pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southwest Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0254819** |
| Facility Type | **Non-Municipal** | APS ID | **841063** |
| Major / Minor | **Minor** | Authorization ID | **1291451** |

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SEWAGE

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **AK Coal Resources Inc.** | Facility Name | **North Fork Mine STP** |
| Applicant Address | 1134 Stoystown Road | Facility Address | 716 Hoffman Church Road |
| | Friedens, PA 15541 | | Friedens, PA 15541 |
| Applicant Contact | Kent Saylor | Facility Contact | Joseph Lloyd |
| Applicant Phone | (817) 443-2646 | Facility Phone | 814-443-3344 |
| Client ID | 6980 | Site ID | 782665 |
| Ch 94 Load Status | Not Overloaded | Municipality | Jenner Township |
| Connection Status | No Limitations | County | Somerset |
| Date Application Received | October 8, 2019 | EPA Waived? | Yes |
| Date Application Accepted | November 13, 2019 | If No, Reason | |

Purpose of Application: See below.

## Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0254819. NPDES Permit No. PA0254819 was previously issued by the PA Department of Environmental Protection (DEP) on September 9, 2014 and subsequently amended on June 15, 2016. That permit expired on September 30, 2019. The NPDES permit was amended to reflect a reduction in the proposed design flow of the treatment facility from 4,000 gpd to 2,100 gpd.

This draft permit is approved during the Coronavirus pandemic requiring DEP employees to telework. Electronic signatures are considered appropriate for the draft permit documents. An electronic copy of the communication that transmitted approval of the draft permit documents has been saved and is included with the file.

The draft cover letter asks the permittee's permission to send the final permit documents electronically in case the office is still closed when the final permit is ready to be issued. If this is not acceptable to the permittee, DEP will arrange to mail the final permit documents through the US Postal Service.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| x | | David R. Ponchione<br>David R. Ponchione / Project Manager | July 8, 2020 |
| x | | Christopher Kriley<br>Christopher Kriley, P.E. / Program Manager for Donald J. Leone, P.E. / Environmental Engineer Manager | July 13, 2020 |

| Discharge, Receiving Waters and Water Supply Information | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | .0021 |
| Latitude | 40º 6' 47.54" | Longitude | -79º 2' 54.22" |
| Quad Name | Boswell | | |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | Hoffman Run (CWF) | Stream Code | 45546 |
| NHD Com ID | 123722771 | RMI | 1.6800 |
| Drainage Area | 0.05 | Yield (cfs/mi$^2$) | 0.0352 |
| $Q_{7-10}$ Flow (cfs) | 0.0018 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 2,040 | Slope (ft/ft) | 0.0342 |
| Watershed No. | 18-E | Chapter 93 Class. | CWF |
| Exceptions to Use | None | Exceptions to Criteria | None |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | HABITAT ALTERATIONS, METALS, SILTATION | | |
| Source(s) of Impairment | ACID MINE DRAINAGE, REMOVAL OF RIPARIAN VEGETATION | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

Changes Since Last Permit Issuance: None

**Treatment Facility Summary**

**Treatment Facility Name:** North Fork Mine STP

| WQM Permit No. | Issuance Date |
|---|---|
| 5615406 | June 15, 2016 |

| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
|---|---|---|---|---|
| Sewage | Secondary | Septic Tank Sand Filter | Chlorine With Dechlorination | 0.0021 |

| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
|---|---|---|---|---|
| 0.0021 | 16.8 | Not Overloaded | None | Combination of methods |

Changes Since Permit Amendment Issuance: None

Other Comments

The existing treatment facility serves a bathhouse from which the wastewater flows by gravity to two septic tanks in series each having a volume of 2,300-gallons. The wastewater flows from the septic tanks to a dosing tank with 1,000-gallon capacity and then to a subsurface sand filter. After filtration the wastewater flows through a chlorine feeder to a 1,250-gallon chlorine contact, then to a de-chlorination feeder and discharges through the outfall to Hoffman Run, which is classified as cold-water fishery.

The original NPDES permit assumed the STP would have a design flow of 4,000-gpd. However, after the NPDES permit was issued, the permittee conducted a study of similar underground mine facilities in the region and concluded the plant should be designed for a lower flow. The facilities included in the study were found to have an average flow of 8-10 gpd for each employee. The facility has a design flow based on: 210 employees although only 140 are expected to be employed, thus providing a reserve flow. The facilities studied are maintained by the CME's certified sewage plant operators.

The existing treatment plant is a septic tank / sand filter type and is only rated 100 gpd higher than a small flow treatment facility that is defined as a facility rated at or less than 2,000 gpd. The Solids Management for Non-Lagoon Systems requirement is typically placed in permits for Non-Municipal plants. This writer feels it is more appropriate to replace that requirement with the requirements chosen for Part C.I.F and Part C.I.G that are applicable to SFTF's. They address the need for the permittee to measure the depth and scum in the septic tanks annually and address septic tank pumping requirements.

**Compliance History**

# Operations Compliance Check Summary Report

**Compliance Review Period:** 6/15 – 6/20

**Inspection Summary:**

| INSP ID | INSPECTED DATE | INSP TYPE | AGENCY | INSPECTION RESULT DESC |
|---|---|---|---|---|
| 2611621 | 04/11/2017 | Administrative/File Review | PA Dept of Environmental Protection | Violation(s) Noted |
| 2455080 | 02/24/2016 | Compliance Evaluation | PA Dept of Environmental Protection | No Violations Noted |

**Violation Summary:**

| VIOL ID | VIOLATION DATE | VIOLATION TYPE | VIOLATION TYPE DESC | RESOLVED DATE |
|---|---|---|---|---|
| 790589 | 04/11/2017 | 92A.61(G) | NPDES - Failure to use a format or process required by DEP for self-monitoring results | 04/19/2017 |

**Open Violations by Client ID:**

No open violations for client ID 6980

**Enforcement Summary:**

| ENF ID | ENF TYPE | ENF CREATION DATE | VIOLATIONS | ENF FINALSTATUS | ENF CLOSED DATE |
|---|---|---|---|---|---|
| 355741 | NOV | 07/05/2017 | 92A.61(G) | Comply/Closed | 04/19/2017 |

**DMR Violation Summary:** Using eDMR as of 1/2018 No DMR exceedances.

**Compliance Status:** Permittee incompliance. Permit issuance recommended.

**Completed by:** John Murphy

**Completed date:** 6/11/20

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** .0021
**Latitude** 40º 6' 47.54" **Longitude** -79º 2' 54.22"
**Wastewater Description:** Sewage Effluent

The discharge was previously evaluated using WQM 7.0 to evaluate the $CBOD_5$, Ammonia Nitrogen and Dissolved Oxygen parameters. The modeling results show technology based effluent limitations for $CBOD_5$ are appropriate. The modeling results also confirm that Ammonia-Nitrogen and Dissolved Oxygen limitations are necessary to meet in-stream water quality criterion. Because there have been no changes to the discharge or the receiving stream, it was unnecessary to remodel these parameters.

### Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

| Pollutant | Limit (mg/l) | SBC | Federal Regulation | State Regulation |
|---|---|---|---|---|
| $CBOD_5$ | 25 | Average Monthly | 133.102(a)(4)(i) | 92a.47(a)(1) |
| | 40 | Average Weekly | 133.102(a)(4)(ii) | 92a.47(a)(2) |
| Total Suspended Solids | 30 | Average Monthly | 133.102(b)(1) | 92a.47(a)(1) |
| | 45 | Average Weekly | 133.102(b)(2) | 92a.47(a)(2) |
| pH | 6.0 – 9.0 S.U. | Min – Max | 133.102(c) | 95.2(1) |
| Fecal Coliform (5/1 – 9/30) | 200 / 100 ml | Geo Mean | - | 92a.47(a)(4) |
| Fecal Coliform (5/1 – 9/30) | 1,000 / 100 ml | IMAX | - | 92a.47(a)(4) |
| Fecal Coliform (10/1 – 4/30) | 2,000 / 100 ml | Geo Mean | - | 92a.47(a)(5) |
| Fecal Coliform (10/1 – 4/30) | 10,000 / 100 ml | IMAX | - | 92a.47(a)(5) |

Comments: The above effluent limitations are consistent with the previous permit amendment.

### Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

| Parameter | Limit (mg/l) | SBC | Model |
|---|---|---|---|
| Dissolved Oxygen | 6.0 | Inst. Min | WQM 7.0 |
| Ammonia Nitrogen | 3.0 | Average Monthly | WQM 7.0 |
| Total Residual Chlorine | 0.10 | Average Monthly | TRC _CALC |

Comments: The above effluent are consistent with the previous permit amendment.

### Kiskiminetas River Basin

There is a TMDL for metals in the Kiskiminetas River watershed. The contribution for metals from a sewage plant of this nature is expected to be less than water quality criteria and therefore not contributing to stream impairment. 1/year monitoring is imposed on the Total Aluminum, Total Manganese, and Total Iron parameters for plants rated between 0.002 mgd up to 0.499 mgd. This is consistent with the previous permit amendment.

### TN and TP MONITORING

Nutrient monitoring is required to establish the nutrient load from the waste water treatment facility and the impacts that load may have on the quality of the receiving stream(s). Sewage discharges with design flows > 2,000 gpd require monitoring, at a minimum, for Total Nitrogen and Total Phosphorus in new and reissued permits. This is consistent with the previous permit amendment.

## Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

**Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date**.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Flow (MGD) | 0.0021 | XXX | XXX | XXX | XXX | XXX | 1/week | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | 6.0 Inst Min | XXX | XXX | XXX | 1/day | Grab |
| TRC | XXX | XXX | XXX | 0.10 | XXX | 0.30 | 1/day | Grab |
| CBOD5 | XXX | XXX | XXX | 25.0 | XXX | 50.0 | 2/month | Grab |
| TSS | XXX | XXX | XXX | 30.0 | XXX | 60.0 | 2/month | Grab |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2000 Geo Mean | XXX | 10000 | 2/month | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1000 | 2/month | Grab |
| Total Nitrogen | XXX | XXX | XXX | Report Daily Max | XXX | XXX | 1/year | Grab |
| Ammonia Nov 1 - Apr 30 | XXX | XXX | XXX | 9.0 | XXX | 18.0 | 2/month | Grab |
| Ammonia May 1 - Oct 31 | XXX | XXX | XXX | 3.0 | XXX | 6.0 | 2/month | Grab |
| Total Phosphorus | XXX | XXX | XXX | Report Daily Max | XXX | XXX | 1/year | Grab |
| Total Aluminum | XXX | XXX | XXX | Report Daily Max | XXX | XXX | 1/year | Grab |

**Outfall 001 , Continued (from Permit Effective Date through Permit Expiration Date )**

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Total Iron | XXX | XXX | XXX | Report Daily Max | XXX | XXX | 1/year | Grab |
| Total Manganese | XXX | XXX | XXX | Report Daily Max | XXX | XXX | 1/year | Grab |

Compliance Sampling Location: Outfall 001

To be consistent with current DEP policy:

- Effluent limitations for pH and DO are to be reported as “Instantaneous Minimum” in lieu of “Minimum”.
- The units for Fecal Coliform are now “No./100 ml” in lieu of “CFU/100 ml”.
- Mass loading limits and influent monitoring are not applicable for non-publicly owned treatment works.
- The design flow of the sewage treatment plant is less than 0.1 mgd. For this reason, the permittee is not required to report influent and effluent concentrations for various parameters as listed in the NPDES application. Total Dissolved Solids and its major constituents are therefore not a concern at this time.

The previous permit writer did not include a PDF file of the pollution report with the fact sheet and this writer does not have access, due to office closure, to scanning equipment to do so for this pollution report. A hard copy of the pollution report, which includes the modeling results can be found in Central Files.