

December 27, 2023

VIA EMAIL

Andrew Bishop, President
Bishop Brothers Construction Company, Inc.
1376 Leisure Drive
Towanda, PA 18848

RE: Technical Deficiency Letter for Noncoal Application
Bishop Brothers Construction Company, Inc.
Mining Permit Application No. 08230301, Minard Mine
NPDES Permit Application No. PA0270041
Athens Township, Bradford County
APS ID No. 1089095, AUTH ID No. 1440877 & 1440878

Dear Mr. Bishop:

The Department of Environmental Protection (DEP) has reviewed the above referenced application and has identified the following technical deficiencies. The deficiencies are based on applicable laws and regulations, and the guidance sets forth the Department's preferred means of satisfying the applicable regulatory requirements. The appropriate regulation is cited in brackets following the deficiency comment.

Technical Deficiencies

NPDES APPLICATION

1. On page 2-5, Sump 1 information is listed three times. No information is provided for the pit sump, Support Area Sump 1, Support Area Sump 2, S&G Phase 1 Pit or S&G 2 Pit. Provide this information. (25 PA Code 92a.21)

PNDI

1. A March 30, 2020, Bald Eagle Nest Survey was completed during the nesting season for the proposed mining area by Wildlife Specialists of Wellsboro, PA. No active or inactive Bald Eagle nests were observed at historical nest locations or near the proposed mine site at that time. In 2016, an active Bald Eagle nest site (EO 28723) was reported by the PA Game Commission near the proposed mining area. It has been three years since that survey was completed. Recently (Summer, 2023), residents have reported seeing mature and immature Bald Eagles flying the river corridor near the proposed mine site. Tom Wittig of the U.S. Fish and Wildlife Service (USFWS) noted in his April 21, 2020 email that upon any sign of Bald Eagle activity USFWS should be consulted for further consideration. The operator should consult with the USFWS and PA Game Commission to determine if another Bald Eagle survey is required. (Bald Eagle and Golden Eagle Protection Act and 50 CFR 22.3)

MODULE 1 GENERAL INFORMATION

1. The Athens Township Planning Commission approved the Land Development Plan for the Minard Mine on August 17, 2023. Please provide any documentation of the approved Land Development Plan. The Planning Commission noted a number of deficiencies that still need to be addressed although many of deficiencies will be addressed as part of this mining permit application (ex. NPDES coverage). Please provide an update on the status of deficiencies and items that still need to be addressed as requested by the Planning Commission. Provide a status update on any other municipal approvals that are needed such as the driveway permit from Athens Township. (Acts 67, 68, & 120)
2. Provide the approved Conditional Use Approval for the Woodland Conservation Zoning Districts. On August 15, 2023 Athens Township approved a clarification of the Conditional Use Decision of February 21, 2021. The 2021 Conditional Use Decision only explicitly applied to the Agricultural Zoning District. The August 15, 2023 decision clarified that the Conditional Use Decision applied to the entire Minard property including Woodland Conservation Zoning Districts. The August 15, 2023 decision was subject to two separate appeals in the Pennsylvania Court of Common Pleas. Please inform the Department of any developments related to the appeals. (Acts 67, 68, & 120)
3. The Pennsylvania Historic & Museum Commission (PHMC) sent a new comment letter on October 16, 2023 in response to inquiries from the public regarding the presence of Native American archaeological resources. The October 16, 2023 letter stated that there was a high probability of archaeological sites being located within the permit area and recommended that a Phase 1 archaeological survey be conducted with deep testing in areas that will be affected. Please provide a response to the PHMC's October 16, 2023 letter. If you choose not to proceed with a Phase 1 survey, then please describe what kind of monitoring for archaeological resources will be conducted during the removal of topsoil and other unconsolidated deposits above the bedrock where the archaeological resources may be located.

EXHIBIT 6.2 ENVIRONMENTAL RESOURCES MAP

1. Show all drilled well water supplies within the 1,000-foot boundary on the mapping. If a well location cannot be determined identify the property as using a drilled well supply. Provide background samples for these water supplies. (25 PA Code 77.410)
2. Were any background samples collected from water supplies beyond the 1,000-foot boundary in response to requests from residents? If so, those locations could be shown on the Exhibit 6.1 Topographic map or another Exhibit map. (25 PA Code 77.410)
3. A water line is shown in the northern area of the mapping. Are any dwellings connected to this water line? What does the water line service? Is this water line a source of public water that could be utilized if a drilled well becomes degraded from mining activities? (25 PA Code 77.410)
4. Identify the symbol for M1 in the map legend. (25 PA Code 77.410)

5. Move the location of the text identifying the location of monitoring point S5B onto the Chemung River at the northern section of the map. (25 PA Code 77.410)
6. Show the proposed location of the wetland monitoring piezometers on the mapping. (25 PA Code 77.410)
7. Add the permit number to all applicable maps. (25 PA Code 77.410)

MODULE 8 HYDROLOGY

1. Provide two (2) up to date samples for all proposed monitoring points. (25 PA Code 77.532)
2. Discuss the seasonal variations in water quality at monitoring point S1A when compared to monitoring points S1B and S1C. (25 PA Code 77.532)
3. Discuss the seasonal variations of the water quality in the Chemung River at monitoring points S5A and S5B. (25 PA Code 77.532)
4. Revise Module 8 with the details of any private water supply wells that have been sampled since the application was submitted. The Department recommends that new notification letters be sent to owners of the properties that are within 1,000 feet of the proposed permit and didn't respond to the letters that were sent on August 23, 2021 requesting to a schedule a meeting time to obtain a water quality sample from their private water supplies. (25 PA Code 77.532)

EXHIBIT 9 OPERATIONS MAP

1. The topsoil/overburden stockpile berms in the northern mining area along Meadowlark Drive are constructed in areas where floodwaters have historically flowed when Tutelow Creek reaches flooding levels. The stockpile berms have the potential to increase flooding along Meadowlark Drive by damming floodwaters and increasing the floodwater depth. The topsoil/overburden stockpile berms may need to be removed from areas as proposed, modified so that it is not one continuous berm (gaps in berm), or replaced with another type of visual barrier (trees?). Provide information on how the building of berms, as proposed in the permit, will affect floodwaters along Meadowlark Drive should Tutelow Creek or the Chemung River reach flood stages. See Module 14 comment #1 below. (25 PA Code 77.459)
2. Label the rock filter and emergency spillway of Basin 2. (25 PA Code 77.410)
3. Add the permit number to all applicable maps. (25 PA Code 77.410)
4. Include a reference on the Exhibit 9 map to the Exhibit 9.1 map that shows greater detail of the Hard Rock Phase 1 and 2 areas. (25 PA Code 77.410)
5. Show proposed diversion ditches above the Phase 3 mining area. (25 PA Code 77.410)

6. The application to the Susquehanna River Basin Commission mentions that a water well will be drilled for a source of water in the permit area. Please show the proposed location of the well on the map. (25 PA Code 77.454)

MODULE 10 OPERATIONAL INFORMATION

1. Include more detail on how the pit sump in the hard rock will be developed. As noted in the pre-application review letter, it will likely be necessary to maintain a low wall that functions similar to a containment berm. Overburden material should not be placed downslope of the low wall. There is currently only one brief mention of a low wall in Module 10.1. Please provide additional information about how containment will be achieved in the hard rock mining area. (25 PA Code 77.454)
2. Provide the name of the operator of the above-ground electric utility line that runs through the permit area. Is there an established right-of-way easement for the power line on the Minard property? If there is no established right-of-way then the Department assumes a total right-of-way of 50 feet with a 25-foot barrier on either side of the utility line. The operator must contact the electric utility company and obtain a waiver to conduct mining activities within 25 feet of the electric utility line. The only activity that wouldn't require approval is when vehicles would just be passing under the electric mine on an existing road. All electric power poles should be shown on the mapping and the allowed setback distance barrier shown around the utility line. The section of the electric line to be relocated should be clearly identified in a color different than the electric line to be left untouched. Include a label with the name of the electric utility operator somewhere on the map. (25 PA Code 77.504)
3. The permit line setback must be shown on the cross-sections. The setback in unconsolidated material, at a minimum, must be equal to the total highwall height for the setback area. In addition, the variance areas must also be shown on the cross-sections. The setback would also apply to barrier areas (property lines, streams, dwellings, utilities, roads, geofabric) within the permit boundary, for example the 100-foot stream barrier along the Chemung River and Tutelow Creek. The intent of the setback is to prevent slumping of the highwall into areas where mining is prohibited. Revise the cross-sections and mapping to show the setback areas where applicable. The setback length should also be labeled on the mapping. Label Tutelow Creek where applicable on cross-sections. (25 PA Code 77.572)

BONDING

1. Add the permit number to the bonding worksheets. (Application Instructions)
2. Include a separate bond item for the removal of the bridge crossing of Tutelow Creek and culvert crossing of the unnamed tributary. (25 PA Code 77.202)
3. Indicate on the bond forms/mapping that the 70,000 cubic yards of overburden storage is for reclaiming the eastern portion of the hard rock mining pit. Revise as needed. (25 PA Code 77.202)

MODULE 12 EROSION & SEDIMENTATION CONTROLS

1. Include a description of how any proposed berms shall be installed such that they will not affect the floodway of Chemung River and Tutelow Creek. Ditches may be substituted for berms in the floodway areas so as not to influence the path of flood waters. See Module 14 comment below. (25 PA Code 77.454)
2. Include additional details regarding development of the pit sump (see Module 10 comment #1). Module 12 only references a perimeter berm as the containment for a pit sump. There is no reference to a low wall. (25 PA Code 77.454)
3. The ditch design sheets need to list the size of riprap that will be used in all ditches and diversions. (25 PA Code 77.461(c))
4. Ditch designs for East Slope and West Slope diversions are provided but those ditches are not labeled as such on the Exhibit 9.1 Map for the hard rock phases 1 and 2. No diversion ditches are shown for Phase 3, which is only shown on the Exhibit 9 map. (25 PA Code 77.454)
5. Please describe the Erosion & Sedimentation controls that are proposed around the "Overburden Storage Pile" area and show them on the Exhibit 9 map. (25 PA Code 77.454)

MODULE 13 IMPOUNDMENTS/TREATMENT FACILITIES

1. Provide a spillway capacity for the Basin 1 principal spillway. (25 PA Code 77.461(c))
2. Provide a discharge capacity for the dewatering device for Basin 1. (25 PA Code 77.461(c))
3. Provide a time to dewater for a full pond at Basin 1. (25 PA Code 77.461(c))
4. Proposed nondischarging Sump 1 and Sump 2 located in the support area are each proposed to have a volume of 20,000 cubic feet (200' x 20' x 5'). All impoundments with a volume greater than 2,000 cubic feet are required to be certified. Please provide design certifications for Sump 1 and Sump 2 in the support area. Will the drainage from Sump 1 and Sump 2 be directed into Basin 1 if the sumps overflow during a storm event? Please demonstrate that the combined capacity of Sump 1, Sump 2, and Basin 1 is adequate to handle the drainage from the entire support area, which appears to be approximately 10 acres.

Revise the Exhibit 13.3 Basin Drainage Areas map to show the drainage areas for Sump 1 and Sump 2. (25 PA Code 77.461)

5. The capacity of Basin 2 is based on the dewatering rate from the pit sump by pumping (200 gpm), however, the pit sump is also described as being dewatered by gravity. How is the flow rate into Basin 2 going to be controlled when it receives gravity drainage? (25 PA Code 77.454)

MODULE 14 STREAMS/WETLANDS

1. Separate Module 14 sections are included for the proposed encroachments for the bridge crossing of Tutelow Creek, the pipe crossing of UNT 1 to Tutelow Creek, and the mining activities within 100 feet of UNT 1 to/and Tutelow Creek. The proposed activities within the floodway between Tutelow Creek and Chemung River are also an encroachment and need to be described in a separate Module 14 section. The section needs to describe the total area proposed to be affected within the floodway and all the activities proposed with the floodway. (25 PA Code 77.523 & 105.13(e)(1)(vi))
 - a. The current plans for the mining and support activities within the floodway do call for berms to be constructed. If berms or other fill material are to be constructed or placed within the floodway that would result in a change to the floodway delineation, then a study must be conducted to determine the project's impact on the floodway. Otherwise, a detailed explanation must be provided for how all the activities within the floodway will not have an effect on the floodway delineation.
 - b. It is stated in the response to Module 10 Comment # 15 of pre-application review letter that "Support area structures relocated out flood". The Exhibit 9 map shows the support area within the floodway. Please clarify what support activities will be done within the floodway. Please note that large stockpiles of any kind of material shouldn't be placed in the floodway.
 - c. As noted in Exhibit 9 Comment #1 residents along Meadowlark Drive have noted that floodwaters from Tutelow Creek entered the Phase 2 Sand & Gravel mining area. Residents stated that water was flowing through that area (i.e., it was part of the floodway). Please reevaluate the floodway delineation in that area based on those observations and address how the mining activities won't affect the floodway in a way that would impact houses along Meadowlark Drive.
 - d. Any study of the floodway delineation should include the following:
 - i. A study needs to be performed to determine return period flood event versus out of bank flooding. This would aid in providing estimates for when there will be significant flooding in the project area.
 - ii. A study needs to be done to determine flow velocities on the flood plain (if any) during return period flood events.
 - iii. These studies would have the opportunity of being calibrated against observed historical flooding. It could then be determined if the models developed from the studies are marginally accurate to estimate accepted regional flood event return periods.
 - iv. A summary/narrative should be provided of the flooding impacts of historical floods. Typically, high water marks and damages are recorded.

- v. A relationship between water surface elevation and return period should be developed with the aid of hypothetical floods and historical floods.
 - vi. A review of historical flooding and the use of developed models should be used to determine duration of flooding at the project site during an event.
 - vii. Given the size of the rivers (Chemung and Susquehanna) a review of any historical impacts from ice jams should be provided. Was any backwater increased due to ice jams or was there any increase to flooding once an ice jam was breached?
 - viii. Any berms anticipated to be constructed on the floodplain need to be modeled to determine if they increase flooding elevations on the Chemung River during an out-of-bank event.
2. To avoid cluttering the Exhibit 9 map we recommend submitting a separate Exhibit map for Module 14 that shows the stream/floodway variance and encroachment areas (25 PA Code 77.523 & 105.13(e)(1)(vi))
3. When an encroachment of a Federal Emergency Management Agency (FEMA) floodway is proposed a letter from the local municipality commenting on the analysis is required. Was the floodway analysis specifically addressed by Athens Township as part of the Land Use and Development Plan review that was conducted in summer of 2023? (25 PA Code 77.523 & 105.13(e)(1)(vi))
4. Provide an estimate of bridge and culvert Inlet/outlet velocities. Is any scour erosion expected for culvert and bridge? (Inlet scour, outlet scour, culvert barrel flushing, and bridge wall scour.) (25 PA Code 77.523 & 105.13(e)(1)(vi))
5. PA Fish & Boat Commission Comment: It is recommended that the proposed inlet and outlet riprap aprons for the crossing of UNT 1 to Tutelow Creek be depressed into the streambed and backfilled with excavated material to recreate a stream channel atop of the placed riprap and prevent subsurface flow through interstitial voids in the riprap. Revise the culvert design as needed to address this comment. (25 PA Code 77.523 & 105.13(e)(1)(vi))
6. PA Fish & Boat Commission Comment: The proposed plans for the removal of the culvert in UNT 1 to Tutelow Creek post mining do not depict woody riparian plantings. The PFBC recommends the plantings and/or grade control structures be utilized to stabilize this steep channel once the structure is removed. This restoration should be detailed in the Exhibit 14 plans. (25 PA Code 77.523 & 105.13(e)(1)(vi))
7. PA Game Commission Comment: No wetland impacts are proposed. However, actual mining operations may provide additional critical information with respect to wetland impacts. Six piezometers will be installed adjacent to Wetlands I, II, and J prior to mining and will be monitored. Should field measurements and observations indicate adverse impacts, then a mitigation plan for wetlands restoration must be developed and adequately address the loss of these resources due to the proposed mining operation. Revise Module 14

with the details of the potential indirect wetland impacts and the proposed wetland monitoring. (25 PA Code 77.523 & 105.18a(b))

MODULE 17 AIR POLLUTION AND NOISE CONTROL PLAN

1. The Department recommends completing a study of the pre-mining environmental sound level to characterize noise levels prior to mining. That study will be used to determine if the proposed noise mitigation measures are adequate to prevent a public nuisance with respect to the noise from the operations. The study should be conducted at the nearest residence along Meadowlark Drive. (§ 1917-A of the Administrative Code of 1929)
2. The list of Best Management Practices (BMPs) should include the proposed evergreen tree screen to be planted along the north side of the site. Also, a revised list of BMPs with regard to use of berms within the floodway depending on how you address the Module 14 comments should be included. (25 PA Code 77.454)

MODULE 18 LAND USE & RECLAMATION MAP

1. Show the riparian area to be planted with trees along Tutelow Creek on the Exhibit 18 Map. Reference the tree species listed in Module 23 in the “Vegetative Cover” notes on the Exhibit 18 map. (25 PA Code 77.456)

MODULE 23 REVEGETATION

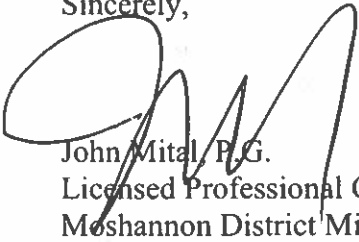
1. PA Game Commission Comment: Because of its ability to out-compete other grass species and/or non-native nature, and because there are higher value wildlife habitat grasses we recommend either minimizing the use of annual ryegrass, redtop and orchard grass, or eliminating and replacing with a combination of oats (spring) and/or wheat (fall), along with crimson, red and/or white clover. Revise Module 23, Permanent Cover, as needed to address this comment. (25 PA Code 77.456)
2. PA Game Commission Comment: We recommend not planting European white birch. Sweet (black) or gray birch are alternatives, and river birch is an alternative for riparian/wet areas. We recommend not planting American ash for survival is unlikely due to the widespread presence of the invasive emerald ash borer. Revise Module 23, Woody Plants as needed to address this comment. (25 PA Code 77.456)

You must submit a response fully addressing each of the significant technical deficiencies set forth above or DEP may deny the application. A full response to this letter is due by **January 26, 2024**.

If you believe that any of the stated deficiencies is not significant, instead of submitting a response to that deficiency, you have the option of asking DEP to make a decision based on the information with regard to the subject matter of that deficiency that you have already made available. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency. Please keep in mind that if you fail to respond, your application may be denied.

Should you have any questions regarding the identified deficiencies, please contact me at 814.342.8200 to discuss your concerns or to schedule a meeting. The meeting must be scheduled within your allotted reply period, unless otherwise extended by DEP. You may also follow your application through the review process via eFACTS on the Department of Environmental Protection website.

Sincerely,



John Mital, P.G.
Licensed Professional Geologist
Moshannon District Mining Office

cc: Public Review Copy - Athens Township Building
Tim Gourley, P.G., Tract Engineering PLLC *(via email)*
Gregory Aaron, P.G., Chief, Permit & Technical Services *(via email)*
H. David Goss, Inspector Supervisor *(via email)*
Mike Donahue, Blasting Inspector *(via email)*
Holly Greenly, Environmental Trainee *(via email/hardcopy)*
eFACTS/ Permit Application File ✓

JPM/adf