



# Public Service Commission

## State of North Dakota

---

### COMMISSIONERS

Randy Christmann  
Julie Fedorchak  
Brian Kroshus

Executive Secretary  
Darrell Nitschke

600 East Boulevard, Dept. 408  
Bismarck, North Dakota 58505-0480  
Web: [www.psc.nd.gov](http://www.psc.nd.gov)  
E-mail: [ndpsc@nd.gov](mailto:ndpsc@nd.gov)  
Phone: 701-328-2400  
ND Toll Free: 1-877-245-6685  
Fax: 701-328-2410  
TDD: 800-366-6888 or 711

April 25, 2017

Mr. Jason Frye  
Environmental Specialist  
Otter Creek Mining Company, LLC  
P.O. Box 1087  
Underwood, ND 58576-1087

Dear Mr. Frye:

The Reclamation Division has conducted a review of Otter Creek Mining Company, LLC's application for Surface Coal Mining Permit NAOC-0802 for the Otter Creek Mine in Oliver County, North Dakota. The following items must be satisfactorily addressed before the Reclamation Division can once again deem the application complete and before public notice can commence.

Initially, we had indicated that we would conduct another "completeness" review of the latest submittal even though the permit application had been previously deemed complete. This was due to changes in the permit area, land use, surface and mineral ownership, mine plan changes, and the amount of time that has lapsed since the permit was originally submitted (December 23, 2008), deemed complete (April 19, 2010), and the last technical review (February 15, 2012). You will note that many of the deficiencies listed below are more technical in nature; however, the decision was made to include these items in order to make the permit application more accurate prior to sending it to the various advisory committee member and other agencies. Once these items have been adequately addressed, you will be instructed to provide public notice again of the permit application. This will include re-advertising the public notice, re-submittal of landowner notifications and other application completeness requirements normally associated with submittal of a new permit application. In addition, we will again notify the advisory committee members and other agencies.

### **Section 1.0 – Introductory Information**

1. Please re-submit a revised permit application form and place that document in Section 1.1.1. The partially revised application changed the date and acreage on page 1 of the form, but retained all of page 2 with the original signatures of company officials that no longer either serve with the company or no longer serve in the official capacity designated on the application form. A new permit application needs to be submitted that is signed by current officials in the company and notarized. (BEB/GAW)

#### **Section 1.2.4 – Public Notice and Publication Map**

2. As previously noted, Otter Creek will be required to re-notice this permit application, therefore please update the Newspaper Publication Notice in Section 1.2.4 and the Newspaper Publication Reference Map, Section 1.2.4a. Significant permit area boundary and leasehold status changes have occurred since public notice was last provided in 2010. (BEB/ZAB/GAW/RLK/WTG)
3. The Newspaper Notice states that during the term of the permit, mining related activities will need to be located across section lines located on the east and south sides of Section 30, T143N, R4W, and on the section line between Sections 25 and 36, T143N, R85W, but Sections 25 and 30 are not being permitted with this latest submittal. Please review and revise to provide clarity. (GAW)
4. Please review and if necessary update the section line closure and operations within 100 feet of the outside rights-of-way narratives located on pages 8-10 of the public notice. (ZAB)
5. Please change the ND Public Service Commission's address from the Capitol Building to 600 East Boulevard Ave., Dept. 408, Bismarck, ND 58505-0480 in the last two paragraphs of the public notice. (ZAB)

#### **Section 1.2.5 – Certification of Liability Insurance**

6. Please replace the certificate of liability insurance dated 1/24/2017 with the approved version that is dated 2/16/2017. The cancellation endorsement on page 11 in Section 1.2.5 of the permit is the approved version, but the Location General Aggregate Endorsement on pages 12-13 must be replaced with the approved signed version that was submitted with the revised certificate of liability insurance. (ZAB)

#### **Section 1.3.6 – Relationship to Areas Designated Unsuitable**

7. As required by NDAC 69-05.2-05-02(1), please revise the paragraph introducing the list of 15 temporary section line closures on page 4 of Section 1.3.6 to reference Section 3.5.21 (Road Relocation and Closing Plan Map) for the proposed section line closure dates. (WTG)
8. It appears that section line closure number 4 on page 4 of Section 1.3.6 should be corrected to describe Section 2 as being in R85W rather than R84W. Please review and revise the range description as necessary. (WTG)
9. Please review the paragraph introducing the list of section lines where operations within 100 feet of the outside rights-of-way will be necessary on page 5 of Section 1.3.6 as follows:  
*“No surface coal mining operations will be located within 100 feet of the outside rights-of-way of any of these county and section line roads until they are closed by the Oliver County Board of Commissioners. Before the rights-of-way and associated setback corridors are disturbed, approval from the Oliver County Board of Commissioners will be obtained. Notice and opportunity for a hearing will be provided as required in several sections of the ND Century Code.”*  
This paragraph appears to be redundant because the succeeding paragraph on page 5 states that Oliver County approval will be obtained prior to conducting the operations and it also appears to

be inaccurate because the section lines will not be closed to conduct operations within 100 feet of the outside rights-of-way. Please review the paragraph and correct it to convey accurate information, or delete it from Section 1.3.6. (WTG)

10. Please review the following section lines where operations within 100 feet of the outside rights-of-way will be necessary on both sides of the section lines as listed page 6 of Section 1.3.6 as follows:

*Both sides of the north-south section line between Sections 1 and 2, T142N, R85W.*

*Both sides of the east section line between Sections 29 and 32, T143N, R84W.*

It appears that the north-south section line between Sections 1 and 2, T142N, R85W should be appended to state "prior to closure of the north half" based on a review of Section 3.5.21 (Road Relocation and Closing Plan Map). It also appears that the east section line between Sections 29 and 32, T143N, R84W should be corrected to east-west, and should be appended to state "prior to closure" based on a review of Section 3.5.21 (Road Relocation and Closing Plan Map). (WTG)

#### **Section 1.4 – Surface Owner Protection Act Compliance Information**

11. All surface owner notification letters and maps will need to be revised and re-sent to affected landowners for the following reasons: The most recent (2009) notice to surface owners' states that the permit area encompasses approximately 5,492 acres and that number will need to be revised downward to 5249.5 acres. The 2009 letter also informs the surface owners that permit application approval is expected in 2009 or 2010. Copies of the surface owner notification maps, Section 1.4.2, that were included with the surface owner notification letters mailed in 2008 and 2009 must be retained in the permit as part of the record. Please update the surface owner notification letters, map and landowner preference statements, and prepare to re-send those documents once the application has been deemed complete. [NDCC 38-18-06(1)] (BEB/GAW/WTG)
12. The Surface Owner Notification Letters, Section 1.4.2, do not include new surface owners of Tract 28, Chad Fleckenstein and Laura Fleckenstein. Please provide a notification letter and map to them as well as providing them a copy of the Landowners Post-Mining Preference Statement form and incorporate those documents into the permit. We have also noted that other tracts of land have changed/updated surface ownership, such as Tracts 6, 18, 25, and perhaps others. In those instances where the new surface owner(s) was/were previously sent a preference statement form for other tracts of land under their ownership within the permit area, an updated Landowner Post-Mining Preference Statement for recently acquired tracts will be necessary. Among other things, the surface owners in the S1/2 of Section 32 should be made fully aware of the proposed temporary cessation of mining that is planned. Please incorporate the updated notice letters in the permit and re-send the notification documents. (BEB/GAW)

#### **Section 1.5 – Identification of Interests and Rights of Entry**

13. Please review all leases and add affidavits certifying that expired leases have been renewed. We also noted that several leases will expire in 2017 and others expire prior to the first permit renewal. At a minimum, affidavits must be provided for all tracts that will be disturbed or mined in the first 5-year permit term. We noted the following surface and/or coal leases that need review; however, the list may not be all-inclusive and all leases should be reviewed. [NDCC 38-18-05(3) and NDCC 38-18-06(2)] (ZAB/WTG)

- a. H. Huffman & Co. in Tract 5
- b. Inez Arman in Tracts 8, 9 and 26
- c. Rene Barchenger, William Keuther, Medora Nunez, Vila Regalia and Renotta Scherr in Tract 10
- d. Carter and Barbara Berg in Tracts 13, 14, 15 and 16
- e. Earl and Marlyn Bornemann (Barry, Robert and Ronald Bornemann) in Tracts 15 and 16
- f. Kent and Deborah Albers in Tracts 17, 19, 20, 22 and 23
- g. Tina Krakow in Tracts 17 and 22
- h. Elmer & Snowflake Yeager in Tracts 17 and 18
- i. Isabel Werner in Tract 19
- j. John Albers, Claudia Albers, and Jack Albers in Tract 22
- k. Loren and Kristen Henke in Tracts 24 and 29
- l. Wayne and Loretta Beckman, Life Estate in Tracts 25 and 31
- m. The lease with Mike and Tanya Ginther in Tract 28 will expire in May 2017 (Section 1.5.1 lists Chad and Laura Fleckenstein as the new surface owners of this tract)
- n. Leland Wolf, William Wolf and Bauer Investments, LLC., in Tract 29
- o. All of the North Dakota Department of Trust Land leases in Tracts 17, 18, 26, 29, 30, 31, 32, and 33 expire in 2019

#### **Section 2.0 – Environmental Resource Information**

14. Follow-up Original Item No. 70: Please include a list of the technical references used and include the names of persons and organizations that collected and analyzed the data, and the qualifications of persons involved as required by NDAC 69-05.2-05-02(2). NDAC 69-05.2-05-02(3) requires the name, address and position of officials of each private or academic research organization or governmental agency consulted in preparing information on land uses, soils, geology, vegetation, fish and wildlife, water quantity and quality, air quality, and archaeological, cultural, and historic features. (GAW)

#### **Section 2.4 – Fish and Wildlife Resources**

15. Please revise Section 2.4.1, Fish and Wildlife Resources Report, to include bookmarks for all relevant subsections of Section 2.4.1 and reorganize the information in this report such that the results of the surveys are included in the Results and Discussion subsection. A new subsection has been added to the Methodology section entitled Special Evaluations and Considerations, which includes results and discussions beyond what one would expect in the Methodology section of this report. The Methodology section should clarify why baseline study information was conducted over a 10-year period. There are numerous instances where Otter Creek makes commitments about future monitoring in the baseline Fish and Wildlife Resources Report. Please move future monitoring commitments to the Wildlife Monitoring Plan section of the permit, Section 2.4.3. (GAW)
16. A sentence in the first paragraph on page 6 of Section 2.4.1, states that Otter Creek will continue to monitor the study area for species that are considered sensitive by the USFWS. Please include a list of the species that are considered “sensitive” by the USFWS, or otherwise provide an explanation of this terminology. (GAW)

17. Please revise the native grassland discussion that begins on page 12 of Section 2.4.1 to discuss how much of the native grassland is typically idle during the growing season and depict each of those areas on the Pre-Mine Wildlife Habitat and Study Area Location Map, Section 2.4.1a. Please then provide a narrative discussion about habitat value of grassland in the permit area in terms of ecological site diversity, ecological condition and apparent management during the growing season. (GAW)
18. Please revise the Breeding Bird Census discussion on page 18 of Section 2.4.1 to include species-specific trends observed during the 9-year period for each of the three vegetation communities surveyed, and discuss observed differences between the two native grassland breeding bird sites. Please also include a discussion about the presence of species listed as Species of Conservation Priority for ND (NDGF 2015) and perhaps some discussion about the ecological condition of the native grassland monitoring sites and the land use and management during this monitoring period. (GAW)
19. Please revise the Sharp-tailed Grouse Lek survey information to include a narrative discussion about the trends observed over the 9-year survey period. Please also provide some explanation as to why so few Sharp-tailed Grouse Leks were found in the area surrounding the proposed permit area compared to the much smaller permit area. (GAW)
20. Please revise the Fish and Invertebrate Survey subsection of Section 2.4.1 to provide an explanation of the results of the surveys. In other words, please discuss what the macroinvertebrate survey is showing in terms of biological conditions and stream water quality. Please discuss if the ND Department of Health has established a benthic macroinvertebrate metric for this stream, or this area of the state, and if established, discuss macroinvertebrate taxa composition, richness, tolerance/intolerance to characterize the biological condition and water quality of Square Butte Creek. (GAW/RLK)
21. Follow-up to original Item No. 38: The bookmark heading for Table 5 of Section 2.4.1, Federal Threatened, Endangered and Candidate Species Found in Oliver County, is specific to Oliver County but the Table itself indicates that it contains species for North Dakota. Please correct this error. In addition, please also include species proposed for listing in this table. (GAW)
22. Please update the piping plover narrative that begins on page 22 of Section 2.4.1 to discuss whether or not there is any designated critical habitat for this species within the study area and the distance between the proposed permit area and designated critical habitat. (GAW)
23. Please revise the last sentence on page 23 of Section 2.4.1 that carries over to page 24, which states that "*According to the final 4(d) rule, in the absence of surveys, the NLEB presence is not expected outside of the white-nosed syndrome buffer area, which is all of North Dakota.*" The final 4(d) rule allows incidental take outside of the white-nosed syndrome zone (WNS) but says nothing about species presence or absence in this zone. Please review and revise to provide accuracy and clarity regarding the final 4(d) rule. (GAW)
24. The fourth paragraph on page 28 of Section 2.4.1 states that no other species of concern (NDNHI) were found during wildlife reconnaissance surveys. Please revise the sentence to clarify that the NDNHI species of concern list is "plant species of concern", and clarify in the paragraph if there are any NDNHI plant species of concern in Oliver County, North Dakota. (GAW)

25. A sentence in the second paragraph on page 29 of Section 2.4.1 states that special attention was paid to the USFWS Species of Habitat Fragmentation Concern for ND. Please provide a description of this document (include in the Literature Cited subsection), clarify which species are included in this list and discuss if any of these species were found in the wildlife study area during the 9-year monitoring period. The last sentence of this paragraph states that the species of habitat fragmentation concern are bold and italicized in Table 6 but no bold or italicized species are listed in this Table. (GAW)
26. Please further explain how the Dakota Skipper survey sites were determined to be the best sites in the permit/study area for monitoring. The native grassland vegetation data in Appendix V of Section 2.7 does not appear to indicate that these sites were in the best ecological condition or that these sites contained the most little bluestem and these sites are not in the largest tracts of native grassland. Please revise to explain the characteristics of the sites that were chosen as having the greatest potential to support the Dakota Skipper. (GAW)
27. Tables 6 and 7 of Section 2.4.1 are entitled "USFWS 100 Species of Concern for North Dakota" but the table headings when opened are entitled "NDGF 100 Species of Concern. It appears Tables 6 and 7 have been updated to conform to North Dakota's 2015 State Wildlife Action Plan. The 2015 North Dakota State Wildlife Action Plan (SWAP) increases the species of conservation priority from 100 to 115 species. Please review all tables and the narratives in Section 2.4.1 to clarify if the old NDGF 100 Species of Conservation Priority list is being used, or the 2015 SWAP 115 Species of Conservation Priority is being used, or if an unknown USFWS list of 100 Species of Concern for North Dakota is being used. All relevant documents should be listed in the Literature Cited bookmark of Section 2.4.1. (GAW)
28. Please update the Threatened and Endangered Species subsection of Section 2.4.1 to include a discussion about all of North Dakota's listed threatened and endangered species. The Black-footed Ferret, Pallid Sturgeon, and Gray Wolf are species that could occur in Oliver County but are not discussed in the Results Section of 2.4.1, and the Poweshiek Skipling is not mentioned. Please also include a discussion about whether the permit and adjacent areas contain any of the species currently proposed for listing as threatened and endangered. Information should be provided for each proposed species, and include site-specific resource information for any proposed species that might be in or adjacent to the permit area as required by NDAC 69-05.2-08-15 (3). This would include the Sturgeon Chub, Sicklefin Chub, Western Bumblebee, Moose, Monarch Butterfly and Regal Fritillary. (GAW)
29. Please revise Section 2.4.1 to provide an explanation of the purpose and results of the work completed in Table 1 of Appendix II. Specifically, please discuss the habitat changes that occurred over the 10-year period and what opportunistic observations were completed, recorded and included in this report. (GAW)

#### **Section 2.4.1a – Pre-Mining Wildlife Habitat and Study Area Location Map**

30. NAIP aerial photography appears to indicate that the hayland located in the SW1/4NE1/4 of Section 20 was farmed with the adjacent cropland in 2016. It also appears that cropland and hayland changes may have occurred on lands in the SW1/4 of Section 20 during the past few years. Please review and update as necessary. (GAW)

31. Please review the habitat types listed on the tract of hayland located near the center of the W1/2 of Section 5. Aerial photography appears to indicate a low area in this field that may be associated with the adjacent wetland NW5-1. Please review and update if necessary. (GAW)
32. Please review the habitat type listed on the tract of hayland located in the NW1/4NE1/4 of Section 6. Aerial photography appears to indicate this field being managed with the cropland to the north. In addition, please review the boundary between the cropland and wetland T-NW6-1 on this tract as it appears the wetland has expanded a considerable distance into the field and that this portion of the field was not cropped in 2016. (GAW)
33. Please review the habitat type listed on the tract of hayland located in the SW1/4 of Section 1. Aerial photography appears to indicate this field being managed with the cropland located to the southeast. (GAW)
34. Please review the habitat type listed on the tract of hayland located in the NW1/4SE1/4 of Section 2. Aerial photography appears to indicate this field being managed with the cropland located to the east. (GAW)
35. Please review the boundaries of the native grassland located in the N1/2SE1/4 of Section 35. Aerial photography appears to indicate portions of this area as cropland. (GAW)
36. Please revise the Pre-Mining Wildlife Habitat and Study Area Location Map, Section 2.4.1a, to distinguish the native grassland in the proposed permit boundary that is typically idle during the growing season and that which is typically grazed or hayed. (GAW)
37. Please label the ecological sites depicted on the Dakota Skipper Study Area Map, Section 2.4.1f, to allow one to determine why these areas are considered Dakota Skipper Ecosites. (GAW)

#### **Section 2.4.2 – Fish and Wildlife Management Plan**

38. The last sentence in the fourth paragraph on page 7 of Section 2.4.2, states, “*According to the final 4(d) rule, in the absence of surveys, the NLEB presence is not expected outside of the white-nosed syndrome buffer area, which is all of North Dakota.*” Please revise this sentence to provide clarity and accuracy about what the rule actually says. The 4(d) rule does not require surveys for the species outside of the white-nosed syndrome buffer area and says nothing about expected species presence in this area, and it states that incidental take will not be prohibited outside of the white-nosed syndrome buffer area. Please clarify if Otter Creek is planning an incidental take of this species. (GAW)
39. Please revise the Fish and Wildlife Management Plan to include a discussion about Otter Creek’s compliance with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The USFWS identifies 22 migratory species of birds that potentially breed or winter in the Otter Creek permit area and there are no provisions for allowing take of migratory birds that are unintentionally killed or injured. This discussion should include mine plan disturbance activities during species nesting, breeding and fledgling seasons. (GAW)
40. Please revise the Fish and Wildlife Management Plan to include a discussion about how Otter Creek will minimize disturbance and adverse impacts to species included in North Dakota’s 2015

Species of Conservation Priority list that exist or may potentially exist in the proposed permit area. [NDAC 69-05.2-09-17 and NDAC 69-05.2-13-08]. (GAW)

41. Please revise the Fish and Wildlife Management Plan to include a species-specific protection and enhancement plan for all species currently proposed for listing as threatened and endangered that may potentially exist in the proposed permit area. This would include the Regal Fritillary and Monarch Butterfly, and possibly the Western Bumblebee. [NDAC 69-05.2-09-17 and NDAC 69-05.2-13-08] (GAW)

#### **Section 2.4.3 – Wildlife Monitoring Plan**

42. A sentence in the third paragraph on page 4 of Section 2.4.3, Wildlife Monitoring Plan, states that, "*Per USFWS request, special consideration was made to document the spatial distribution of the 100 species of concern list for North Dakota.*" The link at the end of the sentence references Table 7 of Appendix III of Section 2.4.1 but that document is the NDGF list of species of conservation priority. Please include a copy of the USFWS request and clarify if the USFWS reference is the NDGF species list or a USFWS list. (GAW)
43. Please update the Wildlife Monitoring Plan, Section 2.4.3, to include specific surveys for all species proposed for listing to the Threatened and Endangered Species Act that have the potential to exist in the proposed permit and adjacent area. This would include the Regal Fritillary, Monarch Butterfly and possible the Western Bumblebee. (GAW)
44. Please update the Wildlife Monitoring Plan, Section 2.4.3, to include annual Fish and Benthic Macroinvertebrate Surveys of Square Butte Creek. This is needed to document the biological condition and water quality of Square Butte Creek prior to, during, and after mining. (GAW)

#### **Section 2.6 – Surface Water Information and Monitoring Plan**

45. The Surface Water Features Map in Section 2.6.4 identifies the tributary to Square Butte Creek entering the permit area at Monitoring Site 1 as an intermittent stream but the monitoring site information provided in Section 2.6.8 describes this tributary as an ephemeral stream (Monitoring sites MS-1A, MS-11 and MS-26). Please review and revise for consistency as appropriate. (RLK)
46. Please provide additional information to support the ephemeral or intermittent stream designations for the west tributary to Square Butte Creek (monitoring sites MS-1 and MS-26) and the tributary entering Square Butte Creek in Section 6 (monitoring site MS-14) as required by NDAC 69-5.2-08-07. The surface water quantity information should be updated to include recent flow monitoring and hydrograph data for the stream monitoring sites, particularly sites MS-1, MS-26, and MS-14. (RLK)
47. Please update the surface water probable hydrologic consequences (PHC) for the eastern portion of the mine area (Control Point SB-2) to account for the modified permit area that no longer includes the E1/2 of Section 5, T142N, R84W and a tract in the SE1/4 of Section 32, T143N, R84W. The PHC evaluation for this drainage system should be adjusted to consider a control point at the permit boundary on the section line between Sections 5 and 32. In addition, we suggest that the drainage located to the north and west of the Albers farmstead(s) in the SE1/4 of

Section 32 (approximately the drainage area for proposed sediment pond P-32-02) be described in the PHC determination. [NDAC 69-05.2-08-04] (RLK)

48. The acreages listed in Section 2.6.5c for control point SB-10 are the same as the pre- and post-mining drainage areas for the SB-10d portion of the watershed as provided on the maps in Sections 2.6.5a and 2.6.5b. The PHC analysis on Table 1, Section 2.6.5c appears to be based on only the acreage of watershed SB-10d; however, control point SB-10 should also include the acreage of subwatershed 10A, 10b, and 10c as well as 10d. Please review and revise as appropriate. (RLK)
49. The PHC maps in Sections 2.6.5a and 2.6.5b contain two labels for control point SB-18 with differing acreages. Please review and revise as appropriate. (RLK)
50. Please depict the pre-mine and post-mine land uses on the pre-mine and post-mine PHC maps in Sections 2.6.5a and 2.6.5b, respectively. Land use is a significant factor in the surface water hydrology modeling and analysis for the PHC. (RLK)
51. The narrative in Section 2.6.5 attributes a rather large increase in peak flow and runoff volume for Watershed SB-14 to an increase in CN values for conversion of grassland acres to cropland but the pre- and post-mine land acreage use for the watershed area appears very similar. Please review the peak flow and runoff volume information and revise or provide clarification on the anticipated changes for the SB-14 drainage area. (RLK)
52. The narrative in Section 2.6.5 attributes an increase in peak flow and runoff volume for Watershed SB-16 to an increase in watershed area and an increase in CN values for conversion of grassland acres to cropland. However the pre- and post-mine land use acreage for the watershed area appears very similar. Please review the peak flow and runoff volume information and revise or provide clarification on the anticipated changes for the SB-16 drainage area. (RLK)
53. Please provide information in the permit showing that reestablished ephemeral stream channels are appropriately designed and have a longitudinal profile and cross section that approximate the pre-mining channel characteristics as required by NDAC 69-05.2-16-06(5). Include stream channel profile and length comparisons for the reestablished drainages identified in the PHC (Section 2.6.5) as Watersheds SB-2h, SB-5b, and SB-10d. (RLK)
54. Please include the model results or similar design information used to analyze the stability of reclaimed drainage ways in accordance with NDAC 69-05.2-16-06(6). The post-mine reclaimed drainage ways should be evaluated based on the 100-year/6 hour storm event. Please update the probable hydrologic consequences (or other permit section) to show the calculated flow velocities in the representative portion of each reclaimed drainage way channel, and the expected velocities in the most erosive section of each drainage way. (RLK)

#### **Section 2.7 – Pre-Mining Land Use and Vegetation**

55. A sentence in the first paragraph on page 4 of Section 2.7.1, Pre-Mining Land Use and Vegetation Narrative, states the hayland in the S1/2 of Section 1 gets multiple cuttings, which is likely due to favorable moisture conditions due to proximity to Square Butte Creek. Please revise to clarify if this additional moisture is due to soils, landscape position (run-on) or other factors

such as subirrigation. The language in this section should be consistent with the Alluvial Valley Floor determination. (GAW)

56. A sentence in the first paragraph of the woodland narrative indicates that the volunteer woodlands within tracts of native grassland has understory vegetation dominated with smooth brome grass and Kentucky bluegrass. Please revise to clarify if this statement applies to all of the woodlands in the permit, and all of the woodland mapping unit types, or a representative sample of the woodlands in the permit area. Please revise to provide additional information regarding the understory vegetation of the woodlands in the permit area. (GAW)
57. Please provide updated baseline vegetation inventory data for the native grasslands, woodlands, haylands, CRP lands, tame pasturelands and wetlands (including Square Butte Creek) as required by NDAC 69-05.2-08-08. The vegetation inventory in the permit application is obsolete, given that it is 10-years old. (GAW)
58. Follow-up to Item No. 76: Please provide appropriately scaled maps showing the woodland mapping units in each woodland site as required by NDAC 69-05.2-08-08(1)(c)(4). This information is not legible on the Pre-Mining Land Uses and Associated Mapping Units map in Section 2.7.2a. (GAW)

#### **Section 2.7.3 – Appendices I-VII**

59. Follow-up to Item No. 67: Please review and update Appendix I, Pre-Mining Land Management Information, to ensure the information provided is current and accurate as required by NDAC 69-05.2-05-02(1). There appears to be some land use changes within the past five years that should be discussed as required by NDAC 69-05.2-08-08. (GAW)
60. Follow-up to Item No. 67: Please update Appendix III, Plant Species, to ensure the list is current and complete as required by NDAC 69-05.2-05-02. (GAW)
61. Follow-up to Item No. 67: Please revise Appendix V, Native Grassland Vegetative Data, to include the currently approved versions of the NRCS Ecological Site Descriptions rather than the 2003 version. (GAW)
62. Follow-up to Item No. 67: Please review Appendix VI, Pre-Mining Assessment Information for Shelterbelts, to insure the information provided is still valid and update as necessary. (GAW)
63. Follow-up to Item No. 68: Please revise Section 2.7.3 to include vegetation species composition information for each tract of CRP and hayland in the permit area. [NDAC 69-05.2-08-08(1)(d)] (GAW)

#### **Section 2.7.2 – Pre-Mining Land Use Map**

64. Please label every wetland and shelterbelt depicted on the Pre-Mining Land Use Map. (GAW)
65. NAIP aerial photography appears to indicate that the hayland located in the SW1/4NE1/4 of Section 20 was farmed with the adjacent cropland in 2016. It also appears that other cropland and

hayland changes may have occurred on lands in the SW1/4 of Section 20 during the past few years. Please review and update as necessary. (GAW)

66. Please review the tract of hayland located near the center of the W1/2 of Section 5. Aerial photography indicates a low area in this field that appears associated with the adjacent wetland NW5-1. Please review and update if necessary. (GAW)
67. Please review the hayland located in the NW1/4NE1/4 of Section 6. Current aerial photography appears to indicate this field is being managed with the cropland to the north. In addition, please review the boundary between the cropland and wetland T-NW6-1 on this tract as it appears the wetland has expanded a considerable distance into the field and that this portion of the field was not cropped in 2016. (GAW)
68. The updated aerial photo background for the Pre-Mining Land Use Map in Section 2.7.2 and other aerial imagery sources appear to indicate that approximately 15 acres of land in the N1/2SE1/4 of Section 35 identified as having a pre-mine land use of native grassland was used for crop production in recent years. Please review the land use on this tract (Tract 26 ownership map, Tract 15 pre-mine map) and update the information in Sections 2.7.1 and 2.7.3 as appropriate to describe any changes to the current and historic land uses in accordance with NDAC 69-05.2-08-08(3). (RLK)
69. Please review the hayland located in the SW1/4 of Section 1. Aerial photography appears to indicate this field is being managed with the cropland located to the southeast. (GAW)
70. Please review the hayland located in the NW1/4SE1/4 of Section 2. Aerial photography appears to indicate this field is being managed with the cropland located to the east. (GAW)
71. Please review the boundaries of the native grassland located in the N1/2SE1/4 of Section 35. Aerial photography appears to indicate portions of this area is cropland. (GAW)

#### **Section 2.7.2a – Pre-Mining Land Uses and Associated Mapping Units**

72. Please update Section 2.7.2a, Pre-Mining Land Uses and Associated Mapping Units, to address land use mapping unit changes consistent with what is depicted on the Pre-Mining Land Use Map. (GAW)

#### **Section 2.7.3 – Appendix VII – Woodland Vegetation Data for the Otter Creek Permit Area**

73. Please revise Appendix VII to explain the data presented. It is not clear who collected this data, the date the information was collected or where precisely, the transects were placed. Please also revise to allow one to determine if the dominant species of perennial grasses are native or introduced species. Please also explain how the NRCS expected heights of planted trees and shrubs, as included on page 5 of Appendix VII, is relevant to the natural woodland communities in this proposed permit area. Actual woodland information is required, not NRCS shelterbelt information. (GAW)

### **Section 3.1 – Operations - General**

74. Follow-up to item 89: On the map in Section 3.1.5, the tributary to Square Butte Creek flowing through Sections 2 and 35 appears to include a yellow outline identifying the stream segment as an intermittent stream but information elsewhere in the permit application describes this stream segment as ephemeral. Please review and revise or clarify as appropriate. (RLK)

### **Section 3.2 – Operations – Existing Structures**

75. Please review the Existing Structures narrative in Section 3.2.1, add section numbers to the Existing Structures map in Section 3.2.2 and update the surface ownership as necessary. It was noted the map shows ownership of the occupied dwelling in the SW1/4 of Section 35 to be Mike and Tonya Ginther; however, other information in the permit indicates that Chad and Laura Fleckenstein are the current owners of that property. In addition, new easements were added to numerous tracts in Section 1.5.1 for WRT, RRE, southwest water pipeline, and wind turbines. Please review and depict accurate surface ownership and any new structures on the map. [NDAC 69-05.2-08-02(f)] (ZAB/BEB/GAW)
76. Follow-up to Item No. 89: Please add narrative to the Operations Section that discusses any disturbance planned within 100 feet of any intermittent and perennial stream. [NDAC 69-05.2-16-20] (GAW)

### **Section 3.5 – Operations – Transportation Facilities**

77. It appears that the off-permit road between Sections 33 and 4 is being upgraded and re-aligned such that it ties into the intersection of the north-south county road and the mine access road at the permit boundary. It is not clear if this road is being updated and re-aligned as a result of mining activities. Please describe Otter Creek's plans or arrangement with Oliver County regarding construction of this road that is located outside of the permit boundary because road relocation and closing plan narrative in Section 3.5.20 only describes section line trail closure and road re-construction activities within the permit boundary. Please provide sufficient detail regarding the construction and use of this road outside of the permit area in order for the Commission to determine if this activity should be permitted. (BEB)

### **Section 3.6 – Operations – Surface Water Management**

78. Please include detailed design plans for sedimentation ponds P-05-01, and if necessary P-05-02 and P-32-01. Detailed design plans for structures scheduled for construction within the first year of the permit term must be submitted with the application as required by NDAC 69-05.2-09-09(e) (1). Also, please include narrative as well as a schedule for construction of the shop/office complex. Include narrative details of surface water management during construction of the shop/office, as well as the surface water management of the equipment parking area/fuel storage and coal handling facility. [NDAC 69-05.2-09-01(3&4)] (BAJ/RLK)

#### **Section 4.1 – Post-Mining Land Use and Revegetation**

79. A sentence on page 6 of Section 4.1.1 states that mining will disturb five DWR's in Sections 1, 2, 31, 32 and 36. However, it also appears that a stock pond in the NE1/4 of Section 35 will also be disturbed by mining. Please review and revise as appropriate. (RLK)
80. Follow-up to item No. 111: The updated Post-Mining Land Use Map in Section 4.1.2 still identifies pre-mine section line roads and trails as being reclaimed to county roads. Please include information on the design criteria/standards required by the local road authority for the post-mine county roads proposed in the permit application. [NDAC 69-5.2-09-13] (RLK)
81. Please provide the preliminary design parameters for sizing the post mine replacement stock ponds shown on the post mine land use map in Section 4.1.2. The permit should include information for any proposed permanent impoundments to demonstrate they can support the intended purpose as required by NDCC 69-05.2-08-04(6) and NDCC 38-14.1-24(7). (RLK)
82. Please review and update the cropland and native grassland pre-mine acreages listed in Section 4.1.3 for the apparent conversion of approximately 15 acres of grassland to cropland in the SE1/4 of Section 35, as appropriate. (RLK)
83. Please update the bookmarks for Section 4.1.4 to account for removal of the Landowner's Post-Mining Preference Statements for Howard and John Bubel. (RLK)

#### **Section 4.2 – Reclamation - General**

84. The reclamation procedures narrative in Section 4.2.1 refers to areas to be scarified or worked to promote root growth or relieve possible compaction where necessary or where required. In the time since this permit application was first submitted, additional emphasis has been placed on identifying compaction issues and appropriate treatment or techniques for relieving compaction on reclaimed areas in more specific terms. Please update this section to provide more detail on the situations in the reclamation process where excessive compaction may be expected and the methods for relieving the particular type of compaction. [NDAC 69-05.2-05-02(1) and NDAC 69-05.2-15-04] (RLK)
85. Please revise Section 4.2 to include a table for each surface owner tract that compares the acreages of the pre- and post-mining slope ranges in 3% increments to demonstrate compliance with NDCC 38-14.1-24(3) which requires gentle topography consistent with the approximate original contour. Please also include a narrative discussing the results of pre- and post-mining slopes by surface owner tract. (GAW)
86. Please review the variance request narratives in the Reclamation Schedule, Section 4.2.2, to improve clarity. The Area A request mentions a temporary cessation of mining that is not shown on the Pit Layout and Facilities Map, and the Area B-C variance narrative mentions a "last pit area" which is confusing since mining is to resume in this area. Please also provide ample justification for opening a pit in the S1/2 of Section 32 in 2023, adjacent to several farmstead residences, and then leaving it open for a six-year period. (GAW)

87. Please revise the native grassland seed mixture, Section 4.2.2, to include at least 3 native forbs as recommended by NDSU publication R1728, Successful Reclamation of Lands, and NRCS's Range Planting 550, Design and Installation Guide, which recommends that forbs and shrubs comprise up to 4 percent of the seed mixture. NDAC 69-05.2-13-05 requires the use of the best technology currently available. (GAW)
88. Either remove or revise the Area D narrative to clarify that conceptually there may be a need for a reclamation variance for this area where mining is planned in 2063 through 2065. The Projected Reclamation Time Schedule in Section 4.2.2 will also need to be revised accordingly. The Reclamation Division will not approve a reclamation variance for Area D more than 50 years prior to mining. (GAW)

#### **Section 4.2.3 – Reclamation Sequence Map**

89. Please revise the Reclamation Sequence Map, Section 4.2.3, so that the pits are consistent with what is shown on the Pit Layout and Facilities Map, Section 3.1.5. The Pit Layout and Facilities Map shows mining in the Area B-C Variance areas through 2023 and resuming in 2027 but the Reclamation Sequence Map shows mining ceasing in 2022 and resuming in 2028. There are similar timing differences in the Area A and Area D variance areas. Please also discuss the Area B-C Variance areas with separate narratives since they are distinct tracts with different mining plans. (GAW)

#### **Section 4.2.4 – Reclamation Costs – Worst Case**

90. Please include detailed reclamation and demolition costs for the shop/office/coal handling facility in Section 4.2.4. The costs should include details on the size and type of shop/office building. Pond designs are also necessary for ponds P-05-01, P-05-02, and P-32-01 so that reclamation costs can be determined. The pond reclamation schedule, Section 3.6.2d, indicates ponds P06-01 and P31-01 are to be constructed in 2018 but these ponds are outside of the Incremental Bond Area. Include reclamation costs for any other structures such as substations, fuel farms, and overburden and SPGM stockpiles. [NDAC 69-05.2-12-07(1&2)] (BAJ/GAW)

If you have any questions, please contact this office.

Sincerely,



Dean K. Moos  
Director  
Reclamation Division