

FALKIRK MINE

November 08, 2022

Ms. Zanna Brinkman
Reclamation Director
ND State Public Service Commission
600 East Boulevard, Dept. 408
Bismarck, ND 58505

RE: Revision 42, 8th Addition, Technical Review Responses to Permit NAFK-8405

Dear Ms. Brinkman:

Falkirk submits the following responses to the technical review items to Permit NAFK-8405 in response to your letter dated October 4, 2022.

Section 1.5.1 Permit Area Surface and Coal Interests

- 1. Please verify and update the address for Gary Heidelberger. The certified letter was returned, and the green card listed Gary Heidelberger, 2588 6th St. NW, Underwood, ND 58376, as the correct address. Also, please ensure that the surface owner received all necessary documentation and notices. (PJR)***

The correct address is 2588 6th St. NW, Underwood, ND 58376. The surface owner received all of the necessary documentation and notices. The address in tract 103 in Section 1.5.1 was incorrect. That address has been updated to the correct address.

Section 2.1 – Cultural and Historical Resources

- 2. Please update Section 2.1.2, Cultural Resources Location Map, to show the current permit boundaries and bond released tracts. (MLJ)***

Please see the updated Cultural Resources Location Map in Section 2.1.2.

Section 2.3 – Geology

- 3. Please consider adding additional information to the comment column in Section 2.3.6, Drill Hole Information, to assist in identifying the location of the drill holes. (PJR)***

Please see the suggested changes made to 2.3.6.

- 4. Please update Section 2.3.11, Structural Contour Map - Top of Hagel Bed, to show the current permit boundaries and bond released tracts. (MLJ)***

Please find changes made as requested.

- 5. Please update Section 2.3.12, Overburden Thickness Isopach Map, to show the current permit boundaries and bond released tracts. (MLJ)**

Please find changes made as requested.

- 6. Please update Section 2.3.13, Interburden Thickness Isopach Map, to show the current permit boundaries and bond released tracts. (MLJ)**

Please find changes made as requested.

- 7. Please update Section 2.3.14, Drill Hole Location and Cross-Section Reference Map, to show the current permit boundaries and bond released tracts. (MLJ)**

Please find changes made as requested.

- 8. Please update the Generalized Cross-Section Reference Map in Section 2.3.15, Geologic Cross-Sections, to show the current permit boundaries and bond released tracts. (MLJ)**

Please find changes made as requested.

- 9. In Section 2.3.15, Geologic Cross-Sections, please add titles to the values on the x & y axis for cross sections A-A', B-B', C-C', M-M', and N-N' on the map. (e.g., Elevation) (PJR)**

Please find changes made as requested.

Section 2.4.1d – Eighth Addition Study Area Report

- 10. The Dakota skipper narrative on page 12 of Section 2.4.1d indicates that surveys were conducted for the Dakota skipper and that no Dakota skippers were seen during the study period. Please revise this narrative to clarify if any potentially suitable Dakota skipper habitat exists in the Revision 42 addition area and clarify if the Dakota skipper surveys were completed by a USFWS permitted Dakota skipper surveyor in accordance with the 2018 Dakota skipper protocol. (GAW)**

Please see the updated 8th Addition Study Area Report in Section 2.4.1d regarding the Dakota skipper. Also updated, were the Fish and Wildlife Management Plan in Section 2.4.2 and the Wildlife Monitoring Plan in Section 2.4.3 to reflect the potential suitable habitat surveys that were conducted in 2019.

- 11. Please consolidate the Dakota skipper narrative information on page 14 with the information provided on page 12. A statement on page 14 indicates that no Dakota skipper observations have been made in McLean County. Please clarify if this statement is referring to records according to the USFWS Bismarck Field Office and provide a date to which this statement is valid since survey work is ongoing. (GAW)**

Please see the updated 8th Addition Study Area Report in Section 2.4.1d regarding the Dakota skipper.

- 12. The Threatened and Endangered Species narrative on page 13 of Section 2.4.1d incorrectly states the USFWS lists seven species (two avian, two mammalian, two invertebrate and one fish) as endangered. The USFWS IPaC site currently lists one bird and one fish as endangered; one mammal, two birds, and one insect as threatened; and designated critical habitat for the piping plover in McLean County. Please update the narrative so the information provided is accurate for the wildlife study reporting period and clarifies the current list of threatened and endangered species and designated critical habitat. (GAW)**

Please see the updated 8th Addition Study Area Report in Section 2.4.1d. Attachment I in Section 2.4.1d and Table 1 in Section 2.4.3 were updated to include the updated list of threatened and endangered species and critical habitat from the USFWS IPaC list from October of 2022.

- 13. The Threatened and Endangered Species narrative on page 13 of Section 2.4.1d includes a discussion about the least tern. Please revise the narrative to clarify that the species has been delisted. (GAW)**

Please see the updated 8th Addition Study Area Report in Section 2.4.1d and the updated Fish and Wildlife Management Plan in Section 2.4.2 in regards to the delisting of the least tern.

- 14. Please revise the piping plover narrative on page 14 of Section 2.4.1d to mention designated critical habitat for this species and clarify the proximity of the designated habitat to the Revision 42 addition area and the Falkirk Mine. (GAW)**

Please see the updated 8th Addition Study Area Report in Section 2.4.1d, the updated Fish and Wildlife Management Plan in Section 2.4.2 and the Wildlife Monitoring Plan in Section 2.4.3 regarding piping plover critical habitat.

- 15. Please revise the fourth paragraph on page 15 of Section 2.4.1d to clarify that the USFWS is in the process of up listing the Northern Long Eared Bat to Endangered status which will remove the species 4(d) rule and update the narrative such that the information provided is current and accurate. (GAW)**

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The Falkirk Mining Company, a subsidiary company of The North American Coal Corporation

Please see the updated 8th Addition Study Area Report in Section 2.4.1d, the updated Fish and Wildlife Management Plan in Section 2.4.2 and the Wildlife Monitoring Plan in Section 2.4.3 regarding the northern long-eared bat.

Section 2.6 – Surface Water Information and Monitoring Plan

16. Since Sections 2.6.3a, b, c, and d are referenced in the table of contents for Section 2.6 – Surface Water Information and Monitoring Plan, and Sections 2.6.3c and d are separated by title pages, please add a title page after page 3 of Section 2.6.3 to start Section 2.6.3a – Surface Water Monitoring Sites Quality Data and after page 9 to start Section 2.6.3b – 1993-1994 Surface Water Monitoring Sites Quality Data. Also, please change the title page of Section 2.6.3d from “Section 2.6.3d – Developed Water Resource” to “Stockpond Water Quality Data” to correlate to the table of contents in Section 2.6 – Surface Water Information and Monitoring Plan. (JAR)

Please see the updated cover pages in the Surface Water Quality Data in Section 2.6.3.

17. Please update Section 2.6.4, Surface Water Features & Monitoring Sites Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Surface Water Features & Monitoring Sites Map in Section 2.6.4.

18. Please retain the original revision numbers on the page footers that were not updated with Revision 42 in Section 2.6.5, Probable Hydrologic Consequences, and Section 2.6.7, Surface Water Monitoring Plan. (JAR)

When Falkirk updates any portions of a narrative, the entire narrative will receive a page footer for that revision on each individual page. Separating pages with different footers will cause confusion when updating future narratives, since we use the latest footer to determine which narrative is the latest version to update. Track changes are added to the narrative to determine what has been updated throughout the narrative. Falkirk will continue to add page footers to the entire narrative for the most current revision when a change or update is made.

19. Please update the narrative in Section 2.6.5, Probable Hydrologic Consequences, for pit water Ponds P-E24-01 and P-W12-07 to reflect their current status as reclaimed. (JAR)

Section 2.6.5 Probable Hydrologic Consequences has been updated to reflect the reclamation of Pitwater Pond P-E24-01. Pitwater Pond P-E12-07 is still active, therefore, no updates were made to this portion of the narrative.

20. Please update Section 2.6.5a, Pre-Mining Watershed Map - Probable Hydrologic Consequences, to show the current permit boundaries and bond released tracts. (MLJ)

Section 2.6.5a, Pre-Mining Watershed Map – Probable Hydrologic Consequences has been updated to show the current permit boundary and bond released tracts.

21. Please update Section 2.6.5b, Post-Mining Watershed Map - Probable Hydrologic Consequences, to show the current permit boundaries and bond released tracts. (MLJ)

Section 2.6.5b, Post-Mining Watershed Map – Probable Hydrologic Consequences has been updated to show the current permit boundary and bond released tracts.

22. Please identify the thick, dashed black line in the map legend as depicted in the Post-Mining Probable Hydrologic Consequences Map, Section 2.6.5b. Also, please identify what the yellow shading depicts on the Post-Mining Probable Hydrologic Consequences Map in the map legend. (JAR)

The legend on Section 2.6.5b, Post-Mining Watershed Map – Probable Hydrologic Consequences has been updated to identify the Terrain Modification Boundary and the Topo from Approved Regrade.

23. Please replace “National” with “North Dakota” in the first sentence of the second paragraph on page 1 of 4 in Section 2.6.7, Surface Water Monitoring Plan, since North Dakota has primacy of the NDPDES program. (JAR)

Please see the updated Surface Water Monitoring Plan in Section 2.6.7.

24. Please update the permit boundary in Section 2.6.9a, Post-Mining Drainages Map, to include the 8th Addition to Permit NAFK-8405. Also, with the additional area that will be added, please update Section 2.6.9(b/c/d) as necessary. (JAR/PJR)

Section 2.6.9a, Post-Mining Drainages Map has been updated to show the current permit boundary and bond released tracts. Section 2.6.9(b/c/d) did not need to be updated.

Section 2.7 – Pre-Mining Land Use and Vegetation

25. Please update Section 2.7.2, Pre-Mining Land Use, Vegetation, and Wildlife Habitat Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Pre-Mining Land Use, Vegetation and Wildlife Habitat Map in Section 2.7.2.

Ms. Zanna Brinkman
November 8, 2022
Page 6

26. Please label DWR-SE36-1 in the Pre-Mining Land Use, Vegetation and Wildlife Habitat Map, Section 2.7.2, to clarify that the seasonal wetland is also a developed water resource. (GAW)

Please see the updated Pre-Mining Land Use, Vegetation and Wildlife Habitat Map in Section 2.7.2.

27. In Section 2.7.1, Pre-Mining Land Use and Vegetation Narrative, please update the total acres on the second page, second paragraph from 13529.2 to 13436.93 to account for the 92.3 acres that were released with Final Bond Release 3, effective May 13, 2022. (MJF/PJR)

Please see the updated Pre-Mining Land Use and Vegetation Narrative in Section 2.7.1.

Section 2.7.2a - Pre-Mining Land Use and Associated Mapping Units

28. Please update Section 2.7.2a, Pre-Mine Land Use and Associated Mapping Units Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Pre-Mining Land Use and Associated Mapping Units Map in Section 2.7.2a.

29. The native grassland mapping unit symbols and ecological site abbreviations are very difficult to interpret in the Pre-Mining Land Use and Associated Mapping Units Map, Section 2.7.2a. Please revise such that the native grassland mapping unit symbols are more prominent than the soil mapping unit numbers on areas of native grassland in Section 2.7.2a. In some instances, it appears the ecological site's symbol is underneath or otherwise obscured by the soil mapping label. (GAW)

Please see the updated Pre-Mining Land Use and Associated Mapping Units Map in Section 2.7.2a.

30. Please increase the label size for Ecological Sites as they are very difficult to read in Sections 33 and 36 in Section 2.7.2a, Pre-Mining Land Use and Associated Mapping Units Map. (MJF)

Please see the updated Pre-Mining Land Use and Associated Mapping Units Map in Section 2.7.2a

31. Ecological sites depicted in the Revision 42 addition area are missing from the legend in the Pre-Mining Land Use and Associated Mapping Units map, Section 2.7.2a. For example, mapping units SL, WM, Sa, and LSb are labeled in the S½ of Section 36 but these ecological sites are not included in the legend of the map. Please revise the legend to include all mapping units present in the permit area. (PJR/GAW)

Please see the updated Pre-Mining Land Use and Associated Mapping Units Map in Section 2.7.2a.

Section 2.7.3 – Appendices for Vegetation I – VI

- 32. Tract information provided in Appendix I, Pre-Mining Land Management Information for the Revision 42, Eighth Addition area incorrectly indicates that field bindweed, *Convolvulus arvensis*, is a noxious weed. Please correct this error on each of the tracts in which the species is listed. (GAW)**

Please see the updated Appendix I, Pre-Mining Land Management Information in Section 2.7.3.

- 33. The narrative description for the S½ of Section 36 states that the wetlands sampled had simple plant communities and relatively low quality due to the surrounding land use dominated by cropland but there is no cropland in the S½ of Section 36. Please review this statement and revise the narrative to otherwise explain why the wetlands have a simple plant community. (GAW)**

Please see the updated Appendix I, Pre-Mining Land Management Information in Section 2.7.3. Additional information was added to explain why the wetlands have a simple plant community.

- 34. Table 2, Summary Table of Native Grassland Acreage for the Eighth Addition, includes 0.2 acres of land not associated with an ecological site. This NA acreage surrounds a wetland, and the soil mapping units map is not legible. Please asterisk the table to clarify why this soil mapping unit cannot be assigned an ecological site. (GAW)**

Please see the updated Table 2 in Appendix II in Section 2.7.3. Also, please see the updated Pre-Mining Land Use and Associated Mapping Units Map in Section 2.7.2a. The soil mapping unit SD was enlarged to make it legible and it was added to the legend. The SD is for stock dam and that is why it was not assigned an ecological site.

Section 2.8 - Soil Resources

- 35. Paragraph nine of Section 2.8.1, Soils Narrative, erroneously states that “When Falkirk has an excess of subsoil, as shown in the submitted SPGM removal plan, subsoil lift approvals do not have to be approved through the PSC and all in place SPGM monuments will be waived and not be removed or salvaged as subsoil as this volume is negligible; in place monuments will not alter any soil balance.” Waivers from the approval process of subsoil removal and salvaging of the SPGM monuments must be granted by the Commission pursuant to NDAC 69-05.2-15-02(2)(a) after being explicitly requested in an annual SPGM removal plan. Please revise the quoted statement to indicate that subsoil lift approval waivers by the PSC can only be granted on an annual basis after being explicitly requested in an annual SPGM removal plan. (MLJ)**

Please see updated Section 2.8.1, removed statement in narrative.

36. Please update Section 2.8.2, Soil Survey Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Soil Survey Map in Section 2.8.2.

37. It appears that the potential SPGM respread depth associated with boring FA19108C, located in the NW¼NW¼ of Section 35, incorrectly shows a respread depth of 24 inches in Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map. Based on the spoil sample analyses from Section 2.3.8, the potential respread depth for the area associated with FA19108C should be 36 inches due to three spoil samples having sodium absorption ratio (SAR) values between 12 and 20 and four additional spoil samples having a coarse texture (sandy loam or coarser). These undesirable spoil properties make up twenty percent or more of the overburden above the lowest coal seam to be mined. Please revise Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map, as necessary. (MLJ)

Please see the updated Drill Hole Location, Overburden Characteristics and Projected Respread Depths Map in Section 2.8.7.

38. It appears that the potential SPGM respread depth associated with boring FA18095C, located in the SE¼SW¼ of Section 35, incorrectly shows a respread depth of 24 inches in Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map. Based on the spoil sample analyses from Section 2.3.8, the potential respread depth for the area associated with FA18095C should be 36 inches due to three spoil samples having SAR values between 12 and 20 and four additional spoil samples having a coarse texture of sandy loam. These undesirable spoil properties make up twenty percent or more of the overburden above the lowest coal seam to be mined. Please revise Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map, as necessary. (MLJ)

Please see the updated Drill Hole Location, Overburden Characteristics and Projected Respread Depths Map in Section 2.8.7.

39. It appears that the potential SPGM respread depth associated with boring FA18116C, located in the SW¼SW¼ of Section 34, incorrectly shows a respread depth of 24 inches in Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map. Based on the spoil sample analyses from Section 2.3.8, the potential respread depth for the area associated with FA18116C should be 36 inches due to three spoil samples having a coarse texture of sandy loam. These undesirable spoil properties make up twenty percent or more

of the overburden above the lowest coal seam to be mined. Please revise Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map, as necessary. (MLJ)

Please see the updated Drill Hole Location, Overburden Characteristics and Projected Respread Depths Map in Section 2.8.7.

40. It appears that the potential SPGM respread depth associated with boring FA18061C, located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 35, incorrectly shows a respread depth of 24 inches in Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map. Based on the spoil sample analyses from Section 2.3.8, the potential respread depth for the area associated with FA18061C should be 36 inches due to three spoil samples having a coarse texture of sandy loam. These undesirable spoil properties make up twenty percent or more of the overburden above the lowest coal seam to be mined. Please revise Section 2.8.7, Drill Hole Location, Overburden Characteristics, and Projected Respread Map, as necessary. (MLJ)

Please see the updated Drill Hole Location, Overburden Characteristics and Projected Respread Depths Map in Section 2.8.7.

Section 3.1 – Operations Plans – General

41. Please consider updating the Pit Layout and Facilities Map, Section 3.1.5, to revise labels on all necessary haul roads by adding correct labels for each leg of the haul road going into the pit areas (i.e. E5 Ramp). (PJR)

See updated 3.1.5 Map replacing “occupied dwelling” with “public building”.

42. Please verify and revise, as necessary, the setback boundary “occupied dwelling” labels in Sections 17 and 36 on the Pit Layout and Facilities Map, Section 3.1.5. Occupied dwellings require a 500 ft setback (NDAC 69-05.2-04-01.4); however, public buildings require a 300 ft setback (NDCC 38-14.1-07(5)). (MJF/JAR/PJR)

Please see updated 3.1.5 Map replacing “occupied dwelling” with “public building”.

43. Please update Section 3.1.5, Pit Layout and Facilities Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Pit Layout and Facilities Map in Section 3.1.5.

44. Please update Section 3.1.6, Extended Mining Plan Topographic Map of Mine Phases, to show the current permit boundaries. (MLJ)

Please see the updated Extended Mining Plan Topographic Map in Section 3.1.6.

Section 3.2 – Operations – Existing Structures

45. Please review the approval of the facilities referenced in the second paragraph of Section 3.2.1, Existing Structures Narrative, and incorporate relevant narrative into the permit since Permit NAFK-8104 has been archived. (PJR)

Please see the updated Existing Structures Narrative in Section 3.2.1.

46. Please update Section 3.2.2, Existing Structures Map, to show the current permit boundaries and bond released tracts. (MLJ/JAR)

Please see the updated Existing Structures Map in Section 3.2.2.

47. Please revise the two overlapping township and range labels in Section 3.2.2, Existing Structures Map. (PJR/MJF)

Please see the updated Existing Structures Map in Section 3.2.2.

Section 3.3 – Operations - Blasting

48. Please update Section 3.3.2, Blasting Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Blasting Map in Section 3.3.2.

49. If necessary, please review and update Section 3.3.3 to include current blasting designs since electronic blasting has been or will be used in the near future for scheduled blasts. If changes are made, please incorporate the changes into other sections of Section 3.3 if necessary. (PJR)

Falkirk is still evaluating using electronic blasting but has not decided if that is the method moving forward. If changes are made to electronic blasting, then blasting designs will be updated in a future permit revision.

Section 3.4.1 - Fugitive Dust Control Plan

50. In the first sentence of the Fugitive Dust Control Plan, please replace the North Dakota Department of Health with the North Dakota Department of Environmental Quality. (MJF/JAR)

Please see the updated Fugitive Dust Control Plan narrative in Section 3.4.1.

51. In the last sentence of the Fugitive Dust Control Plan, please replace Great River Energy with Rainbow Energy if their 12,000-gallon water truck is still available for dust suppression. (JAR/PJR/MJF)

Please see the updated Fugitive Dust Control Plan narrative in Section 3.4.1.

Section 3.5 – Operations – Transportations Facilities

52. Please update Section 3.5.1, Haulage Road Narrative, to provide details regarding Haul Road Section 8, Haul Road Section 9, Haul Road Section 10, Haul Road Section 11, and Haul Road Section 12. (BSM)

Section 3.5.1 Haulage Road Narrative has been updated to include information on Haul Road Sections 8, 9, 10, 11, and 12.

53. Please update Section 3.5.2, Transportation Facilities Map, to show the current permit boundaries and bond released tracts. (MLJ)

Section 3.5.2 Transportation Facilities Map has been updated to show the current permit boundary and bond released tracts. This section has also been updated with labels for ramps.

54. Please update Section 3.5.6, Haulroad Section 3, Plan and Profile, to reflect the transition of the end station of Haul Road Section 3 and the start station of Haul Road Section 12; otherwise, provide further narrative within Section 3.5.1, Haulage Road Narrative. (BSM)

A note was added to Section 3.5.6 Haul Road Section 3, Plan and Profile to show which portion of this haul road has been replaced by Haul Road Section 9. Also, the narrative on Haul road Section 3 contained in Section 3.5.1 Haulage Road Narrative was updated.

55. Please update Section 3.5.21, Road Relocation and Closing Plan Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Road Relocation and Closing Plan Map in Section 3.5.21. Future plan to construct county roads and constructed county roads were added to the map and the legend. The future planned roads are only depicted on the map for the roads that Falkirk has currently closed.

56. Please consider updating Section 3.5.21, Road Relocation and Closing Plan Map, to depict county road closures that will not be reclaimed as a county road. (JWE/BSM)

Please see the updated Road Relocation and Closing Plan Map in Section 3.5.21.

Section 3.6 - Operations – Surface Water Management

57. Please update Section 3.6.1a, Total Water Management Plan Map, to show the current permit boundaries and bond released tracts. (MLJ)

Section 3.6.1a Total Water Management Plan Map has been updated to show the current permit boundary and bond released tracts. This section has also been updated with labels for ramps.

58. Please provide the watershed area (ac) for Ponds P-E36-05 (36 acres) and P-E36-04 (112 acres) on the Total Water Management Plan Map, Section 3.6.1a. (JAR/BSM)

Watershed acreages have been added for ponds P-E36-04 and P-E36-05 on Section 3.6.1a Total Water Management Plan Map.

Section 4.1 – Post Mining Land Use and Revegetation

59. Please update page 15 of Section 4.1.1, Post-Mining Use Land Narrative, or Section 4.1.2, Post-Mine Land Use Map, as the acreage is inconsistent for the Falkirk-owned replacement shelterbelts in the SE¹/₄ of Section 12 (7.0 vs 11.1 acres) and NW¹/₄ of Section 13 (3.9 vs 5.3 acres). Also, please update the total length of the conservation shelterbelts to 1650 feet in the NW¹/₄ of Section 13 in Section 4.1.2, Post-Mining Land Use Map. (MJF)

Please see the updated Post-Mining Land Use Narrative in Section 4.1.2 for updated to the shelterbelt acres and the updated Post-Mining Land Use Map in Section 4.1.2 for the updated shelterbelt length.

60. Please update the 27.4 acres to 27.2 acres for the recreational land use tract to be consistent with the narrative in the first paragraph, of Section 4.1.1, Post-Mine Use Land Narrative. (MJF)

Please see the updated Post-Mining Land Use Map in Section 4.1.2. The boundary was updated to be consistent with the 27.2 acres in the Post-Mine Land use narrative in Section 4.1.1.

61. Please update Section 4.1.2, Post-Mining Land Use Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Post-Mining Land Use Map in Section 4.1.2.

62. Please review and update Section 4.1.2, Post-Mining Land Use Map, to depict any wetlands missing identification labels. For example, a wetland in the SW¼ of Section 14 is not labeled. (BSM)

Seasonal wetlands that are less than 0.5 acres are not designed and do not have an identification label. All temporary wetlands are not designed and do not have an identification label. These wetlands will be field constructed during reclamation (please see the post-mining wetland narrative in section 5.2.1 for further details). Please see the updated legend in the Post-Mining Land Use Map in Section 4.1.2 regarding the identification of temporary and seasonal wetlands that are less than 0.5 acres. Also, the legend was updated to show that designed wetlands have an identification label.

63. Please revise the label in the legend for Season Wetland in Section 4.1.2, Post-Mining Land Use Map, from “SW” to “W” since all seasonal wetlands are depicted as “W” in the map. (JWE)

Please see the updated legend in the Post-Mining Land Use Map in Section 4.1.2. The legend depicts designed post-mining wetlands for south of Highway 200 (R-E22-03) and north of Highway 200 (W-SE35-01). The SW depicts seasonal wetlands on the map that are undisturbed.

64. The Potential Prime Farmland Landscape delineations found in Section 4.1.2, Post-Mining Land Use Map, appear to omit the added prime farmland within the mining disturbance boundary of the acreage addition of Revision 42. Please add the Potential Prime Farmland Landscape delineations for the prime farmland that will be mined, as stated in Section 2.8.5a, Prime Farmland Statement, to Section 4.1.2. (MLJ)

Please see the updated Post-Mining Land Use Map in Section 4.1.2.

65. Please update Section 4.1.6a, Revegetation Success Standards Map, to show the current permit boundaries and bond released tracts. (MLJ)

Please see the updated Revegetation Success Standards Map in Section 4.1.6a.

66. As necessary, please update Section 4.1.1 (Post-Mining Use Land Narrative), Section 4.1.2 (Post-Mining Use Land Map), and Section 4.1.3 (Pre- and Post-Mining Land Use Acreage Comparison Table) to account for Final Bond Release 3. (MJF)

Please see the updated Post-Mining Land Use Map in Section 4.1.2 and the Pre- and Post-Mining Land Use Acreage Comparison Table in Section 4.1.3. No updates were needed in the Post-Mining Land Use Narrative in Section 4.1.1.

67. Please remove one of the two overlapping labels for the wetland in the SE¼ of Section 33 from Section 4.1.2, Post-Mine Land Uses Map. (MJF)

Please see the updated Post-Mining Land Use Map in Section 4.1.2.

Section 4.2 – Reclamation – General

68. Please include the “Potential Prime Farmland Landscape” label in the map legend for Section 4.2.6b, Post-Mining Contour Map. It is assumed that the hatched purple polygons represent the potential prime farmland landscape as shown in Section 4.1.2, Post-Mining Land Use Map. (MLJ)

See updated label in legend for 4.2.6b.

69. Please include the “Potential Prime Farmland Landscape” label in the map legends for Section 4.2.7b, Post-Mining Area Slope Map. It is assumed that the hatched purple polygons represent the potential prime farmland landscape as shown in Section 4.1.2, Post-Mining Land Use Map. (MLJ)

See updated label in legend for 4.2.7b.

70. The Potential Prime Farmland Landscape delineations found in Section 4.2.6b, Post-Mining Contour Map, appear to omit the added prime farmland within the mining disturbance boundary of the acreage addition of Revision 42. Please add the Potential Prime Farmland Landscape delineations for the prime farmland that will be mined, as stated in Section 2.8.5a, Prime Farmland Statement, to Section 4.2.6b. (MLJ)

See updated Prime Farmland in Section 4.2.6b.

71. The Potential Prime Farmland Landscape delineations found on Section 4.2.7b, Post-Mining Area Slope Map, appear to omit the added prime farmland within the mining disturbance

boundary of the acreage addition of Revision 42. Please add the Potential Prime Farmland Landscape delineations for the prime farmland that will be mined, as stated in Section 2.8.5a, Prime Farmland Statement, to Section 4.2.7b. (MLJ)

See updated Prime Farmland in Section 4.2.7b.

72. Please update Section 4.2.3, Grading Sequence Map, to show the current permit boundaries and bond released tracts. (MLJ)

See updated permit boundary and bond released tracts.

73. Please update Section 4.2.6a, Pre-Mining Contour Map, to show the current permit boundaries and bond released tracts. (MLJ)

See updated permit boundary and bond released tracts.

74. Please update Section 4.2.6b, Post-Mining Contour Map, to show the current permit boundaries and bond released tracts. (MLJ)

See updated permit boundary and bond released tracts.

75. Please update Section 4.2.7a, Pre-Mining Area Slope Map, to show the current permit boundaries and bond released tracts. (MLJ)

See updated permit boundary and bond released tracts.

76. Please update Section 4.2.7b, Post-Mining Area Slope Map, to show the current permit boundaries and bond released tracts. (MLJ)

See updated permit boundary and bond released tracts.

Section 5.1 – Pre-Mining Wetlands

77. Due to the dynamic nature of wetlands, it appears there are possible wetlands in the 8th addition area that were deemed seasonal since the surveys were conducted in record drought years based on historical data. Therefore, please review and update as necessary the pre-mining wetlands narrative (Section 5.1.1), pre-mining wetland location map (Section 5.1.1a), and pre-mining wetland vegetation maps (Section 5.1.1b) added with the 8th addition. Additionally, please consider comparing any data available from the U.S. Fish & Wildlife

Services. If any changes are made to the sections mentioned above, please update Section 2.7.2, Pre-Mining Land Use, Vegetation, and Wildlife Map, accordingly. (PJR)

Wetlands in the 8th Addition were classified and the seasonality was verified over a three-year period from 2019 through 2021. In 2018 and 2019, there was above average precipitation that was recorded around the Falkirk Mine (18.5" in 2018 and 22.6" in 2019). There were also drought years in 2020 and 2021 around the Falkirk Mine (11.1" in 2020 and 13.6" in 2021). The wetlands were classified according to the system of Stewart and Kantrud, using field inspections from 2019 to 2021, using aerial photos and using National Wetland Inventory Maps. Wetlands were classified by correlating soils, hydrology, and vegetative characteristics in 2019, through use of the USACE wetland determination form, which was before the drought and would be indicative of what wetland seasonality would look like following the drought of 2020 and 2021. The dynamic nature of wetlands in the Prairie Pothole region were accurately assessed and described during the baseline survey years. No updates are necessary for the Pre-Mining Wetlands narrative in Section 5.1.1, the Pre-Mining Wetland Location Map in Section 5.1.1a or the Pre-Mining Wetland Vegetation Maps in Section 5.1.1b.

UNDERWOOD GROUND WATER HYDROLOGY

Section 2.2.1 - Ground Water Hydrologic Setting

- 1. Please review Section 2.2.1 to ensure that all information has been updated to Revision 42 information. The last paragraph states that the number of water supply wells (162) identified in the study area reflects current information approved with Revision 38. If updates are made, the table in Section 2.2.14 will also need to be updated. For example, Section 2.2.12 (Location Map – Certified Well) was updated on 2/22/22, but the sections referenced above were not updated. (PJR/MLJ)***

There has been one well certification added to these sections. There are a few more that have been contacted, but the certification process is not 100 percent complete. This information will be inserted as soon as it is received.

Section 2.2.6 - Ground Water Monitoring Plan

- 2. Please revise page 2 of Section 2.2.6, Ground Water Monitoring Plan, to include added well 219-4, since it is shown in the table on page 12 and in Section 2.2.8, Location of Monitoring Wells, Pit Progression, & Cross-Section Reference Map. (PJR)***

Please find changes made as requested.

Section 2.2.5 - Probable Ground Water Hydrologic Consequences

- 3. Please correct the label on the Y axis for Figure 1 found on page 7 of Section 2.2.5 as it is not legible. (MLJ/PJR)***

Please find changes made as requested.

Section 2.2.5a - Ground Water Hydrologic Reclamation Plan

- 4. The third bullet point in the Summary of Hydrologic Reclamation Plan states that stripped topsoil "...is eventually re-placed over the recontoured spoils after mining." Topsoil should only overlay respread subsoil, while the subsoil is respread over the recontoured spoils. Please revise the narrative in the third bullet point accordingly. (MLJ)***

Please find changes made as requested.

Section 2.2.14 - Water Supply Well and Spring Information

- 5. The table in Section 2.2.14 has not been updated since Revision 38. With the addition of over 3,300 acres, it seems unlikely that no wells would be added into the 8th addition area. Please review and revise as necessary. (PJR)***

Please find changes made as requested.

Section 2.2.16 - Monitoring Well Information

- 6. Please review and verify the bed screened for monitoring wells 220-1, 220-2, 220-3, 221-1, and 221-3 on page 9 of Section 2.2.16. If changes are necessary, please make sure corresponding changes are made in other appropriate sections. (e.g., Section 2.2.31, etc.) (PJR)***

I have reviewed and they are the correct beds screened. No changes were necessary.

General

- 7. Please review and revise all necessary maps to show the correct permit boundaries and all bond release tracts as appropriate. (PJR)***

Ms. Zanna Brinkman
November 8, 2022
Page 18

Please see the updated permit boundary for the following maps in sections: 2.1.2, 2.3.11, 2.3.12, 2.3.13, 2.3.14, 2.3.15, 2.6.4, 2.6.5a, 2.6.5b, 2.7.2, 2.7.3 app. V (Native Grassland Tracts Map), 2.8.2, 2.8.7, 3.1.5, 3.1.6, 3.2.2, 3.3.2, 3.5.2, 3.5.21, 3.6.1a, 4.1.2, 4.1.6a, 4.2.3, 4.2.6a, 4.2.7a, 4.2.7b & 5.1.1a.

Additional Updates:

Please see the new wetland basin details and sedimentation pond designs in Sections 3.6.76, 3.6.77, 3.6.77a, 3.6.78, 3.6.78a, 3.6.79, 3.6.80, 3.6.80a, 3.6.81, 3.6.81a.

Sincerely,

THE FALKIRK MINING COMPANY



Jason Frye
Environmental Specialist

JF/tv
Enc.