

NPDES Permit Fact Sheet
For Individual NPDES Permit Associated
With Noncoal (Industrial Mineral) Mining Activities

1. Facility Information

Mining Permit Application No. 08230301

NPDES Application No. PA0270041

Site Name: Minard Mine

Date Application received: May 15, 2023

Applicant: Bishop Brothers Construction Co., Inc.

Municipality: Athens Township

County: Bradford

Type of Mining Activities:

Surface Mining

Underground Mining

Support Activities on Mine Site:

Asphalt Plant

Crushing/Screening/Sizing

Reclamation Fill

Other: _____

Type of Material Permitted for Mining:

Limestone

Sandstone

Shale

Sand & Gravel

Dimensional Stone (ex. Bluestone)

Coal (incidental)

Igneous/Metamorphic Rock

If Sand & Gravel or Sandstone is checked above what is the sand material being used for:

Construction Aggregate/Fill

Industrial (refractories, abrasives, glass making)

This application is for:

New source(s)

Renewal of existing source(s)

Revision/Modification

Permit History

Not applicable, this is a New Permit

Outfall	Latitude			Longitude			Identifier	Type	Source	Frequency	Average Flow Rate	Design Flow Rate	Units (GPM/MGD)
001	41°	58'	1.0"	76°	32'	42.7"	Sediment Basin 1	SWO	SW	P	0.06	0.6	MGD
002	41°	58'	3.8"	76°	32'	51.7"	Treatment Basin 2	TFO	PW	I	0.04	0.3	MGD
004	41°	58'	9.4"	76°	32'	50.9"	Sump 1	SWO	SW	*	*	*	*
005	41°	58'	7.1"	76°	32'	47.9"	Sump 2	SWO	SW	*	*	*	*

For the type of discharge use Stormwater Outfall (SWO) or Treatment Facility Outfall (TFO)

For frequency use Continuous (C), Intermittent (I), or Precipitation Dependent (P)

For Source use Stormwater (SW), Pit Water (PW), Process Water (PRCW), or Post-Mining Discharge (PMD)

*Non-discharging sumps collecting stormwater in the support area. Water infiltrates into sand & gravel.

2. Background Summary

The Bishop Brothers Construction Company, Inc. (Bishop), Minard Mine is a 360.7 acre permit area with 150.7 acres proposed to be affected. Bishop plans to mine sand/gravel over 84.6 acres and sandstone/siltstone over 35.6 acres. One sediment basin and one treatment basin will be constructed onsite to control stormwater and pit water. Sediment Basin 1 (SB1, 001) will collect stormwater runoff using containment berms constructed around the support area located

between Tutelow Creek and Chemung River. In addition, two non-discharging sumps (Sump 1 and Sump 2) are to be constructed in the support area. The water in those sumps will be contained and infiltrate into the sand & gravel below the support area. A pit sump will be constructed in the sandstone mining area above Tutelow Creek. Water will be drained by gravity or be pumped from the pit sump to Treatment Basin 2 (TB2, 002). Both SB1 (001) and TB2 (002) discharge to Tutelow Creek (WWF, MF) and then to the Chemung River (WWF, MF). Mining will occur with the drainage area of the Chemung River but all water will either be contained or discharged to Tutelow Creek.

3. Receiving Stream Information

Receiving Waters: Tutelow Creek			
Receives discharge from the following outfalls: 001, 002			
Drainage Area (mi ²):	5.97	Mean Flow (gpm):	408.0
Q ₇₋₁₀ Flow (gpm):	27.0	Q ₇₋₁₀ Basis:	USGS StreamStats
Existing Use:	None	Designated Use:	WWF
Exceptions to Use:	None	Exceptions to Criteria:	None
Assessment Status			
Assessment Status	Attaining		
Cause(s) of Impairment	None		
Source(s) of Impairment	None		
Total Maximum Daily Load (TMDL)			
TMDL Name:	N/A	TMDL Status:	N/A
Special Protection Waters			
Does this stream have an Existing or Designated Use of High Quality (HQ) or Exceptional Value (EV)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

Nearest Downstream Public Water Supply Intake: Danville Municipal Water Authority
 Stream which the Public Water Supply intake draws from: Susquehanna River
 Distance from the Outfalls: >25 miles
 Drainage Area of stream at Public Water Supply intake: 11,200 square miles
 Flow of the stream at the Public Water Supply intake: 6,870,000 gpm (mean annual flow)

4. TMDL Waste Load Allocation

Not Applicable-Not a TMDL Stream

5. Effluent Characterization

The following pollutants of concern have been identified based on the regulations and what is expected to be present in the discharge.

According to Pa. Code Title 25 Chapter 77, the Code of Federal Regulations Title 40 Part 436 Subparts B, C, & D, and the Developing NPDES Permits for Mining Activities Technical Guidance Document (563-2112-115) the only standard parameters of concern for noncoal mine operations are pH and total suspended solids, both of which will have effluent limits applied.

Flow rate is a standard monitoring requirement for all outfalls and some outfalls that discharge large volumes of pumped pit water may have a flow limit applied.

If the noncoal operation will be mining within the coal measures where incidental coal and other acid forming materials may be encountered then the following additional constituents are pollutants of concern for noncoal mine operations: acidity, iron, manganese, and aluminum. These constituents will all either have an effluent limit applied or have a monitoring requirement. Monitoring requirements for specific conductivity and sulfate will also be applied to all outfalls.

Effluent Characterization Waivers:

Has the applicant requested a waiver for Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), Ammonia (NH₃), and Total Organic Carbon (TOC) because they are not anticipated to be present? Yes No
Is the Waiver granted? Yes No

Has the operator requested a waiver for the organic toxic pollutants (EPA Table II) because the operation has total gross sales of less than \$100,000 (1980 dollars) per year? Yes No * No organic toxic pollutants expected to be present

Dioxins:

Has the applicant indicated that Dioxins may be present? Yes No

Other Toxic Pollutants:

Applications for noncoal mining operations are only required to submit data for all EPA Table III Pollutants that are expected to be present in the discharge. Are any of the EPA Table III constituents expected or identified as being present in the effluent? Yes No

Conventional and Nonconventional Pollutants:

Has the applicant indicated that any Conventional and Nonconventional Pollutants (EPA Table IV) are expected to be present in the discharge? Yes No

If mining in the coal measures then iron, manganese, aluminum, and sulfate are expected to be present.

Oil & Grease:

If there are fuel and oil storage tanks on the mine site do the quantity and capacity of the tanks warrant applying a monitoring requirement for oil & grease to any outfalls on the permit? Yes No

Toxic Pollutants and Hazardous Substances:

Has the applicant indicated that any Toxic Pollutants and Hazardous Substances (EPA Table V) are expected to be present in the discharge? Yes No

Thermal Impacts:

Are there any anticipated thermal impacts from the discharges: Yes No

Osmotic Pressure Analysis:

The state water quality criterion for osmotic pressure is 50.0 mOsm/kg. The osmotic pressure of the water is proportional to amount of dissolved solids in the water (also measured by Total Dissolved Solids or Conductivity).

- Discharges from this mine are not anticipated to exceed an osmotic pressure of 50 milliosmoles per kilogram (mOsm/kg) and will not adversely affect the receiving streams. Explain: Discharges from this permit are not expected to have elevated osmotic pressure due to the type of noncoal material being mined at the site.

Public Water Supply Analysis:

Pa. Code Title 25 Sections 93.7 and 96.3(d) specify that human health criteria for Phenols, Fluoride, Nitrite/Nitrate, Total Dissolved Solids, Chloride and Sulfate only be applied at public water supply (PWS) intakes. Of those pollutants only total dissolved solids and sulfate may normally be expected to be present in effluent from some noncoal mining operations at concentrations approaching or exceeding their respective instream criterion that applies at the PWS intake

Based on the distance to the nearest downstream public water supply and the drainage area of the stream which the PWS intake draws from is there potential for discharges on this mine site to impact the water quality at the intake: Yes No

Is it known or expected that gypsum mineral could be encountered during mining? Yes No

For the pollutants of concern identified above the applicant submitted data which complies with the effluent characterization requirements in 40 CFR 122.21(g)(7) and 122.26(c)(1)(E). The effluent characterization data from each pollutant of concern was compared to the applicable water quality standards to determine if each pollutant has a reasonable potential to degrade the receiving stream.

Effluent Characterization for a New Permit Application:

The NPDES permit requires an effluent characterization sample to be collected within two years of the initial discharge at the site.

Effluent Characterization Review Questions:

Is the pit water and/or raw treatment water acidic indicating that discharge monitoring for trace metals is needed? Yes No

Has the Mine Inspector identified any concerns regarding the water quality of the discharge or the receiving stream? Yes No

Has review of monitoring data indicated that effluent limits or monitoring requirements are needed for pollutants? Yes No

6. Aquatic Life Water Narrative Quality Standard

Summarize the evaluation and measures taken to prevent a violation of the Aquatic Life Narrative Water Quality Standard:

The NPDES permit contains the following conditions to address violations of the narrative water quality standards:

The discharger may not discharge floating materials, scum, sheen, or substances that result in deposits in the receiving water. Except as provided in the permit, the discharger may not discharge foam, oil, grease, or substances that produce an observable change in the color, taste, odor, or turbidity of the receiving water. [25 Pa. Code § 92.41(c)]

The permittee may not discharge substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. [25 Pa. Code § 93.6(a)]

Flocculant Use:

Has the applicant requested to use a flocculant to meet effluent limits? Yes No
If Yes, What product are they proposing to utilize? MasterCat 4239 to be applied at the inlet of Treatment Basin 2 if needed for settling suspended sediment.

7. Calculations and explanation of effluent limits

No Discharge of Effluent:

The following outfalls will have no discharge: Sump 1 & Sump 2 in Support Area

Water in the sumps will infiltrate into sand & gravel

Effluent Limits for Point Source Discharges:

Note: Maximum Daily and Instantaneous Maximum (IMAX) limits are determined by multiplying the average monthly limits by 2.0 and 2.5 respectively.

Technology Based Effluent Limitations:

Mine Drainage Treatment (Dewatering of Pit Water and Process Water) Discharges:

Discharges resulting from dewatering of pit water and process water from noncoal mines are subject to the following technology based effluent limitations, which are based on Pa. Code Title 25 Chapter 77, the Code of Federal Regulations Title 40 Part 436 Subparts B, C, & D, and the Developing NPDES Permits for Mining Activities Technical Guidance Document (563-2112-115). The Technology-Based Effluent Limits are different depending on what type of material is being mined.

Technology-Based Effluent Limits for discharges resulting from dewatering of pit water and process water on noncoal mine permits producing Crushed Stone, Construction Sand & Gravel, Dimensional Stone, and igneous/metamorphic rock:

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Maximum
All Discharges					
Total Suspended Solids (mg/L)	-	35.0	70.0	90.0	-
pH (S.U.)	6.0	-	-	-	9.0

Technology-Based Effluent Limits for discharges resulting from dewatering of pit water and process water on noncoal mine permits producing Industrial Sand (ex. for refractories, abrasives, and glass making):

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Maximum
All Discharges					
Total Suspended Solids (mg/L)	-	25.0	45.0	N/A	-
pH (S.U.)	6.0	-	-	-	9.0

Stormwater Discharges:

The following limits only apply to outfalls of the facilities that only receive stormwater runoff. There must be no comingling with process or pit water.

Discharges of stormwater from noncoal mines are subject to the following technology based effluent limitations, which are based on Pa. Code Title 25 Chapter 77. The Department also applies Total Suspended Solids (TSS) limits to dry weather discharges from stormwater control facilities. An alternative Settle Solids effluent limit applies instead of the TSS limit in response to precipitation events. The alternative precipitation limits are the same that are applied to stormwater facilities on coal permits in accordance with Pa. Code Title 25 Chapter 87.102. The alternative precipitation limits only apply during a precipitation event and for 24 hours afterwards. The alternative precipitation limits do not apply if any WQBELs are required for a stormwater outfall (see next section).

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Maximum
Dry Weather Discharges					
Total Suspended Solids (mg/L)	-	35.0	70.0	90.0	-
pH (S.U.)	6.0	-	-	-	9.0
Precipitation Event Less Than or Equal to 10 year/24 Hour Precipitation Event					
Settleable Solids (mL/L)	-	-	-	0.5	-
pH (S.U.)	6.0	-	-	-	9.0
Precipitation Event Greater than 10 year/24 Hour Precipitation Event					
pH (S.U.)	6.0	-	-	-	9.0

Water Quality Based Effluent Limitations:

No Water Quality-Based Effluent Limits (WQBELs) required evaluation for this permit.

Total Maximum Daily Load Limitations:

A TMDL does not apply to any of the receiving streams of this permit or, if a TMDL does apply, it is not mining related. No effluent limits were calculated based on a TMDL.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the permit. These limits reflect the most stringent limitations amongst the technology, water quality, and TMDL limitations.

The effluent limits below apply to the following Mine Drainage Treatment Outfall(s): 002						
Parameter	Effluent Limitations				Monitoring Requirements	
	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Minimum Measurement Frequency	Required Sample Type
All Discharges						
pH (S.U.)	6.0	-	-	9.0	2/month	Grab
Total Suspended Solids (mg/L)	-	35.0	70.0	90.0	2/month	Grab
Flow (gpm)	Report				2/month	Measured
Conductivity (µmhos/cm)	Report				2/month	Grab

The following effluent limits apply to the following Stormwater Control Outfall(s): 001						
Parameter (units in mg/L unless otherwise noted)	Effluent Limitations				Monitoring Requirements	
	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Minimum Measurement Frequency	Required Sample Type
Dry Weather						
pH (S.U.)	6.0	-	-	9.0	2/month	Grab
Total Suspended Solids	-	35.0	70.0	90.0	2/month	Grab
Flow (gpm)	Report				2/month	Measured
Precipitation event less than or equal to 10 year/24 hour precipitation event						
pH (S.U.)	6.0	-	-	9.0	2/month	Grab
Settleable Solids (mL/L)	-	-	-	0.5	2/month	Grab
Flow (gpm)	Report				2/month	Measured
Precipitation event greater than 10 year/24 hour precipitation event						
pH (S.U.)	6.0	-	-	9.0	2/month	Grab

8. Basis for Permit Conditions

This NPDES permit contains the mandated standard conditions as required in 40 CFR 122.41.

For new Permits, the following conditions are included in the permit to document the effluent characterization requirements:

The permittee shall provide analysis of samples collected from the mine drainage treatment outfalls no later than two years after the initial discharge of each facility in compliance with 40 CFR 122.21(k)(5)(vi). Specifically, sampling results are required for the pollutants listed in 40 CFR 122, Appendix D, Table III (Report all), and for Appendix D Tables II and IV for those that are expected to be present. This quantitative data requirement is subject to the small business exemption at 40CFR 122.21(g)(8) for Table II.

The permittee shall provide analysis of samples collected from erosion and sedimentation control outfalls within two years of the initial discharge of each facility in compliance with 40 CFR 122.26(c)(1)(i)(G). Specifically, sampling results are required for the pollutants listed in 40 CFR 122, Appendix D, Table III (Report All), and for Appendix D, Tables II and IV for those that are expected to be present and pH, specific conductivity, temperature, alkalinity, acidity, iron, manganese, aluminum, sulfate, chloride, settleable solids, total dissolved solids, oil and grease, BOD5, COD, Kjeldahl nitrogen, and nitrate plus nitrite nitrogen. This quantitative data requirement is subject to the small business exemption at 40 CFR 122.21(g)(8) for Table II.

The following condition was added due to the proposed use of flocculants:

As described in Module 13, flocculants are proposed to be placed at the inlet of the initial treatment basin (TB2) when they are necessary to settle out suspended sediment. The proposed flocculant products to be utilized are MasterCat 4239 from Process Masters

The permittee must notify the mine inspector if use of flocculants is required to meet the effluent limits and describe how much flocculant is being added. Module 13 must be revised if different flocculant products are proposed to be used or if the plan for how the flocculants are applied is modified.

9. Public Review

Notification of the submission of this NPDES permit application was published by the applicant in a newspaper of general circulation in the area where the NPDES permit will be or is located.

A Notice of Draft NPDES Permit has been published in the PA Bulletin. The draft NPDES Bulletin Notice includes the list of proposed outfalls and their effluent limits.

Further information regarding this application may be obtained by contacting John Mital, P. G., PADEP Moshannon DMO, 186 Enterprise Drive, Philipsburg, PA 16866. jmital@pa.gov

Public participation comments and request for public hearings:

The public may participate by providing written comments during the comment period, requesting a public hearing, attending a public hearing or providing testimony at a public hearing.

Persons wishing to comment on this permit application should submit a statement to the Department at the address listed. Comments received within the comment period will be considered in the final determination regarding the NPDES permit application. Comments must include the name, address and telephone number of the writer and a concise statement to inform the Department of the exact basis of a comment and the relevant facts upon which it is based.

The Department will accept requests or petitions for a public hearing on this NPDES permit application, as provided in 25 Pa. Code § 92.61. The request or petition for a public hearing shall be filed within the comment period and shall contain the name, address, telephone number and the interest of the party filing the request and shall state the reasons why a hearing is warranted.

If a hearing is scheduled, a notice of the hearing on the NPDES permit application will be published in the *Pennsylvania Bulletin* and a newspaper of general circulation within the relevant geographical area.

Unless otherwise noted in this fact sheet, no variances, waivers, or alternatives to required standards have been granted.

Tools and References Used to Develop Permit	
<input type="checkbox"/>	Water Quality Spreadsheet (WQSS) (see Attachment)
<input type="checkbox"/>	PENTOXSD for Windows Model (see Attachment)
<input type="checkbox"/>	Toxics Management Spreadsheet (TMS) (see Attachment)
<input type="checkbox"/>	TMDL Report:
<input checked="" type="checkbox"/>	PADEP's eMapPA (for stream designation details)
<input checked="" type="checkbox"/>	USGS StreamStats Report (see Attachment)
<input type="checkbox"/>	TMDL Wasteload Loading to Concentration Calculations (see Attachment)
<input type="checkbox"/>	Anti-degradation Supplement for Mining Permits
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 7/11.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input checked="" type="checkbox"/>	Developing National Pollutant Discharge Elimination System (NPDES) Permits for Mining Activities Technical Guidance Document (563-2112-115)
<input type="checkbox"/>	Other:
<input type="checkbox"/>	Other: