pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Northcentral Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0007854** |
| Facility Type | **Industrial** | APS ID | **996639** |
| Major / Minor | **Minor** | Authorization ID | **1279089** |

# NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **PA American Water Co.** | Facility Name | **Milton Water System** |
| Applicant Address | 105 Sodom Road | Facility Address | 702 S Front Street |
| | Milton, PA 17847-9232 | | Milton, PA 17847-1020 |
| Applicant Contact | Scott Sharp | Facility Contact | Laura Walter |
| Applicant Phone | (570) 538-4438 | Facility Phone | (570) 742-4612 |
| Client ID | 87712 | Site ID | 257187 |
| SIC Code | 4941 | Municipality | Milton Borough |
| SIC Description | Trans. & Utilities - Water Supply | County | Northumberland |
| Date Application Received | July 2, 2019 | EPA Waived? | Yes |
| Date Application Accepted | July 17, 2019 | If No, Reason | |

Purpose of Application .Renewal of NPDES Permit No. PA0007854 for the discharge of water treatment plant wastewater.

## Summary of Review

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 | | *Nicholas W. Hartranft*<br>Nicholas W. Hartranft, P.E. / Environmental Engineer Manager | May 6, 2020 |
| X | | *Thomas M. Randis*<br>Thomas M. Randis / Environmental Program Manager | May 7, 2020 |

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.1 |
| Latitude | 41º 0' 33.44" | Longitude | -76º 51' 56.56" |
| Quad Name | Milton | Quad Code | 1031 |
| Wastewater Description: | Water Treatment Plant Wastewater | | |
| Receiving Waters | West Branch Susquehanna River (WWF, MF) | Stream Code | 18668 |
| NHD Com ID | 66919807 | RMI | 10.98 |
| Drainage Area | 6680 | Yield (cfs/mi$^2$) | 0.122 |
| $Q_{7-10}$ Flow (cfs) | 817.5 | $Q_{7-10}$ Basis | Gage No. 01553500 |
| Elevation (ft) | 450 | Slope (ft/ft) | N/A |
| Watershed No. | 10-D | Chapter 93 Class. | WWF, MF |
| Existing Use | N/A | Existing Use Qualifier | N/A |
| Exceptions to Use | N/A | Exceptions to Criteria | N/A |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBS) | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | West Branch Susquehanna |
| Nearest Downstream Public Water Supply Intake | Sunbury Municipal Water Authority | | |
| PWS Waters | Susquehanna River | Flow at Intake (cfs) | 2.430 |
| PWS RMI | 124.11 | Distance from Outfall (mi) | 12.39 |

Changes Since Last Permit Issuance: The drainage area was changed slightly from 6681 mi$^2$ to 6680 mi$^2$ based on results from USGS Streamstats (Attached). The $Q_{7-10}$ was re-evaluated. Data from a USGS document titled, *Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania*, was used to derive the $Q_{7-10}$. A representative reference gage located on the West Branch Susquehanna River near Lewisburg (Gage No. 01553500) was listed to have a drainage area of 6,847 mi$^2$ and a $Q_{7-10}$ of 838 cfs. The drainage area ratio analysis resulted in a $Q_{7-10}$ at Outfall 001 of 817.5 cfs.

| Treatment Facility Summary | | | | |
|---|---|---|---|---|
| **Treatment Facility Name:** Milton District Water Filtration Plant<br><br>Wastewater treated from the Milton District Water Filtration Plant consists of filter backwash water, sludge settling supernatant, pump cooling water, and analyzer wastewater. The combined wastewater stream is conveyed to one of two lagoons (North Lagoon or South Lagoon) for solids settling prior to discharge to the West Branch Susquehanna River. | | | | |
| **Waste Type** | **Degree of Treatment** | **Process Type** | **Disinfection** | **Avg Annual Flow (MGD)** |
| Industrial | Physical (Industrial Waste) | Sedimentation | No Disinfection | 0.1 |
| | | | | |
| | | | | |
| **Hydraulic Capacity (MGD)** | **Organic Capacity (lbs/day)** | **Load Status** | **Biosolids Treatment** | **Biosolids Use/Disposal** |
| 0.187 | N/A | Not Overloaded | Sludge Lagoon | Hauled Off |

Changes Since Last Permit Issuance: None

Other Comments: N/A

## Compliance History

**DMR Data for Outfall 001 (from March 1, 2019 to February 29, 2020)**

| Parameter | FEB-20 | JAN-20 | DEC-19 | NOV-19 | OCT-19 | SEP-19 | AUG-19 | JUL-19 | JUN-19 | MAY-19 | APR-19 | MAR-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.101 | 0.082 | 0.066 | 0.060 | 0.062 | 0.0734 | 0.059 | 0.0628 | 0.069 | 0.0629 | 0.0667 | 0.073 |
| Flow (MGD) Daily Maximum | 0.143 | 0.135 | 0.121 | 0.129 | 0.128 | 0.165 | 0.093 | 0.092 | 0.140 | 0.103 | 0.102 | 0.105 |
| pH (S.U.) Instantaneous Minimum | 7.0 | 7.0 | 7.0 | 7.0 | 7.2 | 7.1 | 7.2 | 7.1 | 6.9 | 7.1 | 7.0 | 7.1 |
| pH (S.U.) Instantaneous Maximum | 7.4 | 7.6 | 7.4 | 7.4 | 7.6 | 7.5 | 7.5 | 7.5 | 7.3 | 7.3 | 7.5 | 7.6 |
| TRC (mg/L) Average Monthly | 0.30 | 0.29 | 0.40 | 0.036 | 0.17 | 0.14 | 0.25 | 0.23 | 0.15 | 0.12 | 0.19 | 0.31 |
| TRC (mg/L) Instantaneous Maximum | 0.62 | 0.52 | 0.78 | 0.64 | 0.27 | 0.35 | 1.14 | 1.22 | 0.52 | 0.35 | 0.42 | 0.84 |
| TSS (mg/L) Average Monthly | 1.0 | < 1.60 | 3.4 | 2.00 | 2.40 | 1.8 | 3.2 | 2.8 | 2.0 | 3.6 | 2.2 | 1.4 |
| TSS (mg/L) Daily Maximum | 1.0 | < 1.60 | 3.4 | 2.00 | 2.40 | 1.80 | 3.2 | 2.8 | 2.0 | 3.6 | 2.2 | 1.4 |
| Total Aluminum (mg/L) Average Monthly | 0.185 | < 0.100 | 0.475 | 0.400 | 0.410 | 0.251 | 0.356 | 0.364 | 0.199 | 0.219 | 0.328 | 0.208 |
| Total Aluminum (mg/L) Daily Maximum | 0.185 | < 0.100 | 0.475 | 0.400 | 0.410 | 0.251 | 0.356 | 0.364 | 0.199 | 0.219 | 0.328 | 0.208 |
| Total Iron (mg/L) Average Monthly | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.20 | < 0.200 | < 0.200 | < 0.20 | < 0.20 | < 0.300 | < 0.300 |
| Total Iron (mg/L) Daily Maximum | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.200 | < 0.20 | < 0.20 | < 0.300 | < 0.300 |
| Total Manganese (mg/L) Average Monthly | 0.0367 | 0.106 | 0.0439 | 0.0251 | 0.0765 | 0.0588 | 0.178 | 0.235 | 0.053 | 0.0828 | 0.0339 | 0.037 |
| Total Manganese (mg/L) Daily Maximum | 0.0367 | 0.106 | 0.0439 | 0.0251 | 0.0765 | 0.0588 | 0.178 | 0.235 | 0.053 | 0.0828 | 0.0339 | 0.037 |

## Compliance History

| | |
|---|---|
| **Summary of DMRs:** | Throughout the past 12 months, no effluent violations have been noted. |
| **Summary of Inspections:** | The Department last conducted a compliance evaluation inspection of this facility on January 30, 2020. No violations were noted during the inspection. Discharge was observed from the outfall during the inspection. |

Other Comments:

Below is a summary of open violations from a report pulled on April 24, 2020 for the client (ID No. 87712). Two violations noted are for a different facility under the NCRO Clean Water Program's jurisdiction.

| FACILITY | INSP PROGRAM | PROGRAM SPECIFIC ID | VIOLATION DATE | VIOLATION | INSP REGION |
|---|---|---|---|---|---|
| STEELTON WATER FILTRATION PLT | Storage Tanks | 22-63836 | 12/11/2019 | Failure to meet containment requirements | SCRO |
| STEELTON WATER FILTRATION PLT | Storage Tanks | 22-63836 | 12/11/2019 | Failure to meet containment requirements | SCRO |
| PA AMERICAN WATER COMPANY SCRANTON WWTP | WPC NPDES | PA0026492 | 12/20/2019 | NPDES - Violation of Part C permit condition(s) | NERO |
| TURBOTVILLE WWTP | WPC NPDES | PA0028100 | 03/23/2020 | NPDES - Violation of effluent limits in Part A of permit | NCRO |
| TURBOTVILLE WWTP | WPC NPDES | PA0028100 | 03/23/2020 | NPDES - Violation of effluent limits in Part A of permit | NCRO |
| PA AMER WATER POCONO COUNTRY PLACE WWTP | WPC NPDES | PA0060097 | 12/23/2019 | NPDES - Violation of Part C permit condition(s) | NERO |

## Existing Effluent Limitations

**Outfall 001**

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/month | Grab |
| Total Residual Chlorine | XXX | XXX | XXX | 0.5 | XXX | 2.3 | 1/week | Grab |
| Total Suspended Solids | XXX | XXX | XXX | 30 | 60 | 75 | 1/month | Composite (3) |
| Total Aluminum | XXX | XXX | XXX | 4.0 | 8.0 | 10 | 1/month | Composite (3) |
| Total Iron | XXX | XXX | XXX | 2.0 | 4.0 | 5.0 | 1/month | Composite (3) |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | 2.5 | 1/month | Composite (3) |

Footnotes

(1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.

(2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

(3) A composite for batch discharge mode of operation is defined as three equal volume grab samples to be taken as follows. The first is to be taken exactly 10 minutes after the commencement of the discharge. The second sample should be taken when approximately 1/3 of the total volume has been discharged. The third grab is to be taken when approximately 2/3 of the total volume has been discharged. The three grab samples should then be combined as a composite and analyzed.

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.1
**Latitude** 41º 0' 34.00" **Longitude** -76º 51' 47.00"
**Wastewater Description:** Water Treatment Plant Effluent

**Technology-Based Limitations**

*Guidance*

The following technology-based limitations are recommended by *Technology-Based Control Requirements for Water Treatment Plant Wastes (362-2183-003, 10/1/97)* for wastewater from treatment of water treatment plant sludges and filter backwash.

| Parameter | Limit (mg/l) | SBC |
|---|---|---|
| **Total Suspended Solids** | 30 | Monthly Avg |
| | 60 | Daily Max |
| **Total Iron** | 2.0 | Monthly Avg |
| | 4.0 | Daily Max |
| **Total Aluminum** | 4.0 | Monthly Avg |
| | 8.0 | Daily Max |

| | | |
|---|---|---|
| **Total Manganese** | 1.0 | Monthly Avg |
| | 2.0 | Daily Max |
| **pH*** | 6.0 | Minimum |
| | 9.0 | IMAX |
| **Total Residual Chlorine** | 0.5 | Monthly Avg |
| | N/A | Daily Max |

*Also required by 25 Pa. Code 95.32(1)

Comments: These recommended effluent limitations are all currently established in the permit.

## Water Quality-Based Limitations

*Total Residual Chlorine (TRC)*

Total Residual Chlorine (TRC) limitations were reevaluated using the TRC_CALC spreadsheet (attached). The spreadsheet indicates that the existing TRC TBEL of 0.5 mg/L required by 25 Pa. Code § 92a.48(b)(2) is protective. However, the spreadsheet indicates that an instantaneous maximum (IMAX) limit of 1.1 should be employed. This change is proposed for this permit term. Given sample results from the past 12 months for IMAX TRC, on two occasion the proposed IMAX TRC limit slightly exceeded at 1.14 and 1.22 mg/L respectively.

*Toxic Pollutants*

Sample results representing maximum concentrations from the current permit term from Pollutant Groups 1 and 2 provided in the application were run through the Toxic Screening Analysis (TSA) Spreadsheet model. The TSA is used to determine if any pollutants were candidates for PENTOXSD modeling by comparing effluent concentrations to the most stringent criterion. Where the TSA spreadsheet recommended modeling, the parameters were entered into PENTOXSD v2.0d. Based on the TSA, selenium, cadmium, copper, and fluoride were recommended for PENTOXSD modeling due to sample analysis being conducted at higher quantitation limits (QL) than the minimum QLs required. For selenium, cadmium, copper, and fluoride, the QL was used as the discharge concentration for modeling purposes.

Following modeling, the PENTOXSD recommended WQBELs are also entered in the Toxics Screening Analysis spreadsheet. Based on the data and PENTOXSD model output, the spreadsheet will either recommend no action, monitoring or effluent limitations.

Modeling input/output data has been attached. The model required no action with no WQBELs being established.

## Chesapeake Bay

This discharge will not produce a net increase in TN and TP loadings. Consequently, monitoring requirements and/or cap loads are not necessary.

## 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) and/or BPJ.

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

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) | | Concentrations (mg/L) | | | | Minimum Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | 9.0 | XXX | 1/month | Grab |
| Total Residual Chlorine | XXX | XXX | XXX | 0.5 | XXX | 1.1 | 1/week | Grab |
| Total Suspended Solids | XXX | XXX | XXX | 30.0 | 60.0 | 75 | 1/month | Grab-Composite* |
| Total Aluminum | XXX | XXX | XXX | 4.0 | 8.0 | 10 | 1/month | Grab-Composite* |
| Total Iron | XXX | XXX | XXX | 2.0 | 4.0 | 5 | 1/month | Grab-Composite* |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | 2.5 | 1/month | Grab-Composite* |

*(*) A composite for batch discharge mode of operation is defined as three equal volume grab samples to be taken as follows. The first is to be taken exactly 10 minutes after the commencement of the discharge. The second sample should be taken when approximately 1/3 of the total volume has been discharged. The third grab is to be taken when approximately 2/3 of the total volume has been discharged. The three grab samples should then be combined as a composite and analyzed.*

This language will be included in Part A of the draft permit as a footnote.