: Please add SB5B to the shelterbelt ID for the W1/2NW1/4 of Section 5 on Table 3.5-2 in Section 3.5 to clarify that a portion of this shelterbelt is in the NW1/4. (ZAB)

*Shelterbelt SB5B in the W2SW4 & W2NW4 of Section 5, has been added to the table on page 6 of Section 3.5*

37. Follow-up to item No. 80: The following two errors were noted on Table 3.5-2 in Section 3.5 while reviewing revisions to Appendix 3.6-7. Please change SB19Q

acreage from 0.2 to 0.02 and change SB24R acreage from 0.93 to 1.11 to be consistent with the acreages listed in Appendix 3.6-7 and on Table 3.5-1. (ZAB)

*These errors have been corrected in Table 3.5-2. SB19Q is now 0.02 acres and SB24R is now 1.11*

### **Section 3.6 Pre-Mine Vegetation**

38. Follow-up to item No. 73: The first sentence of the third paragraph on page 12 of Section 3.6 states that one depressional wetland was sampled but the last sentence in this paragraph indicates that two (2) wetlands were sampled. Please review and correct this discrepancy. (GAW)

*The 3<sup>rd</sup> paragraph on page 13 of Section 3.6 has been revised to clarify that one depressional wetland sample was taken in the SE4 of Section 17.*

39. Follow-up to item No. 73: Please revise the fourth paragraph on page 12 of Section 3.6 so that the information is specific to the depressional wetlands in the permit area. A sentence in this paragraph states that there were only three plant species that had a floristics score of 5 or greater. However, wetland sampling data in Appendix 3.6-5, shows only three species present in the wetland that was sampled and only one has a C-value score greater than 5. (GAW)

*The 4<sup>th</sup> paragraph on page 12 of Section 3.6 has been revised to clarify that only 1 plant species, Spikerush (*Eleocharis compressa*), that had a floristic score of 5 or greater.*

40. Follow-up to item No. 74: The fourth paragraph on page 4 of Section 3.6 has been revised to state that western snowberry makes up approximately 1.6% of the composition of vegetation species on native grasslands within BNCR-1101. Please revise to clarify what is meant by this statement and clarify how it was determined that western snowberry comprises 1.6% of the composition. As stated in the original item, please provide an assessment of the spatial frequency or relative abundance of low shrubs not considered woodlands in each tract of native grassland. NDAC 69-05.2-08-08(1)(d) (GAW)

*The narrative starting in the 4<sup>th</sup> paragraph of page 3 in Section 3.6 has been revised. As per conversations with the PSC staff, spatial frequency of low shrubs has been discussed in this narrative. A new appendix (Appendix 3.6-9) has also been added to the permit, which illustrates the acres containing a percentage of western snowberry within the native grassland acres.*

41. Follow up to item No. 75: The legend of Plate 3.6-2 includes a disturbance boundary line that is not shown on the map. Please remove this disturbance boundary line symbol from the legend to avoid confusion. (GAW)

*The legend on Plate 3.6-2 has been revised. The symbol for the disturbance boundary has been removed.*

### **Appendix 3.6-5 Wetland Drawings/Methodology**

42. Follow-up to item No. 79: Appendix 3.6-5 is identified as Wetland Drawings/Methodology in the bookmark section of Appendix 3.6-5 but the document is entitled Appendix 3.6-5 - Pre-Mining Wetlands at the top of page 1 of the document. Please revise so the title of the document is the same in both instances. (GAW)

*Top of page 1 of Appendix 3.6-5 has been revised to correctly title this document as Wetland Drawings/Methodology.*

43. Follow-up to item No. 76: Please revise the third paragraph on page 1 of Appendix 3.6-5 to clarify that Class II wetlands are classified as temporary rather than seasonal wetlands. (GAW)

*The 3<sup>rd</sup> paragraph on page 1 of Appendix 3.6-5 has been revised to clarify that Class I and Class II wetlands are temporary, Class III wetlands are seasonal, and Class IV wetlands are semi-permanent.*

44. Follow-up to item No. 76: A sentence in the third paragraph on page 1 of Appendix 3.6-5 states that Class I, Class II and Class III wetlands sometimes occur as isolated potholes ... but the wetland table on page 12 of Section 3.6 indicates that there are only temporary depressional wetlands in the permit area. Please revise to provide clarity. (GAW)

*The 3<sup>rd</sup> paragraph on page 1 of Appendix 3.6-5 has been revised to clarify that "Class I and Class II wetlands sometimes occur as isolated potholes, but all classes of wetlands (Class I, Class II, and Class III) are most commonly found in the permit area as beaded wetlands along drainage channels."*

45. Follow-up to item No. 76: A sentence in the first paragraph on page 5 of Appendix 3.6-5 states that 3 depressional (2 temporary and one seasonal) were selected to be added to the wetland monitoring. Page 12 of Section 3.6 indicates that only one depressional temporary wetland was sampled. Please review and revise for consistency. (GAW)

*The 1<sup>st</sup> paragraph on page 5 of Appendix 3.6-5 has been revised to clarify that on temporary depressional wetlands was sampled within the permit.*

### **Appendix 3.6-7 Shelterbelt Drawings/Descriptions**

46. Follow-up to item No. 80: Please add a quarter line to the drawing of shelterbelts SB5A and SB5B in Appendix 3.6-7 to clarify that a portion of SB5B is located in the NW1/4 of Section 5. The landowner maps in Appendix 3.5-3 are presented by quarter and Tables 3.5-1 and 3.5-2 list acreages by quarter, therefore the shelterbelt diagram should depict the quarter line for clarity and consistency. (ZAB)

*A quarter section line has been added to the drawing for the Section 5 shelterbelts found on page 4 of Appendix 3.6-7.*

47. Follow-up to item No. 80: The diagram for shelterbelts SB24S, SB24T and SB24U is not in sequential order in Appendix 3.6-7, please place the diagram after the appropriate narrative. (ZAB/GAW)

*The sequential orders for the shelterbelts in Section 24 have been corrected in Appendix 3.6-7. Shelterbelts SB24S, SB24T, SB24U follow the narrative that discusses them. These are now found on pages 43-46.*

48. Follow-up to item No. 80: The diagram for shelterbelts SB24R, SB24P and SB24Q is not in sequential order in Appendix 3.6-7, please place the diagram after the appropriate narrative. (ZAB)

*The sequential orders for the shelterbelts in Section 24 have been corrected in Appendix 3.6-7. Shelterbelts SB24R, SB24P, SB24Q follow the narrative that discusses them. These are now found on pages 40-42.*

49. Follow-up to item No. 80: The diagram for shelterbelt SB13A and the diagram for shelterbelts SB13B through SB13F are not in sequential order in Appendix 3.6-7, please place the diagrams after the appropriate narratives. (ZAB)

*The diagrams for the shelterbelts in Section 13 in Appendix 3.6-7 have been corrected.*

50. Follow-up to item No. 80: Please check the acreage of SB24H in Appendix 3.6-7 which is listed as 0.24 acres and results in a total of 9.38 acres for the E1/2 of Section 24. However, this is not consistent with the total of 9.51 acres given on the first page of the parcel description. It appears the correct acreage for SB24H may be 0.37 acres, which is the acreage listed on Table 3.5-2. Table 3.5-1 and Table 3.5-2 both list the total acreage for the E1/2 as 13.91 acres, which would be consistent with the total for the E1/2 and NE1/4 in Appendix 3.6-7. Please review and revise as appropriate. (ZAB)

*The acreage for Shelterbelt SB24H has been corrected on page 37 of Appendix 3.6-7 to 0.37 acres.*

51. Follow-up to item No. 81: The bookmark table of contents indicates that the Section 19 shelterbelt survey forms are located in an order consisting of the NW1/4, SE1/4 and SW1/4 but the shelterbelt information for the SW1/4 is located preceding the information for the other two quarters. In other words, if one scrolls through document starting with the NW1/4 the information for the SW1/4 is not found. Please revise the bookmarks in Appendix 3.6-7 to show the information in the order it is presented in the document. Please also note that numerous bookmarks in Appendix 3.6-7 open incorrectly or in the middle of a section. Please review all bookmarks in Appendix 3.6-7 after moving the diagram pages requested in other deficiencies and correct as appropriate. (GAW/ZAB)

*The order of the pages within Appendix 3.6-7 has been reordered. They now are in sequential order. All of the bookmarks appear to now open correctly.*

### Section 3.7 Prime Farmlands

52. Follow-up to item No. 84a: Please revise the following items in the Potential for Vegetation Productivity on Prime Farmland narrative in Section 3.7 as follows: (WTG)
- a. The Agricultural Research Service is located at the Northern Great Plains Research Center rather than being a separate entity as indicated in paragraph two.

*The reference to the Agricultural Research Service has been revised within paragraph two of the Potential Productivity on Prime Farmland narrative found in Section 3.7. This reference now reads "the Agricultural Research Service at the Northern Great Plains Research Center,"*

- b. Paragraph three requires grammar and spelling corrections (sentence two and "replaiced").

*The 3<sup>rd</sup> paragraph within the Potential Productivity on Prime Farmland has been revised to correct these grammar errors.*

- c. Research conducted by Power, Ries, and Sandoval was published in 1978 rather than being conducted in 1978 (paragraph three).

*The reference has been corrected in paragraph 3 for Power, Ries, and Sandoval to 1978.*

- d. The reference for Power, et al, should be 1978 rather than 1981 (paragraph three).

*The Power, et al. reference within the 3<sup>rd</sup> paragraph has been corrected and changed to 1978.*

- e. The fourth paragraph should be corrected to describe an average projected SPGM respread depth of 43 inches for acres disturbed by mining (please reference Table 4.11-1) with prime farmland respread at 48 inches.

*The fourth paragraph of the Potential Productivity on Prime Farmland narrative found in Section 3.7 has been revised to clarify that an approximate respread depth of 48 inches will be used on prime farmland areas, and 43 inches on all other areas disturbed by mining.*

- f. The phrase "which is much more than the needed 30 inches" should be deleted from paragraph four.

*This sentence found in the 4<sup>th</sup> paragraph of the Potential Productivity on Prime Farmland narrative has been deleted.*

53. Please revise pages 8 through 10 of the Prime Farmland Soil Physical and Chemical Properties Comparison narrative in Section 3.7 as requested below in order to maintain a narrative structure consistent with that which began on the last paragraph on page 7 to aid the reader in understanding the comparisons. A reference to the dominant Order 1 soil map units in the mining disturbance boundary should be listed first and a reference

to the dominant Order 1 soil map units within prime farmland soil map units in the mining disturbance boundary should be listed second throughout the comparison. (WTG)

- a. The second paragraph of page 8 should be rearranged to begin with the reference to the dominant Order 1 soil map units in the mining disturbance boundary (please also reference Table 3a) followed by the reference to dominant Order 1 soil map units within prime farmland soil map units in the mining disturbance boundary (please also reference Table 3b).

*The order of the Section paragraph on page 8 of Section 3.7 has been revised. A reference to Table 3a has been added. This paragraph now first references the dominant Order 1 soils within the mining disturbance boundary and secondly references the Order 1 soils within the prime farmland soil mapping units.*

- b. The phrase "a comparison" in reference to Table 4 in the second paragraph of page 8 should be deleted because Table 4 is not a comparison but rather a table of soil properties originating from the Oliver County Soil Survey for both the dominant Order 1 soil map units in the mining disturbance boundary and the dominant Order 1 soil map units within prime farmland soil map units in the mining disturbance boundary. Table 4 should be retitled to indicate as such.

*The phrase "a comparison" has been deleted from the 5<sup>th</sup> sentence on the last paragraph on page 8 of Section 3.7, and Table 4 has been retitled "Physical and Chemical Properties as listed by the NRCS Oliver County Survey for both the Dominant Order 1 Soils Map Units within the Mining Disturbance Boundary and the Order 1 Soils Map Units within the Prime Farmland Soil Map Units within the Mining Disturbance Boundary".*

- c. The titles for Tables 5 and 6 should be reversed and the last two sentences in the second paragraph of page 8 should be reversed as well (list a reference to the dominant Order 1 soil map units in the mining disturbance boundary first and list a reference to the dominant Order 1 soil map units within prime farmland soil map units in the mining disturbance boundary second). The references to Tables 5 and 6 on page 9 should also be reversed to match the new table titles.

*The titles and associated references have been reversed for Table 5 and Table 6 in Section 3.7. The references in the last two sentences of the last paragraph on page 8 have also been revised.*

- d. Please correct the spelling of Sodium Adsorption Ratio in current Table 5.

*This spelling error in Table 5 has been corrected*

- e. Please rearrange the listing order for soil map units in current Table 6 to be consistent with the listing order in Table 4 and current Table 5 (Arnegard, Williams, Belfield, and Regent).

*The map units in this table (now Table 5) of Section 3.7 have been re-arranged to be consistent with the order found in Table 4 and revised Table 6.*

- f. Please clarify the second paragraph on page 10. We suggest removing the phrase "this data," to clarify the conclusion.

*This phrase in the second paragraph on page 10 of Section 3.7 has been removed.*

- g. Please delete the last sentence of the narrative regarding selective soil handling because it is out of context in the prime farmland comparison narrative.

*The last sentence on page 10 of Section 3.7 has been deleted.*

54. Please revise the white font for soil map unit labels on Plate 3.7-2 to improve legibility as necessary because the white font is not legible on the yellow fill color. (WTG)

*The soil map unit font for both the dominant Order one soil map unit labels and the NRCS Prime Farmland soil map units have been changed to black on Plate 3.7-2, in order to make them visible against the yellow.*

### **Section 3.10 Baseline Fish and Wildlife Resources**

55. Follow-up to item No. 103: The Wildlife Map 2010 included in Appendix 3.10-3 is different than the one reviewed and approved by the Commission in September of 2010. Please include the map that was approved in August of 2010 rather than the one submitted in January of 2010. As you recall, approximately three sections of land were added to the study area. Please also include section numbers on the map. (GAW)

*The Wildlife Habitat and Study Plan Map on Page 38 of Appendix 3.10-3, has been replaced with the August 2010 version. Section numbers have been added to this map.*

56. Follow-up to item No. 103: Plate 3.10-2 (Sprague's Pipit Sightings and Dakota Skipper Survey Areas) shows Dakota Skipper surveys areas completed in 2009 and then in 2010 and 2011 in the proposed permit and buffer area. The map indicates that all ecological sites in the buffer area that were determined to have habitat suitable for Dakota skipper were surveyed in 2009. However, BNI initially stated that they only had access to the buffer areas along the public roads in 2009 but that language has been changed to state that full access was granted in 2009. Please further explain how the buffer area was accessed to complete surveys in 2009, and revise to show where surveys were actually conducted in the buffer area in 2009. Also, please provide an explanation of why only two Sprague's pipit sightings were made in the whole buffer area if the areas were intensively surveyed as indicated. The original wildlife inventory plan submitted in January of 2010 didn't even mention Dakota skipper surveys and the plan wasn't revised and approved until September of 2010. The first paragraph of the methodology section of Appendix 3-10-2 states that the studies included two seasons of sampling beginning in April of 2010. Please provide documentation, including dates, when detailed Dakota skipper and Sprague pipit surveys were conducted in 2009, 2010 and 2011. The chronological sequence of events does not match what is stated. (GAW)

*Section 3.10 and Appendix 3.10-3 have been updated.*

*In Section 3.10, the last paragraph on page 4 has been updated. This paragraph has been clarified by explaining that Initial surveys were conducted in 2009, and that these were part of an effort to collect preliminary data that was done in anticipation of an approved wildlife plan.*

*The first paragraph on page 2 of Appendix 3.10-3 has been updated to clarify that Preliminary data collection began in 2009. Also a reference to Appendix 3.10-4 has been added.*

*A sentence has also been added to the first paragraph on page 18 of Appendix 3.10-3. The sentence clarifies that surveys for Sprague's Pipit were conducted from May through July.*

*Plate 3.10-2 identifies the dates of each siting of Sprague's pipit. Additionally, Appendix 3.10-4 contains a chronological narrative of the work that was conducted. On page one of this narrative states that potential habitat for the Dakota Skipper and the 100 species of concern (which includes Sprague's Pipit) were part of the field work in 2009.*

57. The original permit application identified the native grassland and tall shrub breeding bird study areas in the NE1/4 of Section 16 and SE1/4 of Section 16, respectively, on Plate 3.10-1, but the map has been revised to show that these studies were conducted in the SW1/4 of Section 9. Please revise Plate 3.10-1 to show the breeding bird study area where it actually occurred, and label the survey sites as study areas rather than reference areas. The reference area language should be limited to the annual wildlife monitoring map. (GAW)

*The breeding bird study areas have been put in their original locations on Plate 3.10-1. These are the locations that were surveyed during the baseline studies. The breeding bird areas have been labeled as study areas rather than reference areas.*

58. Please revise Appendix 3.10-6 (Breeding Bird Data Table) to include the specific location of the study site. (GAW)

*The Breeding Bird Data Table, Appendix 3.10-6 has been revised. Descriptions of the locations of the study areas have been added to the bottom of each table.*

### **Section 3.12 Cultural and Historical Resources and Protection**

59. If BNI has acquired any new cultural resource evaluation reports describing site specific testing or site mitigation that may have been conducted, please incorporate that information into applicable portions of the permit. Also, any new correspondence that may have been received from the State Historical Society regarding updated cultural resource evaluation review, recommendations or approvals should also be placed in the permit at this time. (BEB)

*There has been no additional evaluation, reports, testing, or site mitigation. Any information including correspondence pertaining to the permit is included in the permit.*

## Section 4.1 Operations Plan

60. The last sentence of the first paragraph of the Perennial and Intermittent Streams discussion states that Pond 21-4 will be located within the 100 feet buffer zone of a stream but this does not appear to be the case according to Plate 4.1-1 (Pit Layout and Facilities Map). Please correct this discrepancy. (GAW)

*The entire portion of Section 4.1 that discusses intermittent streams has been re-written and expanded. Those discussions begin on page 4.1-2 under the "Perennial and Intermittent Streams" heading. The list of structures which impact intermittent streams and/or their buffer zones can be found in paragraph 1.*

61. Please revise the Perennial and Intermittent Stream discussion on page 4.1-2 to clarify which section of the permit can be used to determine the type, extent and duration of disturbance planned to each segment of perennial and intermediate streams. The general statement on page 4.1-2 does not provide enough detail and Plate 4.1-1 (Pit Layout and Facilities Map) does not show the extent of the disturbance planned. The disturbance planned in each segment of intermittent and perennial stream must be discussed in detail and include justification as to why it is necessary to disturb the stream and/or buffer area. Sufficient information regarding the type and duration of disturbance planned is needed since we must consult with the State Department of Health and State Engineers office regarding the planned disturbances. Please also discuss compliance with NDAC 69-05.2-16-20(2) which require that areas not to be disturbed be marked according to NDAC 69-05.2-13-04. (GAW)

*The entire portion of Section 4.1 that discusses intermittent streams has been re-written and expanded. Those discussions begin on page 4.1-2 under the "Perennial and Intermittent Streams" heading. Plate 4.1-1 has also been modified to depict the intermittent stream areas to be impacted. We believe these modifications should be sufficient to address the concerns expressed in deficiency #61.*

62. Please discuss the method and location of disposing or stockpiling the initial boxcut spoil from the 2015 pits located in Sections 7 and 8 in the Section 4.1, Boxcut Operations narrative. It appears that BNI has not allotted enough area for storage of boxcut spoil from the 2015 pits. Please also discuss boxcut spoil stockpiling/disposal for the year 2020 pit located in Section 9. These disposal/stockpile locations must be shown on Plate 4.1-1 (Pit Layout and Facilities Map) and must comply with the requirements of NDCC 38-14.1-24-19. Please also clarify where SPGM is going to be placed when the first pits are opened in Section 9. (BAJ/GAW)

*Additional spoil stockpiles have been added to accommodate for building dragline benches for the 736 and 8200. The areas where the draglines will spoil approximately half of the overburden material from the first pit have been widened to show the extent of the piles. Narrative has been added in Section 4.1 to explain how the boxcuts will be opened in each of these areas.*

*SPGM stockpiles have been added in Section 9 on Plate 4.1-1.*

63. Please provide details in Section 4.1 for opening the box cut for the 2018 pit located in the NE1/4 of Section 17; i.e., whether BNI intends to stockpile or to dispose of the boxcut spoil. On the northeast side of, and adjacent to, the 2018 pit is a pit scheduled to be mined in 2024. Include in the discussion the reclamation of the final pit in the 2024 block of mining and if this area (the 2018 pit and last pit in the 2024 block) will require a variance from NDCC 38-14.1-24.14. (BAJ)

*A variance area is now shown in the 2018 pit area. Narrative has been added to Section 4.1 explaining that the 2024 block will be mined with trucks with the initial boxcut spoils being used to reclaim the 2024 area on the north side of the intermittent stream.*

64. Please include narrative in Section 4.1 Operations Plan - Waste Disposal that BNI will dispose of waste in compliance with NDAC 69-05.2-19-04 (Disposal of Noncoal Wastes). (BAJ)

*The first sentence under the "Waste Disposal" heading in Section 4.1 now indicates that operations will be done in compliance with NDAC 69-05.2-19-04. The waste disposal commentary begins on page 4.1-6.*

#### **Plate 4.1-1 Pit Layout and Facilities Map**

65. Please revise Plate 4.1-1, to place all labelling on top of the lines and/or fill patterns being used to distinguish features identified in the legend. In many instances it is not possible to read what is written on the feature. For example, stockpile numbers and volume text for the stockpiles in Sections 7, 8 and 16 are difficult to read. (GAW/BEB)

*Plate 4.1-1 was updated. Labeling was adjusted and moved throughout the entire plate in ways to make the text more legible and features easier to identify.*

66. The symbols for "surface disturbance only" and "areas unsuitable for mining" in the legend of the Pit Layout and Facilities Map should be cross-hatched to match the symbology that is provided on the map (currently they are a solid fill color in the legend but are a cross-hatched color pattern on the map). Please correct the symbols in the legend so that map interpretation is plainly evident based on the information provided in the legend. (BEB)

*The hatching shown in the legend has been changed to match what is shown on the map.*

67. The use of the thin, solid green border to symbolize unleased federal coal tracts gets lost on the map amongst all of the other colored border lines that are provided (including other shades of green for several county roads and the Hagel Coal Seam outcrop line). We recommend that the unleased federal coal tracts be cross-hatched on the map, similar to what has been provided on the map for surface disturbance in portions of Sections 12, 16, and 28. Please consider this request. (BEB)

*The unleased federal coal areas have been cross hatched behind the rest of the linework.*

68. There are two solid green lines (one is dark green and the other is light green) generally following each other along the Hagel crop line, but with separation of the two lines throughout its extent and then complete separation in the NW1/4 of Section 28. If both green lines are intended to represent the Hagel cropline and one of the lines is simply an earlier version that was not deleted from the map, please eliminate one or the other to eliminate confusion. If one of the lines was intended to represent something else other than the Hagel cropline, please provide the symbol and description for what it is supposed to represent in the legend of the map. (BEB)

*One of the lines represented the Hagel A Crop Line while the other represents the Mining Disturbance Boundary (Final Graded Spoil Line). The colors of the two lines were changed to provide better contrast. Also a light gray, solid hatching was added within the mining disturbance boundary in order to help better delineate between the two. The legend was updated to reflect also.*

69. Please clearly show the permit boundary around the Great River Energy tower in Section 8 and the cemetery in Section 18 on the Plate 4.1-1. The legend on this map indicates that a broken magenta colored line is being used but a solid line is shown around the outside perimeter of the permit area. Also, please consider using a color other than magenta for the permit boundary since this same color is being used to distinguish overburden pile locations and intermittent streams. (GAW)

*The boundary line type was corrected around the Great River Energy tower and the cemetery. The boundary color was changed to a darker more bold color to give a better contrast.*

70. Please label MSHA pond P-5-6 and the sediment ponds located in Section 9 on Plate 4.1-1. Please also note that the map shows the ponds in Section 9 being constructed in 2035 well after mining is completed in this area. Please make the necessary corrections. (GAW/FSE)

*The MSHA pond has been labeled and the correct dates and names have been added to the ponds in Section 9.*

71. Follow-up to item No. 108: Please revise Plate 4.1-1 to clearly show the diversions that will be used to protect the drainages above the pool areas of planned sediment ponds P-16-1 and P-12-2, as discussed during our September 20, 2013 meeting. It is not clear how runoff from Section 9 is going to be routed around the intermittent streams located above Pond 16-1 or how the runoff will be directed to Pond 12-1 without affecting the intermittent stream located above this pond where coal is not going to be removed. As mentioned during our meeting, the drainages above these ponds should be left undisturbed and protected from surface mining impacts with the runoff being routed around them to the pool areas of these ponds. NDAC 69-05.2-13-05 (GAW)

*Diversions D-7-3 and D-7-4 have been designed to route runoff around the intermittent stream reach above P-12-1 in Section 7. Detailed designs of these diversions can be found in Section 4.6 Surface Water Management Appendices. A future diversion in Section 16 is shown to route runoff from the mining area in Section 9 around the*

*intermittent stream above P-16-1. The detailed engineering design of Diversion D-16-4 will be submitted in future permit revisions.*

72. As noted in related deficiencies in Section 4.1, please revise Plate 4.1-1 to depict adequately sized stockpiling locations for boxcut spoil from the pits in Sections 7, 8, and 17. (BAJ/GAW)

*Additional spoil stockpiles have been added to accommodate for building a dragline benches for the 736 and 8200. The areas where the draglines will spoil approximately half of the overburden material from the first pit have been widened to show the extent of the piles. Narrative has been revised in Section 4.1 to better explain how the boxcut will be opened in these areas.*

73. As noted in a related deficiency in Section 4.1, please revise Plate 4.1-1 to depict where the boxcut spoil and SPGM is going to be placed when the first pit is opened in Section 9 in 2020. (BAJ/GAW)

*Due to the low cover along the cropline in Section 9, the 736 will rehandle all the initial spoil from the boxcut in the next three pits. The narrative has been updated discussing the plans for the boxcut spoils.*

74. Please consider moving the location of the pond that is proposed in the N1/2 of Section 9 on Plate 4.1-1 to avoid the woodlands in this area. We recommend constructing three small ponds further upstream rather than a single pond located downstream in a heavily wooded area. (GAW)

*The pond in the N1/2 of Section 9 has been relocated upstream of the first pond shown. A diversion was added to convey water into the pond and is also shown Plate 4.1-1 and 4.6-1.*

75. Please revise Plate 4.1-1 to show all planned associated disturbance (e.g., areas of SPGM disturbance beyond the pit disturbance boundaries) as required by NDAC 69-05.2-09-02(2) and (3). (GAW)

*The associated disturbance boundary line work was added to Plate 4.1-1 and updated in the legend.*

76. As previously requested, please revise Plate 4.1-1 to distinguish between those portions of the intermittent streams that are going to be disturbed and those sections that are going to be avoided, and areas that will be disturbed within the 100 foot intermittent stream buffer zone. (GAW)

*Plate 4.1-1 was updated to show buffer zones that are planned to be disturbed.*

77. As previously requested, please revise Plate 4.1-1 to show how runoff will pass through the large box cut spoil pile located in the drainage in the SW1/4 of Section 8. (GAW)

*It has been determined that during active mining the drainage will no longer exist due to the initial boxcut spoils. However, a statement has been added to the narrative*

*pertaining to the boxcuts in Section 4.1 that states "In all cases, boxcut spoils will be handled in such a manner as to support the construction of the approved post mining topography found in Plate 4.10-1 including establishing drainages in boxcut spoil areas."*

78. Section 4.1 (Operations Plan) narrative mentions that two draglines are intended to mine the proposed permit area. Please identify which pits are proposed to be mined with the Bucyrus 8200 dragline and which pits are proposed to be mined with the Page 736 dragline on Plate 4.1. (BAJ)

*The yearly mineral removal areas now have the year and equipment which will be utilized.*

79. Please depict all planned haulroads on Plate 4-1.1. (e.g., haulroad Sections 6 and H and portions of haulroad Section B are not depicted on the map). (BAJ)

*Haul Road Section 6 has been removed from the Transportation Plan and Haul Road Section B has been extended and shown as a Future Haul Road on both Plates 4.1-1 and 4.5-1. Haul Road Section Section H has been added to Plate 4.1-1 as requested.*

#### **Section 4.2 Existing Structures**

80. Follow-up to item No. 116: Although we appreciate the inclusion of the links to photos of the existing roads on Plate 4.2-2, we suggest a map be developed that shows the location of the roads with details on the width, ditch outslopes, surfacing and any other pertinent information. (BAJ)

*The text of Section 4.2 has been modified to include links to the two maps which most appropriately can be referenced for the locations of the existing county roads. Those plates are Plates 4.2-1 and 4.2-2. The text has also been expanded to further elaborate on the slight differences between the two major county roads which will be impacted by mining in BNCR-1101. All of these text modifications are beneath the "Existing Road Systems" heading in Section 4.2. They can be found beginning on Page 4.2-4.*

#### **Section 4.5 Transportation Plan**

81. Follow-up to item No. 123: Please expand the Subsoil as a Road Building Material narrative in Section 4.5 to indicate that BNI will update the permit with a future revision to clearly identify road segments where subsoil has been used for construction of haul roads. Also, BNI will need to demonstrate, based on stockpile volumes and other projections/calculations, that this method will not cause a deficit of the material. In addition, BNI needs to address the measures used to alleviate compaction when reclaiming roads built with subsoil. (FSE)

*This deficiency brings up 3 distinct issues concerning the utilization of subsoil as a road building material. In order to address those issues we have added three paragraphs to the end of the previously submitted subsoil road discussion. Those paragraphs can be found at the end of the "Subsoil as a Road Building Material" section which begins on Page 4.5-2.*

82. Please clarify in Section 4.5 how access will be obtained to the pits in Section 9 and depict the route on both Plate 4.1-1 (Pit Layout and Facilities Map) and Plate 4.5-1 (Transportation Plan). It appears that constructing a haul road through the NE1/4 of Section 8 in Permit BNCR-9401 may be the best alternative to minimize disturbance to lands where coal will not be removed and to avoid the intermittent stream located in the southwest corner of Section 9. (GAW/BAJ/FSE)

*A proposed route through Section 8 to Section 9 is shown on Plate 4.5-1. The route runs through an area that will likely be utilized by Minnkota Power as a future ash cell. Access to the 2024 block in Sections 9, 16 and 17 will be accessed from the Haul Road Section A avoiding the intermittent stream. This is shown as a temporary ramp on Plate 4.5-1.*

83. The second paragraph of the Dragline Walkway Corridor narrative on page 5 of Section 4.5 states in part as follows: "During the next construction season the corridor will be modified to a typical road cross section of 80 ft and profile of Haul Road Section C shown in [Appendix 4.5-6] and remain as a permanent access road between the two active mining areas for the life of the mine." It is unclear what the intent of this sentence is. Please revise and clarify the construction and modification for the dragline walkway corridor and the road in the Dragline Walkway Corridor and the Access Road Section C narratives on pages 4 through 6. (FSE)

*Language has been added to describe the typical design width of the walkway as 140 feet while the typical design width of the access road will be 80 feet. The typical dragline walkway cross section has been added to Appendix 4.5-5. The intent is to reclaim portions of the dragline walkway into a narrow access road the following reclamation season. The dragline walkway will be constructed in the fall of 2014 and partially reclaimed into the access road in 2015.*

84. Please review and revise as necessary the Section 4.5 narrative, Plate 4.5-1 (General Transportation Plan), and all Section 4.5 appendices (including bookmarks) with regard to the naming convention for what will apparently be identified as Access Road Section C following dragline relocations to Permit BNCR-1101. The segment is variously named Access Road Section C, Haul Road Section C, and Haul Road Area C but it should apparently be identified as Access Road Section C consistently throughout the permit. (WTG)

*The naming convention has been changed on the plates in Appendix 4.5-6, in the narrative, and in the bookmark in the permit.*

85. Please bring all labels to the front (or top) on Plate 4.5-1 because some labels are obscured by lines; e.g., the culvert labels in Section 31. (WTG)

*The labels within the plate were adjusted so not to be obscured by other line work within the drawing.*

86. Culvert ID 15 is depicted on Plate 4.5-1 (General Transportation Plan) near station 0+00 for Haul Road Area C - Dragline Walkway; however, a culvert is not depicted on Appendix 4.5-5. Please review and correct as necessary. (BAJ)

*Culvert ID 15 and 16 were added to Appendix 4.5-5. Also, a small portion of the design profile was corrected between stations 0+00 and 4+00.*

#### **Additional Plate 4.5-1 modifications**

*Line work within the drawing was updated to provide better distinction to make the plate more legible; e.g. permit boundary lines, contours, etc.*

#### **Section 4.5 Appendices (various)**

87. Please label or otherwise indicate what the lines represent in the profiles in Appendices 4.5-5, 4.5-6, and 4.5-7. (FSE)

*Plates 4.5-3, 4.5-5, 4.5-6, and 4.5-7 were all updated to address this deficiency. Labels were added where needed to identify the profiles.*

#### **Section 4.6 Surface Water Management Plan**

88. Table 4.6-1 that is located on the last page of the Surface Water Management Plan lists MSHA sediment pond 12-1 as being an MSAH class pond. Please correct the typographical error of this acronym. (BEB)

*The spelling error has been corrected in Table 4.6-1.*

89. As required by NDAC 69-05.2-24-01(2), please describe specific best management practices that will be used to control runoff for the W1/2 of Section 5, particularly along the dragline walkway corridor/road and other disturbances. (FSE)

*The following paragraph has been added on Page 4 of the Surface Water Management Plan;*

Best management practices will be used in the haul road ditches to minimize erosion and capture sediment before it crosses topsoil or runs into waterways or Hagel Creek. These will include a combination of any or all of the best management practices implored at the Center Mine. Examples include applying mulch, seeding, bale dikes, silt fence, rock checks and sumps. These measures will be incorporated into the management practices to control sediment for effected areas of the dragline walkway and Access Road Section C which will remain in use for the life of the mine estimated to be 2042.

90. Plate 4.6-1 depicts two ponds labeled P-16-3 in the NW1/4 of Section 16. One is to be constructed in 2017 and the other in 2022. Please revise so there are not two ponds with the same identification label. (GAW/BAJ)

*The name of the pond to be constructed in 2022 has been changed to P-16-4.*

91. Please revise Plate 4.6-1 to clearly show the diversions that will be used to protect the drainages above the pool areas of all planned sediment ponds, especially proposed sediment ponds 16-1 and 12-2, as discussed during our September 20, 2013 meeting. It is not clear how runoff is going to be routed to the pool area of Pond 16-1 from the disturbance planned in Section 9 or how the runoff will be directed to Pond 12-1 without affecting the intermittent drainage way above this pond where coal is not going to be removed. As discussed during our meeting, the drainages above these ponds should be left undisturbed and protected from surface mining impacts so runoff needs to be routed around them to the pool areas of these ponds. (GAW)

*Diversions D-7-3 and D-7-4 have been designed to route runoff around the intermittent stream reach above P-12-1 in Section 7. Detailed designs of these diversions can be found in Section 4.6 Surface Water Management Appendices. A future diversion in Section 16 shown as D-16-4 and will route runoff from the mining area in Section 9 around the intermittent stream above P-16-1. The detailed engineering design of Diversion D-16-4 will be submitted in future permit revisions.*

92. Please revise Plate 4.6-1 to clearly identify the location of intermittent and perennial streams. (GAW)

*Locations of intermittent and perennial streams where copied from Plate 4.1-1 and added to Plate 4.6-1 as requested.*

93. Please revise Plate 4.6-1 to label intermittent and perennial streams within the permit area and to distinguish between those portions of the intermittent streams that are going to be disturbed by mining activities and those sections that are going to be avoided, and those areas where disturbance will be within the 100 foot intermittent stream. Please also discuss how intermittent streams buffer zones will be marked in the field as required by NDAC 69-05.2-16-20(2). (GAW)

*The map has been modified to show the areas where BNI is requesting to disturb the intermittent stream consistent with Section 4.1-1. Language has been added to Section 4.6 from Section 4.1-1 outlining our plans to delineate the streams in the work areas.*

94. Please label the pond identification numbers for the ponds located in Section 9 on Plate 4.6-1. Please also use distinctive colors and line weights to differentiate between watershed boundaries and diversions. As presented, it is difficult to distinguish between watershed boundaries and diversions because both use identical colors and similar line weights. (BAJ/FSE)

*Pond identification numbers have been added to the ponds in Section 9. Diversions lines have been changed to a cyan color mating the hatch inside of pond areas.*

95. Plate 4.6-1 has construction dates next to the Pond ID text. It appears that several of the dates are incorrect. Please review and correct as necessary. (BAJ)

*Construction dates have been checked to ensure that they match the chronology of the yearly timing blocks.*

#### Section 4.6 Appendices (various)

96. Please review hydrologic information item (7) on page 3 for all sedimentation pond design information sheets. Item (7) spillway information has the design storm event listed as a 50 year 6 hour event but the rainfall event following has the rainfall from a 25 year 6 hour storm at 3.31 inches that is actually the amount of rainfall from a 50 year 6 hour event. Please correct. (BAJ)

*Item (7) now reads; Rainfall From a 50yr-6hr Storm:3.31". The correction has been made to all Appendices containing pond design information sheets.*

97. Please review diversion plan views (plates) in all diversion designs and revise as necessary to ensure that all station labels are brought to the front (or top) and north arrows are present on each plan view. (FSE)

*Station labels were brought to the front or north arrows added to diversion plan views for the following diversions: D-7-1, D-7-2, D-12-1, D-12-2, D-16-1, D-16-2, and D-16-3.*

98. The narrative for pond P-21-2 describes a construction date of 2015 but Plate 4.6-1 (Surface Water Management Plan) shows a date of 2018. Please correct as necessary. (BAJ)

*The narrative and the map both show construction date of 2018.*

99. Please review the design of MSHA pond P-16-1 and revise as necessary. The design for this pond does not show that pond P-16-3 is upstream of P-16-1 and no mention is found of pond P-16-3 in the design narrative or plan sheets of the MSHA pond. Also, the routing of MSHA Pond P-16-1 does not include the effects of the stored water in pond P-16-3. MSHA rules require that impoundments in series be evaluated for the cumulative storage capacity of the ponds in series and if the failure of the upstream impoundment could result in the failure of the downstream impoundment. As noted in a related deficiency for Plate 4.6-1 (Surface Water Management Plan), another pond is identified as pond P-16-3 located approximately 1100 feet to the north-northeast of pond P-16-3 (proposed to be constructed in 2017) with a construction date of 2022. Please clarify the purpose of the second pond identified as P-16-3 with a construction date of 2022, and include narrative and details for its effect on MSHA pond P-16-1 as necessary. (BAJ/FSE)

*The design document of MSHA Pond P-16-1 has been modified to account for the upstream pond P-16-3. Figures 1 and 2 now show the upstream sediment pond. A paragraph has been added to Section 2.1 Hazard Classification stating that the pond will be built upstream. Section 3.4 Dam Breach Impacts of Temporary Pond 16-3 has been added to the report and contains the modeling and results of the dam breach scenario while both ponds are at maximum capacity during a storm event.*

*The second pond which was to be labeled P-16-3 has been removed in place of a diversion labeled D-16-4 which will be built to route water around the intrermitent*

*stream drainage and directly into the pool area of the MSHA pond. D-16-4 is scheduled to be built in 2021 and the detail design will be submitted in subsequent revisions.*

#### **Section 4.9 Reclamation Schedule**

100. Please update the Reclamation Schedule Table in Section 4.9 to agree with the mining pits/dates depicted on Plate 4-1.1 (Pit Layout and Facilities Map). (BAJ/GAW)

*The "Reclamation Schedule Table" located at the top of page 4.9-1 has been modified. The only revision made is to remove the 2014 mining block row due to the fact that there will be no coal mined until 2015. The text preceding this table has also been modified to indicate that the table covers the activities of the first 5 year permit term.*

101. Please correct the date of the initial boxcut construction on the top of page 4.9-2. It currently states the year of boxcut construction in 2014. (BAJ)

*This sentence has been corrected to indicate boxcut construction in 2015. The correction can be found at the top of page 4.9-2.*

102. Please update Plate 4.9-1 to account for recent proposed changes to the mine plan. (GAW)

*Plate 4.9-1 was updated with the current mine plan.*

#### **Section 4.10 Regrading Plan modifications**

*Plate 4.10-1 Post-Mine Topography was updated. Post-mine topography changes were made within the S ½ of Section 17 and the NW ¼ of Section 19. Section 17 was updated to allow for the addition of Wetland 17-1 in the SW ¼ and to add suitable cropland acreage in the SE ¼. The Section 19 post-mine topography was updated to accommodate a modification to Wetland 19-3. These modifications were made in response to deficiencies #105 and #123.*

*Plate 4.10-2 Post-Mining Area Slope Map was updated as a result of the modifications to listed above to Plate 4.10-1.*

*Plate 4.10-10 Wetland 19-3 was updated to reflect a reduction of wetland acreage in that section. This is in response to deficiency #125.*

*Plate 4.10-18 Wetland 17-1 was created to reflect an addition wetland acreage in that section. This is in response to deficiency #125.*

*Plate 4.10-11 Wetland 20-1 was updated to reflect the post-mine topography changes made as listed above. The topography changes were not within the watershed of this wetland and don't affect it in any way. The plate was updated only because the changed topography is visible within this plate.*

*Plate 4.10-17 Wetland 25-1 was updated. The wetland was enlarged in order to incorporate the appropriate wetland acres as stated in the pre/post mine acreage tables.*

*Plate 4.10-4 Wetland 8-1 was updated. The wetland 8-1C was made deeper to hold more water.*

*Section 4.10 Backfilling and Grading narrative was updated. Table 4.10-1 Post Mining Topography Mass Balance was updated to reflect the results from the topography changes. Table 4.10-2 Reclaimed Wetlands was updated to include the addition of Wetland 17-1, Plate 4.10-18.*

### **Section 4.12 Revegetation, Post Mining Land Use and Reclamation Success Narrative**

103. Follow-up to item Nos. 131, 132, 133, and 135: Tract narratives in Section 4.12-1 (Reclamation Plans) and Appendix 4.12-2 (Pre- and Post-Mine Land Use Discussions) mention land use changes in the SW $\frac{1}{4}$  of Section 16, the S $\frac{1}{2}$  of Section 8, and the W $\frac{1}{2}$  of Section 7 that are not accurately depicted on Plate 4.12-1 (Post Mine Land Use). No cropland is depicted in the SW $\frac{1}{4}$  of Section 16 but the narratives state that about 21 acres of native grassland will be converted. Narratives for the S $\frac{1}{2}$  of Section 8 state that 8.15 acres of native grassland will be converted to cropland, but a field about 84 acres in size is depicted which is about 10 acres less than what existed premining. The narratives for the W $\frac{1}{2}$  of Section 7 state that about 99 acres of native grassland will be converted, but the postmine land use map depicts a field about 31 acres in size. These acreages are also incorrect in Appendix 4.12-6 (Post Mine Land Use Acreage Table). Please revise Plate 4.12-1 and Appendix 4.12-6 as necessary to accurately and consistently depict and list the postmine land use acreages that are described in the Section 4.12-1 and Appendix 4.12-2 narratives. (RLK/GAW)

*The narratives in Section 4.12 and Appendix 4.12-2 have been updated for these three tracts (W1/2 of Section 7, SW1/4 of Section 16, and the S1/2 of Section 8. The narratives for Sections 8 & 16 have been revised to clarify that although land use changes were requested by the landowners, BNI does not plan these changes at this time. The narratives for the W1/2 of Section 7 have been revised to clarify that a total of 30.85 acres are planned to be converted to cropland/grassed waterways.*

104. A sentence in the second paragraph on page 3 of Section 4.12 states that "Being that the distribution of habitat types is relatively consistent across the landscape (acres within this tract, the permit area and areas adjacent to the permit area) will provide for native rangeland habitat." Please clarify what is meant with this statement. (GAW)

*The sentence in the second paragraph on page 3 of Section 4.12 has been revised. Wording has been revised as per conversations with PSC staff on 1-27-14. This narrative has been revised to clarify that because the reduction of native grassland acres is small (less than 1%), and because there are similar habitats found nearby, that there will not be an effect on wildlife.*

105. Follow-up to item No. 137: BNI is proposing to convert about 40 acres of premine cropland to native grassland in the E1/2 of Section 17 even though the surface owner is requesting more cropland. BNI reasons that the pre and postmine topography is too steep to accommodate the premine land use. Please consider revising the postmine topography so that additional premine cropland acreage can be replaced and that the premine capabilities of the cropland are being restored as required by NDAC 69-05.2-22-01. (It appears that only slight topographic changes will need to be made to obtain an additional 40 acres of land that has slopes less than 9 percent and the soils handling plan indicates that 18 inches of topsoil is available for respread on this tract. Please also revise the postmine discussion for the E1/2 of Section 17 accordingly. (GAW)

*There was a correction to Appendix 4.12-6 Post-Mine Landuse Acreage Table; the post-mine cropland acreage should have been 127.7 acres, not 109.18 as submitted. With this correction the BNI would be converting closer to 21.5 acres from cropland to native grassland in the E1/2 of Section 17. With that said while answering deficiency #123, we were able to modify the post-mine topography within the SE ¼ of Section 17 to obtain an additional 23 acres of cropland with slopes less than 6 percent. Therefore, a total of 151.18 acres of cropland will be reclaimed in the E1/2 of Section 17. This change has been updated in Section 4.12, Appendix 4.12-2, and Appendix 4.12-6.*

106. BNI is proposing to replace 1.5 acres of pre-mine seasonal wetlands that were located in the E1/2 of Section 17 to the S1/2 of Section 8. The pre-mine wetlands in Section 17 were surrounded by a large tract of native grassland that typically remained idle during the growing season because of the adjacent cropland. Creating three wetland basins relatively close together in the S1/2 of Section 8 may reduce the habitat value of the area compared to the pre-mine state. Please consider placing some of the premining wetland acreage in the E1/2 of Section 17 rather than all in the S1/2 of Section 8. (GAW)

*Please see deficiency #128 for the response. That response was written in order to address both this deficiency and #128.*

107. Follow-up to item No. 138: A sentence in the last paragraph on page 6 of Section 4.12 discussing the Opp Limited Partnership land in the NW1/4 of Section 18 states that "The similar distribution of land uses throughout the landscape will provide numerous opportunities for native grassland habitat." Please revise to clarify how similar distribution of land uses provides opportunities for native grassland habitat. (GAW)

*The sentence in the last paragraph on page 6 of Section 4.12 has been revised. Wording has been revised as per conversations with PSC staff on 1-27-14. This narrative now states that; we believe that because the reduction of native grassland acres is small (less than 1%), and because there are similar habitats found nearby, that there will not be an effect on wildlife.*

108. Follow-up to item No. 139: A statement in the first paragraph on page 9 of Section 4.12 states as follows: "BNI believes that even though there will be some changes in land use, that the condition of post mine landscape will be equal or better than that which existed in pre-mine. For example the reduction of introduced species by the

establishment of native species, rejuvenation of soils, and/or the implementation of conservational features all will be an added benefit to the landscape; which have been observed by BNI and at other mines throughout ND.” First, clarify how the “condition” of the landscape is being measured to determine that it will be improved and provide documentation that there is a reduction of introduced species on reclaimed native grassland compared to undisturbed native grassland. Please also clarify how soils are rejuvenated by mining disturbance and reference where in the permit one can find out which conservation features will be added to the landscape. (GAW)

*This paragraph has been removed. A discussion about land use changes in in the 2<sup>nd</sup> paragraph on page 2 in Section 4.12 addresses the impacts of the proposed landuse changes on wildlife.*

109. Follow-up to item No 140: Please include revising the native grass seed mixture listed in Table 3, Perennial Seed Mixtures, to include several native forb species and a greater number of grass species as recommended by NRCS Range Planting, Conservation Practice 550 specifications. NDAC 69-05.2-13-05 (GAW)

*As per conversations with PSC staff, the 1<sup>st</sup> paragraph on page 10 of Section 4.12 has been revised to stat that “BNI uses the best technology currently available, and will re-evaluated seed mixes as necessary. BNI will consider including a small percentage of forbs in its native grassland mix as recommended by NRCS. The PSC will be notified of any changes in seeding mixtures.”*

110. Follow-up to item No 140: Please review the pure live seed (PLS) pound per acre values and the species percentage of the mix listings in Table 3, Perennial Seed Mixtures, to ensure they are correct and include a reference used to calculate the seeding rates. The third paragraph on page 10 of Section 4.12 states that 40 pure live seeds per square foot will be seeded, but the seeding rates and percentages of the mix do not support this seed density. In other words, the values listed for the species seeding rates and percentages of the mix are not consistent with the values provided in Table 1, of NRCS’s Herbaceous Vegetation Establishment Guide. For example, Table 1 of the Herbaceous Vegetation Establishment Guide shows that intermediate wheatgrass has a full seeding rate of 8.5 lbs per acre in MLRA 54 which amounts to 17 seeds per square foot, therefore 10 lbs of PLS would be need to be seeded if this species were planted at 50% of the mix with a designed seeding rate of 40 PLS per square foot. Likewise, 4.4 lbs of alfalfa would be needed if it was 50% of the mix at the designed seeding rate of 40 seeds per square foot. Table 3, Perennial Seed Mixtures incorrectly indicates that 5 lbs of PLS of intermediate wheatgrass and 2.2 lbs of PLS of alfalfa each comprise 50% of the mix at the designed seeding rate. The values listed for the other grass mixtures are also incorrect. Please revise and include a reference of the methodology (species seeds per pound values) used to calculate the seeding rates. (GAW)

*Tables 3 in Section 4.12 has been revised. The lbs/ac. have been recalculated using the NRCS’s Field Office Technical Guide for Oliver County, Section I- Reference Subject-Plant Materials-Herbaceous Vegetation Establishment Guide. The numbers referenced from this document are shown in Table 3.*

111. Follow-up to item No 140: Please revise the Perennial Seed Mixtures, Table 3, so that the information is legible at the print scale. The notation listed below the Woodland mix is not legible when the page is printed. (GAW)

*Although we believe previous versions were legible, the Table 3 in Section 4.12-1 has been revised. This table is now split in two, one as Table 3 (Perennial Seed Mixtures), and one as Table 4 (Woodlands). References to the woodlands table have been revised to Table 4.*

112. Follow-up to item No. 145: Please clarify how the woodland species seeding rates were calculated. Language at the top of page 12 states that the planting rates were established using page 10 of NRCS's Tree/Shrub Establishment Conservation Practice (CP) 612, but it is not clear what the tree spacing is or the established density. Table 3 indicates that 1700 trees will be planted, presumably per acre, but this density rate is not listed in Table 1 of NRCS's Conservation Practice 612. A sentence on page 13 of Section 3.5 states that species and planting densities will mimic what was conducted at the Glenharold Mine, but this discussion states otherwise. Please revise to clarify. (GAW)

*Woodlands densities within this table were established using those listed on Page 2 of the 612- Tree/Shrub Establishment of the Field Office Technical Guide listed for each tree/shrub type. This was stated in our response to #499 in Technical Review 1 response letter Dated June 10<sup>th</sup>, 2013.*

*The FOTG 612- Establishment Guide lists:*

*435 trees per acres for large trees*

*680 trees per acre for medium shrubs/small trees*

*907 shrubs per acre*

*To calculate densities we took the number of trees per acre, based on the type (trees, tall shrubs, low shrubs) and multiplied that by the percentage it makes up within our mix. For example the Tree Layer is made up of 25% Boxelder, 65% Green Ash, and 5% Willow. This comes out to:  $435 \text{ trees per acre} \times 0.25 = 108 \text{ Box elder}$ ,  $435 \times 0.65 = 282 \text{ Green Ash}$ , and  $435 \times 0.05 = 22 \text{ Willow}$ .*

*The number listed for Silverberry under the low shrub mix was incorrect and has been corrected to list 454 shrubs per acre rather than 154.*

*The narrative for woodlands in the 1<sup>st</sup> paragraph on Page 10 of Section 4.12-1 has been revised to clearly state that "The densities found in Table 4 were established using those listed on Page 2 of the 612- Tree/Shrub Establishment of the Field Office Technical Guide listed for each tree/shrub type.*

*The sentence on page 12 referencing the using species and densities similar to the Glenharold Mine, has been revised to clarify that the species that we are using are modeled after what was used there, however reference to the "densities" has been removed from this statement, as we are using the NRCS recommended stocking rates.*

113. Follow-up to item No. 145: Please revise Table 3 to clarify if the tree planting values listed are species density numbers per acre and include a total value for the column that can be used to determine the woodland density standard. (GAW)

*The numbers listed in the "Densities" column are actually number of trees per acre based on the tree/shrub type. See response to #112. This has been clarified in the heading for this column. A row has been added to this paragraph to the bottom of this table that shows a planting rate of 2000 trees/shrubs per acre .*

114. Follow-up to item No. 145: Table 3 states that tall shrubs will comprise 80% of the mix and that low shrubs and trees comprise 10% of the mix but values listed show that tall shrubs actually comprise 40% of the mix, low shrubs 36% of the mix, and trees 24% of the mix. In addition, the percentages listed for each species are not consistent with the density planting rates. For example, 154 silverberry is listed as being 50% of the low shrub mix but 227 snowberry is listed as comprising 25% of the mix. Please revise to provide clarity and clarify if the density values listed in Table 3 are densities per acre. (GAW)

*Table 4 (previously part of Table 3) in Section 4.12 has been revised. The percentage that each tree/shrub type makes up has been revised to TS (40%), LS (36%), D Tree (24%). It has also been clarified at the top of the column that values listed are number of plants per acre. A totals row has been added to the bottom of this table to clearly show that it is planned that our woodlands mix will be planted at a rate of 2000 Trees/Shrubs per acre.*

115. Follow-up to item No. 145: A new sentence near the top of page 12 states that the tree planting densities found in Table 3 are based on stocking rates listed in Table 1 of CP-612 for each species. Table 1 of CP-612 does not provide a stocking rate for each species. Please revise to clarify. (GAW)

*This sentence at the top of page 12 in Section 4.12 has been revised. It has been clarified that the stocking rates listed in Table 4 (previously Table 3) are based on those listed on page 2 of 612- Tree/Shrub Establishment of the Field Office Technical Guide.*

116. Follow-up to item No. 146: Please explain in detail how pre-mine wetlands that formed as the result of ground water seeps and springs are going to be replaced if the coal seam which created the ground water seep is destroyed by mining. In other words, clarify that these features will be replaced by features that are dependent on surface water runoff. (GAW)

*The first paragraph on page 13 of Section 4.12 has been revised. The sentences that have been added explain that in areas where coal is removed and possibly some nearby areas, springs and seeps will be eliminated. Therefore, postmine wetlands are designed based on expected surface water flows. A reference to Section 3.4 has been included, where Probable Hydrologic Consequences has been addressed.*

117. Follow-up to item No. 146: A new sentence in the wetland narrative on page 12 of Section 4.12 states as follows: "The size and shapes of the reclaimed wetlands are

expected to remain the same as pre-mine”. Please revise to clarify if this sentence is only referring to reclaimed wetlands affected by associated disturbance. (GAW)

*A sentence now in the 1<sup>st</sup> paragraph on page 13, has been revised to clarify that the sentence stating that “The size and shapes of the reclaimed wetlands area expected to remain the same as pre-mine” is referring to only wetlands that are affected by associated disturbance.*

#### **Appendix 4.12-2 Pre-mine and Post Mine Land Use Discussions**

118. For clarity as required by NDAC 69-05.2-05-02(1), please add “Appendix 4.12-2” to the appendix title on page one, rename the first bookmark for the appendix as “Appendix 4.12-2 Pre-mine and Post-mine ...” and edit the page footer to read “Appendix 4.12-2”. (WTG)

*The title on the 1<sup>st</sup> page of Appendix 4.12-2 has been revised to include “Appendix”. The 1<sup>st</sup> bookmark in this section and the footer of this document have also been revised.*

119. New language in the first paragraph on page 4 of Appendix 4.12-2 states that there was no difference in the vegetation species composition of the area previously tilled in the SW1/4 of Section 7 compared to the native rangelands surrounding them. The sampled representative ecological site for this tract indicates that the thin loamy site consists of 58% little bluestem, 10% needle and thread, 5% plains muhly, 8% sideoats grama, approximately 5% upland sedges and less than 10% Kentucky bluegrass. The site also contains a number of desirable native forbs. The Reclamation Division questions the validity of the following statement: “There were no observed differences in vegetation or management of the areas previously tilled in the SW4 of Section 7 and the native rangelands that they are found adjacent to.” Desirable native forbs and upland sedges are usually absent in formerly tilled areas. Please review and revise to accurately describe nature and variability of the previously tilled area as required by NDAC 69-05.2-08-08(1)(d). (GAW)

*The second paragraph of the narrative for the W2 of Section 7 on Page 4 of Appendix 4.12-2 has been revised as per conversations with PSC staff, to better describe the nature and variability of the previously tilled areas in this tract.*

120. The first sentence of the third paragraph on page 23 of Appendix 4.12-2 states that the postmine land use will include hayland, the second sentence says the amount will depend on soils and topography and the third sentence says there are no plans to include hayland on this tract. Please revise to provide clarity. (GAW)

*The first sentence in the third paragraph on page 23 of Appendix 4.12-2 has been revised. This sentence has been changed to clarify that the landowner requested that hayland be included within his tract post mine. The second and third sentence go on to state that land uses are dependent on available soils and topography, and due to limitations of topography, BNI does not plan to include hayland postmine.*

121. Follow-up to item No. 138: Please discuss in the pre-and post-mine land use narratives that a waterway will be constructed in the NE1/4 of the NW1/4 of Section 18 where

premine native grassland is being converted to cropland, and depict this grassed waterway on Plate 4.12-1 (Post Mine Land Use). (GAW)

*A statement has been added to the narrative for the N2NW4, SW4NW4 of Section 18 on page 14 of Appendix 4.12-2 that there will be a 3.69 acre grassed waterway placed within the cropland that will be reclaimed in this tract. This grassed waterway is now depicted on Plate 4.12-1.*

122. Please revise the Pre and Postmine Land Use narrative for the S1/2 of Section 8 to discuss the land that was previously tilled but was considered native grassland in the pre-mine section of the permit. It is not clear if the premine capabilities are being restored in this instance. NDAC 69-05.2-08-08(1)(d) (GAW)

*As per conversations with PSC staff, this deficiency has been addressed on a mine wide basis rather than only addressing the S1/2 of Section 8. A paragraph has been added to 4.12-2 Determining Reclamation Success on page 16 in Section 4.12. Capability will be restored on all agricultural lands. This will be achieved through topography and SPGM respreads.*

123. The pre- and postmine land use discussion for the SW1/4 of Section 17 states that the property is owned by Karen Shulz but the land use preference statement section of the permit includes preference statements from Karen and two other people, all of whom state that the pre-mine land uses should be replaced. BNI is proposing to move 2.6 acres of wetlands from this tract to the NW1/4 of Section 19 which is owned by five individuals. Please include correspondence from the surface owners of both tracts that indicates their concurrence with BNI's proposal to move this wetland acreage and update the narratives in Section 4.12-2 accordingly. Otherwise the 2.6 acres of premine wetlands in the SW1/4 of Section 17 should be replaced on that tract. (GAW)

*Karen Shultz is not an owner in the SW1/4 of Section 17. The preference statement for her on this parcel was incorrect, and it has been removed from Appendix 4.12-1. There are two owners on this parcel, Jerry and Wayne Reuther. Therefore, 2.59 Acres of wetland was removed from the NW 1/4 of Section 19 and replaced within the SW 1/4 of Section 17. The post-mine topography was updated to reflect the wetland addition. The wetland added is now Plate 4.10-18 Wetland 17-1. Plate 4.10-10 Wetland 19-3 was updated to reflect the acreage change.*

124. The first sentence of discussing the SW1/4 of Section 17 states that the property is owned by Karen Shulz but Section 1.9-1, Surface Ownership Map, indicates it is owned by Wayne and Jerry Reuther. Please correct as necessary and review all other tract narratives to ensure ownership is listed correctly in Appendix 4.12-2. (GAW)

*The ownership has been corrected in the narrative for the SW4 of Section 17 on page 13 of Appendix 4.12-2. This narrative now states that Wayne Reuther and Jerry Reuther are the owners on this tract.*

125. Please revise the pre and postmine land use discussion for the NW1/4 of Section 16 to clarify surface ownership. The first sentence states the tract is owned by "Larry & Schmidt". Please also clarify the last sentence that states "Approximately 0.38

additional acres are being planned for this tract as was requested by the landowner” to explain how additional acreage is going to be created. And finally, please clarify why BNI is proposing to replace the pre-mine wetland acreage from this tract in the E1/2 of Section 18. According to the Pit Layout and Facilities Map all of the disturbed wetland acreage will be affected by associated disturbance and the wetland narrative in Section 4.12 states that “The size and shapes of the reclaimed wetlands are expected to remain the same as pre-mining”. We believe that the wetlands disturbed in this tract should be replaced where they existed prior to mining. (GAW)

*The narrative the NW1/4 of Section 16 beginning on page 9 of Appendix 4.12-2 has been revised. The first sentence has been corrected to state that the tract is owned by Larry & Virginia Schmidt.*

*The last sentence has also been clarified that an addition 0.38 acres of woodlands was being planned for this tract, as the landowner requested additional acreage. This number however has been revised as per deficiency #129. There will now be a total of 1 acre of woodlands added in this tract.*

*Finally, the narrative has been revised to describe that there are 0.04 acres of wetlands that are disturbed by the mining disturbance boundary (SE4 of the NW4 of Section 16). This is not visible on the Pit Layout and Facilities Map (premine wetlands are not shown on this map). These 0.04 acres will be reclaimed in its premine location rather than in the E1/2 of Section 18. As a result the wetland in Section 18 was reduced in size by the 0.04 acres. The narrative for the E1/2 of Section 8 on page 17 of this appendix has also been updated.*

126. A new sentence on page 10 of Appendix 4.12-2 states that 20.77 acres of native grassland in the SW1/4 of Section 16 will be converted to cropland, wetlands and DWR's. The landowner requested that the land be leveled as feasible and planted to alfalfa and grass. Please explain/justify why BNI is planning to convert native grassland to cropland, wetlands and DWR's when the landowner is requesting hayland. (GAW)

*The narrative for the SW1/4 of Section 16 on page 11 of Appendix 4.12-2 has been revised to clarify that the landowner requested hayland. Also the narrative has been revised to explain that due to limitations with postmine topography, no land use changes are planned at this time. If plans change, BNI will reassess postmine topography at that time.*

127. Follow-up to item No. 65: As required by NDAC 69-05.2-08-08(1)(d), please revise the Section 31 discussion to describe the species composition of the land in the SE1/4 that was previously disturbed and identify the disturbed areas on the ecological site map, Plate 3.6-1. A sentence at the end of the first paragraph states that “As noted above, there may have been portions of this tract previously disturbed”. Previous disturbance is not mentioned in the preceding narrative. Please revise to provide clarity. (GAW)

*The statement about previous disturbance in Section 31 narrative has been removed. Areas where that were “previously tilled” are no longer within the permit boundary.*

**Plate 4.12-1 Post Mine Land Use**

128. Follow-up to item No. 157: Please revise Plate 4.12-1 to show a replacement developed water resource on the native grassland in the SW1/4 of Section 8. It appears that two spring fed developed water resources will be disturbed by mining activities and a replacement feature should be shown. (GAW)

*The 1.48 acres of developed water resource were moved to the E ½ of Section 17 which is under the same ownership and placed within the same landuse type. There original location would put both within an approximately 78 acre watershed. There new location in the E ½ of Section 17 puts them individually within 69 and 160 acre watersheds respectively. We felt these dwr's would be better served within bigger individual watersheds for water quantity and quality.*

*We also placed the 1.39 acres of wetlands (0.44 acres of Seasonal and 0.95 acres of Temporary) from the E ½ of Section 17 into the S ½ of Section 8 in conjunction to the movement of the developed water resource acres. We believed by placing the wetland acreage in Section 8 that they would be better served within the smaller watershed, since a third of the wetland acreage is considered temporary. The third wetland in the series of three within the S ½ of Section 8, Wetland 8-1C, was revised slightly to add more depth within the wetland cell in order to provide characteristics similar to a developed water resource. Therefore, at this time we believe the wetlands and developed water resources are better served within the locations we originally have shown on Plate 4.12-1.*

129. Follow-up to item No. 162: Larry and Ginger Schmidt requested that additional trees be planted in the NW1/4 of Section 8 and the NW1/4 of Section 16 to improve wildlife habitat. Please include planting plans for tree plantings of sufficient size to be worthwhile for wildlife, such as 3 acre tree plantings in each tract. (GAW)

*Plate 4.12-1 has been revised. Conservational woodland acres are depicted in the NW1/4 of Section 8 and the NW1/4 of Section 16. A one acre tract has been added in each parcel. These will be planted with the woodland species mix.*

130. Reclaimed wetland 19-2 is identified and labeled in the SW1/4 of the SE1/4 of Section 19 but the design plans and Plate 4.10-1 (Post-Mining Topography) indicate that this wetland is going to be constructed in the SE1/4 of the SE1/4 of Section 19. Please review and revise as necessary. Otherwise, please explain what consideration was given to this request and why BNI is not going to plant the trees as requested by the landowners. (GAW)

*The location of reclaimed wetland 19-2 has been clarified. Plate 4.12-1 now depicts wetland 19-2 in the SE4 of the SE4 of Section 19, consistent with Plate 4.10-1 the Post-Mining Topography Map.*

131. Please label reclaimed wetland 25-1 appropriately on Plate 4.12-1. (GAW)

*The label for reclaim wetland 25-1 on Plate 4.12-1 has been corrected.*

132. Please revise Plate 4.12-1 to show more realistic replacement plans for the woodlands that are going to be disturbed by mining activities. The map presently shows the woodlands being replaced in identical location as the pre-mine woodlands, including many of which are less than one tenth of an acre in size. (GAW)

*Plate 4.12-1 has been revised. The reclaimed postmine woodlands have been depicted in more realistic locations. Each of the postmine woodlands has been labeled on Plate 4.12-1, and Appendix 4.12-7 has been added which shows the acreage for each of these woodlands.*

#### **Plate 4.12-2 Ecological Site Reference Area Locations**

133. Mine plan changes now indicate that the proposed native grassland reference areas will be disturbed much sooner than previously planned. Please consider proposing new locations for these sites at this time. It does not appear that the proposed Shallow Sandy reference area site will be able to be managed properly given its proximity to the main haul road and mining activities that will begin in 2015. (GAW)

*Plate 4.12-2 and the narratives in the 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs on page 17 of Section 4.12 have been revised. BNI understands that new locations for all the ecological reference sites will need to be found. This is due to changes with the mine plan and disturbance boundaries, which have come into conflict with proposed locations. During the upcoming field season, BNI plans to conduct field reconnaissance to find appropriate locations for these sites, and will continue to have conversations with the PSC. Once sites are established Plate 4.12-1 and appropriate narratives will be updated.*

#### **Section 4.13 Fish and Wildlife Protection and Enhancement and Monitoring Plan**

134. Follow-up to item No. 164: Please revise the new language on pages 3 or 4 of Section 4.13 to reference a new or existing map that clearly identifies specific areas that BNI will be avoiding to minimize impacts to fish and wildlife habitat as required by NDAC 69-05.2-09-02(11). (GAW)

*The first paragraph on page 4 has been revised to specifically discuss areas where BNI will be avoiding minimizing impacts to fish and wildlife habitats. Also Plate 4.13-3 Wildlife Habitat Protection Map, has been added to the permit and is referenced within this paragraph. This plate specifically depicts the areas discussed in the narrative.*

135. Follow-up to item No. 165: BNI is proposing to replace small beaded depressional wetlands in linear drainages that are often associated with ground water discharges with a few larger basins that are dependent upon surface runoff as shown on the Post Mine Land Use map. Please discuss the wildlife values of these pre-mine wetlands compared to the planned postmining wetlands. (GAW)

*A paragraph has been added to the wetlands narrative on page 6 in Section 4.13. The 3<sup>rd</sup> paragraph on this page now describes the wildlife value of the planned post-mining wetlands compared to premine. The beaded- like wetland features located along drainage ways will not be reclaimed by larger basins. A majority of wetlands located in*

*these areas of associated disturbance, and will be reclaimed in their pre-mine locations in the same size and shape.*

136. Follow-up to item No. 167: Please reference the appropriate Wildlife Monitoring Map, Plate 4.13-1 or 4.13-2, in the new language discussing monitoring for Threatened, Endangered and Candidate Species, that shows where Dakota Skipper and Sprague's Pipit surveys will be conducted. (GAW)

*The last sentences of both the 1<sup>st</sup> and 2<sup>nd</sup> paragraph on page 3 of Section 4.13 have been revised to reference the appropriate map (Plate 4.13-2) that depicts areas that will be monitored for Dakota Skipper and Sprague's Pipit.*

137. Follow-up to item No. 167: A new sentence in the first paragraph under Threatened, Endangered and Candidate Species states that the area will be monitored for Piping Plover. Please clarify why this species and not others, such as Whooping Crane, is specifically mentioned. It appears that BNI expects that habitats may be created during mining that might attract this species. Please clarify. (GAW)

*The first paragraph under the G. Threatened, Endangered, and Candidate Species discussion on page 13 of Section 4.13 has been revised. The reference to monitoring for piping plover has been removed from this statement. It has been clarified that surveys will be conducted for the two candidate species, both which have the potential of being found within the monitoring areas (Sprague's Pipit and Dakota Skipper). Although no listed threatened or endangered species are found or have the potential to be found in the area, any incidental sightings of Threatened or Endangered species such as Piping Plover and Whooping cranes will be documented and reported to the U. S. Fish & Wildlife Service and the PSC.*

138. Please clarify in the first paragraph of page 10 (Fish and Wildlife Monitoring Plan) of Section 4.13 if BNI has a single mine-wide wildlife monitoring plan or if there are separate monitoring plans for each permit area. The plan is written as if BNI has a mine-wide wildlife monitoring plan but sometimes Plate 4.13-1 is referenced which is specific to Permit BNCR-1101 and in other instances Plate 4.13-2 is referenced which is a mine-wide monitoring plan map. Please revise to provide clarity why it is necessary to have two Wildlife Monitoring Maps and to consistently refer to the correct map as necessary. (GAW)

*The first paragraph on page 10 of Section 4.13 has been revised. The new statements at the end of this paragraph explain that each of BNI's permits currently have their own Wildlife Monitoring Plans, however, in the future we plan to create a comprehensive plan. Also the paragraph has been revised to clarify why there are two maps. As per phone conversations with PSC staff, references throughout this narrative have been revised to consistently refer to Plate 4.13-2 Wildlife Monitoring Map (Minewide).*

139. Follow-up to a previous item: The first paragraph on page 6 of Section 4.13 states that the semi-permanent and larger seasonal wetlands located within suitable habitat are usually inundated until early to mid-summer, which provides attractive brood habitat and molting areas. Please revise this narrative to clarify what suitable habitat means in this sentence and clarify if the semi-permanent wetlands and larger seasonal wetlands,

which are limited to Hagel Creek and another un-named intermittent or perennial stream, are usually inundated until early to mid-summer draw down period. This paragraph as written appears to be more applicable to the prairie pothole wetlands rather than stream corridors and areas seasonally saturated due to ground water. Please revise so the information is specific to this permit area. (GAW)

*The 1<sup>st</sup> paragraph on page 6 of Section 4.13 has been revised. The word "suitable" has been removed, and this sentence has been clarified by explaining that the Semi and larger seasonal wetlands within native grasslands provide attractive habitat for brooding and molting areas. This includes Hagel Creek and other unnamed stream (Semi-Permanent) as well as the larger seasonal wetlands that are found in pockets along linear drainages.*

#### **Plates 4.13-1 Wildlife Monitoring Map and 4.13-2 Wildlife Monitoring Map Minewide**

140. Please label the bookmark for Plate 4.13-1 as such so that it is clear that this is Plate 4.13-1 rather than Plate 4.13-2. (GAW)

*The bookmark for Plate 4.13-1 has been revised. It is now labeled "Plate 4.13-1 Wildlife Monitoring Map"*

141. The legend of Plate 4.13-1 includes language that gives an impression that the map is the baseline wildlife study area map rather than an annual wildlife monitoring map. For example, wording at the top of the legend states "Wildlife Study Area Map" and notations at the bottom of the legend mentions "Intensive Study Area = BNCR-1101 Permit Boundary" and "Wildlife Buffer Area". Please review and revise as necessary to clarify why two wildlife monitoring maps are necessary. (GAW)

*The legend of Plate 4.13-1 has been revised. The heading has been revised to say "Wildlife Monitoring Map". The "Intensive Study Area Map", and the "Wildlife Buffer Area" have been removed from this map. As per conversations with the PSC Staff, the first wildlife map depicts areas specific to BNCR 1101. This map allows more detail when printed. The second map is a minewide map, which provides perspective of where BNCR 1101 monitoring occurs in relation to the rest of the mine monitoring. In the future BNI plans to have one Minewide Monitoring Plan.*

142. Follow-up to item No. 167: Please revise as appropriate either Plate 4.13-1 or Plate 4.13-2 to show where Dakota Skipper and Sprague's Pipit surveys will be conducted. Obviously, the Dakota Skipper surveys should be conducted in areas that have habitat with greatest potential for them to exist and the Sprague Pipit surveys should be conducted on all areas where they were detected during the baseline surveys. (GAW)

*Both Plate 4.13-1 and Plate 4.13-2 have been updated to depict areas that will be monitored for each species. There will be 2 transects used to monitor Sprague's Pipit; One along the S2 of Section 9/ N2 of Section 16 and another in the center of Section 18. These tracts encompass areas where the most amount of sightings were located during the Baseline study. Likewise there are two tracts that will be specifically monitored for Dakota Skipper. These include the N2 of Section 16 and the E2 of Section 21. The appropriate ecosites will be monitored within these tracts.*

143. Plates 4.13-1 and 4.13-2 show two breeding bird reference sites in the SE1/4 of Section 16 but Plate 3.10-1 (Baseline Wildlife Study Area Map) shows these sites in different locations. It appears that the reference sites were moved in response to a previous deficiency but the change was made on the wrong map. Please review and revise as necessary to keep a clear distinction between the Permit BNCR-1101 study area map and the annual mine-wide wildlife monitoring area map. (GAW)

*The breeding bird reference areas have been corrected on Plate 4.13-1 and Plate 4.13-2. The sites that are depicted on Plate 3.10-1 Baseline Wildlife Study Area Map has been revised as well.*

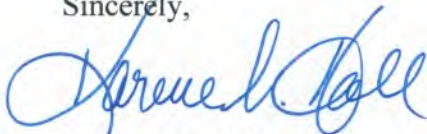
#### **Section 4.14 Reclamation Cost Estimate for Bonding Purposes**

144. Follow-up to item No. 171: BNI has changed the date of the worst case condition for bonding to 2015; however, the recent changes to the mine plan were not considered and incorporated into the worst case reclamation estimate. The Reclamation Division believes the worst case condition will now occur at the end of the first permit term, at the end of year 2019. Please update Section 4.14 to reflect that the worst case condition occurs at the end of year 2019. Please also update Plate 4.14-1 (Worst Case Plan View), Plate 4.14-2 (Worst Case Bond Cross-Sections), and Appendix 4.14-1 (Worst Case Bond Calculations). (BAJ/FSE)

*We have re-calculated the worst case bond considering the revised mineplan and the condition at the end of 2019. These changes resulted in substantial modifications to the entirety of Section 4.14, the associated plates, and the appendix. Section 4.14, Plates 4.14-1 and 4.14-2, and Appendix 4.14-1 have been completely revised and will require a total review of the entire section.*

Thank you for your consideration of this matter. If you have any questions regarding this submittal, please contact me at the Center office.

Sincerely,



Karene M. Hall  
Permit Coordinator