pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southcentral Regional Office**
**CLEAN WATER PROGRAM**

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SEWAGE

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0055352** |
| Facility Type | **Non-Municipal** | APS ID | **471551** |
| Major / Minor | **Minor** | Authorization ID | **1274364** |

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Berks Properties Inc.** | Facility Name | **Woodland MHP** |
| Applicant Address | 3613 Seisholtzville Road PO Box 185 | Facility Address | Dale Road |
| | Hereford, PA 18056-1542 | | Barto, PA 19504 |
| Applicant Contact | Jim Groff | Facility Contact | Jim Groff |
| Applicant Phone | (267) 446-0017 | Facility Phone | (267) 446-0017 |
| Client ID | 180156 | Site ID | 246037 |
| Ch 94 Load Status | Not Overloaded | Municipality | Hereford Township |
| Connection Status | | County | Berks |
| Date Application Received | May 3, 2019 | EPA Waived? | Yes |
| Date Application Accepted | June 4, 2019 | If No, Reason | |

Purpose of Application: NPDES permit Renewal.

## Summary of Review

Berks Properties, Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on October 17, 2014 and became effective on November 1, 2014. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Hereford Township, Berks County to West Branch Perkiomen Creek to Perkiomen Creek. The existing permit expiration date was October 31, 2019, and the permit has been administratively extended since that time.

The discharge design flow is 0.014 MGD. This facility received domestic sewage from the Woodland Mobile Home Park which is approximately 30 mobile homes. This discharge to an Exceptional Value (EV) waters re-designation is justified, since the outfall pre-dates the EV classification of the stream.

The WQM No. 0687428 99-1 amendment was issued on April 13, 1999.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | /s/<br>Hilary H. Le / Environmental Engineering Specialist | January 31, 2020 |
| X | | /s/<br>Daniel W. Martin, P.E. / Environmental Engineer Manager | March 26, 2020 |
| X | | /s/<br>Maria D. Bebenek, P.E. / Clean Water Program Manager | April 7, 2020 |

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

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.014 |
| Latitude | 40º 26' 18.20" | Longitude | -75º 37' 28.06" |
| Quad Name | East Greenville | Quad Code | |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | West Branch Perkiomen Creek (EV) | Stream Code | 01439 |
| NHD Com ID | 25971444 | RMI | 12.0 miles |
| Drainage Area | 4.92 mi.$^2$ | Yield (cfs/mi$^2$) | See comments below |
| $Q_{7-10}$ Flow (cfs) | See comments below | $Q_{7-10}$ Basis | USGS StreamStats |
| Elevation (ft) | 675.28 | Slope (ft/ft) | |
| Watershed No. | 3-E | Chapter 93 Class. | EV |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Attaining Use(s) | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | | Name | |
| Nearest Downstream Public Water Supply Intake | AQUA PA, Inc., Montgomery County | | |
| PWS Waters | Perkiomen Creek | Flow at Intake (cfs) | |
| PWS RMI | 1.1 miles | Distance from Outfall (mi) | Approximate 34 miles |

Changes Since Last Permit Issuance:

*Drainage Area*
The discharge is to West Branch Perkiomen Creek at RMI 12.0 miles. A drainage area upstream of the discharge is estimated to be 4.92 mi.$^2$, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

*Stream Flow*
There are no nearby stream gages with low flow data that have extensive or recent periods of record. Since USGS PA StreamStats estimated the drainage area that is below the minimum value allowed by USGS's regression equations, the USGS gage station (No. 01472199) on West Branch Perkiomen Creek at Hillegass, PA will be used to calculate the $Q_{7-10}$ at the point of discharge using a low flow yield method. The $Q_{7-10}$ here is 3.08 cfs and the drainage area is 23.4 mi.$^2$ which results in a $Q_{7-10}$ low flow yield of 0.13 cfs/mi.$^2$. This information is used to obtain a chronic or 30-day ($Q_{30-10}$), and an acute or 1-day ($Q_{1-10}$) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

$$\text{Low Flow Yield} = Q_{7-10gage} / \text{Drainage Area}_{gage} = 3.08 \text{ cfs} / 23.4 \text{ mi.}^2 = 0.13 \text{ cfs/mi.}^2$$
$$Q_{7-10discharge} = 0.13 \text{ cfs/mi.}^2 * \text{Drainage Area}_{discharge} = 0.13 \text{ cfs/mi.}^2 * 4.92 \text{ mi.}^2 = 0.64 \text{ cfs}$$
$$Q_{30-10} = 1.36 * Q_{7-10discharge} = 1.36 * 0.64 \text{ cfs} = 0.87 \text{ cfs}$$
$$Q_{1-10} = 0.64 * Q_{7-10discharge} = 0.64 * 0.64 \text{ cfs} = 0.41 \text{ cfs}$$

*West Branch Perkiomen Creek*
25 Pa. Code § 93.9f classifies West Branch Perkiomen Creek as Exceptional Value (EV) waters re-designation and migratory fishes (MF). Based on the 2018 Integrated Report, Perkiomen Creek, is not impaired. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

*Potable Water Supply Intake*
The nearest downstream public water supply intake is the AQUA PA, Inc. intake on the Perkiomen Creek, in Montgomery County, approximately 35 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

| Treatment Facility Summary | | | | |
|---|---|---|---|---|
| **Treatment Facility Name:** Woodland MHP | | | | |
| **WQM Permit No.** | **Issuance Date** | | | |
| 0687428 99-1 | 4/13/1999 | | | |
| | | | | |
| **Waste Type** | **Degree of Treatment** | **Process Type** | **Disinfection** | **Avg Annual Flow (MGD)** |
| Sewage | Secondary | | Gas Chlorine | 0.014 |
| | | | | |
| **Hydraulic Capacity (MGD)** | **Organic Capacity (lbs/day)** | **Load Status** | **Biosolids Treatment** | **Biosolids Use/Disposal** |
| 0.014 | | Not Overloaded | N/A | Other WWTP |

Changes Since Last Permit Issuance: none

Other Comments: The WWTP is a 14,000 GPD system with the following treatment units:

Influent Bar Screen
Equalization Tank
Influent Distribution Box
Aeration Tank
Clarifier
Chlorine Contact Tank
Sludge Holding Tank

| Compliance History | |
|---|---|
| **Summary of DMRs:** | See DMR reported from December 1, 2018 to November 30, 2019 Table below (Page 4). |
| **Summary of Inspections:** | 1/02/2019: Mr. Buss, DEP WQS, conducted compliance evaluation inspection. There were some recommendations such as submit biosolids production and disposal supplemental spreadsheet each month, and record all sample results on bench sheet. The field test results were within permitted limits. There were no violations noted during inspection.<br>5/2/2017: Mr. Buss, DEP WQS, conducted compliance evaluation inspection. There were some recommendations such as completing MLSS testing at least monthly. The field test results were within permitted limits. There were no violations noted during inspection. |
| **Other Comments:** | There are currently no open violations associated with the permittee or the facility. |

Other Comments: DMRs for the past 12 months indicate three instances of non-compliance (two exceedances for Fecal Coliform average monthly, and one exceedance for Fecal Coliform IMAX). The facility appears to be operating satisfactorily.

## Compliance History

**DMR Data for Outfall 001 (from December 1, 2018 to November 30, 2019)**

| Parameter | NOV-19 | OCT-19 | SEP-19 | AUG-19 | JUL-19 | JUN-19 | MAY-19 | APR-19 | MAR-19 | FEB-19 | JAN-19 | DEC-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.0006 | 0.0018 | 0.0019 | 0.0017 | 0.0044 | 0.0033 | 0.0038 | 0.004 | 0.0088 | 0.0068 | 0.0026 | 0.0021 |
| Flow (MGD) Daily Maximum | 0.0017 | 0.0133 | 0.0088 | 0.0054 | 0.0165 | 0.0144 | 0.0096 | 0.0113 | 0.0223 | 0.0111 | 0.0157 | 0.013 |
| pH (S.U.) Minimum | 6.1 | 6.4 | 6.9 | 6.1 | 6.1 | 6.0 | 6.1 | 6.4 | 6.4 | 6.0 | 6.2 | 6.2 |
| pH (S.U.) Maximum | 8.0 | 8.1 | 8.1 | 8.2 | 7.8 | 8.0 | 8.1 | 7.9 | 7.5 | 7.8 | 8.1 | 8.2 |
| DO (mg/L) Minimum | 6.1 | 6.2 | 5.5 | 5.0 | 5.1 | 5.3 | 5.4 | 5.1 | 6.1 | 7.4 | 7.6 | 7.2 |
| TRC (mg/L) Average Monthly | 0.04 | 0.1 | 0.1 | 0.1 | 0.03 | 0.03 | 0.02 | 0.02 | 0.04 | 0.04 | 0.1 | 0.05 |
| TRC (mg/L) Instantaneous Maximum | 0.14 | 0.24 | 0.16 | 0.17 | 0.14 | 0.12 | 0.08 | 0.21 | 0.14 | 0.19 | 0.17 | 0.22 |
| $CBOD_5$ (mg/L) Average Monthly | 7.5 | 6.5 | 4 | 2 | 7 | 4 | 12.5 | 6.5 | 7 | 5.5 | 10 | 7 |
| TSS (mg/L) Average Monthly | 13.5 | 5.5 | 17 | 8.5 | 14 | 6.5 | 22.5 | 6 | 4 | 9.5 | 27 | 6 |
| Fecal Coliform (CFU/100 ml) Geometric Mean | 3 | 35 | 800 | 25 | 10 | 251 | < 1 | < 1 | < 1 | < 1 | 17 | < 1 |
| Fecal Coliform (CFU/100 ml) Instantaneous Maximum | 80 | 1200 | 1600 | 40 | 100 | 450 | < 1 | < 1 | < 1 | < 1 | 300 | < 1 |
| Ammonia (mg/L) Average Monthly | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 3.7 | < 0.1 | < 0.1 | < 0.1 | 7.5 | < 0.10 |
| Total Phosphorus (lbs/day) Average Monthly | 0.001 | 0.001 | 0.002 | 0.001 | 0.004 | 0.005 | 0.010 | 0.003 | 0.007 | 0.011 | 0.006 | 0.0073 |
| Total Phosphorus (mg/L) Average Monthly | 0.1 | 0.04 | 0.1 | 0.1 | 0.1 | 0.18 | 0.3 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 |

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.014
**Latitude** 40º 26' 18.20" **Longitude** -75º 37' 27.72"
**Wastewater Description:** Sewage Effluent

### 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) |
| Total Residual Chlorine | 0.5 | Average Monthly | - | 92a.48(b)(2) |

### Water Quality-Based Limitations

*Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):*
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25 mg/L average monthly (AML), and 50 mg/L instantaneous maximum will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

*Ammonia ($NH_3$-N):*
$NH_3$-N calculations were first based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream $NH_3$-N criteria used in the attached computer model of the stream:

| | | | |
|---|---|---|---|
| Discharge pH | = | 7.0 | (Default) |
| Discharge Temperature | = | 20°C | (Default) |
| Stream pH | = | 7.0 | (Default) |
| Stream Temperature | = | 20ºC | (Default for CWF) |
| Background $NH_3$-N | = | 0 | (Default) |

The model input data and results are attached. The printout of the WQM 7.0 output indicates that at a discharge of 0.014 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 25.0 mg/L $NH_3$-N as a monthly average and 50.0 mg/L $NH_3$-N instantaneous maximum are necessary to protect the aquatic life from toxicity effects. Additionally, past DMRs and inspection reports show that the facility has been consistently achieving concentrations under these limits. These limits will remain in the proposed permit.

*Total Suspended Solids (TSS):*
The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the proposed permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Past DMRs and inspection reports show that the facility has been consistently achieving concentrations under these limits.

*pH:*
The effluent discharge pH should remain above 6 and below 9 standard units according to 25 Pa. Code § 95.2(2).

*Dissolved Oxygen (D.O.):*
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

*Fecal Coliform:*
The recent coliform guidance in 25 Pa. Code § 92a.47(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean (average monthly) and not greater than 1,000/100 ml (IMAX) and 25 Pa. Code § 92a.47(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean (average monthly) and not greater than 10,000/100 ml (IMAX), respectively.

*Total Residual Chlorine (TRC):*
Based on the attached TRC Excel Spreadsheet calculator, which uses the equations and calculations from the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (ID No. 391-2000-015), indicated monthly average limit of 0.5 mg/L and an instantaneous maximum limit of 1.64 mg/L. Based on the DMRs from the past year, the facility has been consistently achieving these limits. Therefore, these limits will remain in the proposed permit.

*Stormwater:*
There is no known stormwater outfall associated with this facility.

*Chesapeake Bay Strategy:*
Since the WWTP does not discharge to the Chesapeake Bay, the Chesapeake Bay requirements do not apply.

*Toxic:*
This is a minor sewage facility receiving domestic wastewater only and the current application does not require sampling of toxic pollutants (or heavy metals) for those facilities with design flows less than 0.1 MGD. Therefore, no reasonable potential analysis for toxic pollutants has been performed for this permit renewal.

*Green Lane Reservoir TMDL (Total Phosphorus):*
EPA has approved a TMDL for Green Lane reservoir on March 13, 2003. Green Lane is located downstream of the Woodland MHP discharge. The TMDL requires all dischargers to achieve a 0.5 mg/L phosphorus limit and an average monthly load of 0.059 pounds per day and a cumulative monthly load of 1.75 lbs./day waste load allocation (WLA) for the Woodland MHP discharge (Table 4-5, Individual Wasteload allocations of total phosphorus for Green Lane reservoir, page 4-12, March 2003). However, the existing limits of 0.5 mg/L and 1.0 mg/L will remain in the proposed permit due to anti-backsliding requirements. Additionally, past DMRs and inspection reports show that the facility has been consistently achieving concentrations under these limits.

*Biosolids Management:*
Approximately, 1,300 gallons of activated sludge is wasted from the biological treatment process on a monthly basis to a sludge holding tank. Following storage in the sludge holding tank, the biosolids are disposed of at Hereford Estates Mobile Home Park in Hereford Township, PA (DEP Permit No. 0041505) or at the Pottstown Borough WWTP in Pottstown, PA (DEP Permit No. 0026786).

*Antidegradation (93.4):*
A Protection Report from 2003 indicates that the receiving stream is classified as a Cold-Water Fishery; however, the current classification is Exceptional Value (EV). The current discharge limits do not reflect Exceptional Value discharge criteria, due to the WWTP being "grandfathered" as an existing discharge. The discharge to an EV stream is justified, since the outfall pre-dates the EV classification of the stream.

*Class A Wild Trout Fisheries:*
No Class A Wild Trout Fisheries are impacted by this discharge.

*303d Listed Streams:*
The discharge is not located on a 303d listed stream segment.

## Anti-Backsliding

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements in accordance with 40 CFR §122.44(l)(1).

**WQM 7.0 model inputs**

Node 1: Discharge point at West Branch Perkiomen Creek

| | |
|---|---|
| Elevation: | 675.28 ft (USGS National Map Viewer) |
| Drainage Area: | 4.92 $mi.^2$ (USGS PA StreamStats) |
| River Mile Index: | 12.0 miles (PA DEP eMapPA) |
| Low Flow Yield: | 0.13 $cfs/mi.^2$ |
| Discharge Flow: | 0.014 MGD (NPDES PA0055352) |

Node 2: Just before Trib. 01455 to West Branch Perkiomen Creek

| | |
|---|---|
| Elevation: | 613.77 ft (USGS National Map Viewer) |
| Drainage Area: | 5.29 $mi.^2$ (USGS PA StreamStats) |
| River Mile Index: | 11.4 miles (PA DEP eMapPA) |
| Low Flow Yield: | 0.13 $cfs/mi.^2$ |
| Discharge Flow: | 0.00 MGD |

WQM 7.0 data is attachment.

Berks Properties
WQM Data.pdf

TRC results

## TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

| | | | |
|---|---|---|---|
| 0.64 | = Q stream (cfs) | 0.5 | = CV Daily |
| 0.014 | = Q discharge (MGD) | 0.5 | = CV Hourly |
| 30 | = no. samples | 1 | = AFC_Partial Mix Factor |
| 0.3 | = Chlorine Demand of Stream | 1 | = CFC_Partial Mix Factor |
| 0 | = Chlorine Demand of Discharge | 15 | = AFC_Criteria Compliance Time (min) |
| 0.5 | = BAT/BPJ Value | 720 | = CFC_Criteria Compliance Time (min) |
| 0 | = % Factor of Safety (FOS) | | =Decay Coefficient (K) |

| Source | Reference | AFC Calculations | Reference | CFC Calculations |
|---|---|---|---|---|
| TRC | 1.3.2.iii | WLA afc = 9.446 | 1.3.2.iii | WLA cfc = 9.201 |
| PENTOXSD TRG | 5.1a | LTAMULT afc = 0.373 | 5.1c | LTAMULT cfc = 0.581 |
| PENTOXSD TRG | 5.1b | LTA_afc= 3.520 | 5.1d | LTA_cfc = 5.349 |

| Source | | Effluent Limit Calculations | |
|---|---|---|---|
| PENTOXSD TRG | 5.1f | AML MULT = 1.231 | |
| PENTOXSD TRG | 5.1g | AVG MON LIMIT (mg/l) = 0.500 | BAT/BPJ |
| | | INST MAX LIMIT (mg/l) = 1.635 | |

| | |
|---|---|
| WLA afc | **(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)** |
| LTAMULT afc | EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5) |
| LTA_afc | wla_afc*LTAMULT_afc |
| **WLA_cfc** | **(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc) )...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)** |
| LTAMULT_cfc | EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5) |
| **LTA_cfc** | wla_cfc*LTAMULT_cfc |
| AML MULT | EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1)) |
| AVG MON LIMIT | MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT) |
| INST MAX LIMIT | **1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)** |

**Permit No. PA0055352**

## Existing Effluent Limitations and Monitoring Requirements

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) | | Concentrations (mg/L) | | | | Minimum Measurement Frequency | Required Sample Type |
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| Dissolved Oxygen | XXX | XXX | 5.0 | XXX | XXX | XXX | 1/day | Grab |
| Total Residual Chlorine | XXX | XXX | XXX | 0.5 | XXX | 1.64 | 1/day | Grab |
| $CBOD_5$ | XXX | XXX | XXX | 25 | XXX | 50 | 2/month | 8-Hr Composite |
| Total Suspended Solids | XXX | XXX | XXX | 30 | XXX | 60 | 2/month | 8-Hr Composite |
| Fecal Coliform (CFU/100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1,000 | 2/month | Grab |
| Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2,000 Geo Mean | XXX | 10,000 | 2/month | Grab |
| Ammonia-Nitrogen | XXX | XXX | XXX | 20 | XXX | 40 | 2/month | 8-Hr Composite |
| Total Phosphorus | 0.059 | XXX | XXX | 0.5 | XXX | 1.0 | 2/month | 8-Hr Composite |

## 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 | Daily Maximum | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | 5.0 | XXX | XXX | XXX | 1/day | Grab |
| TRC | XXX | XXX | XXX | 0.5 | XXX | 1.64 | 1/day | Grab |
| $CBOD_5$ | XXX | XXX | XXX | 25.0 | XXX | 50.0 | 2/month | 8-Hr Composite |
| TSS | XXX | XXX | XXX | 30.0 | XXX | 60.0 | 2/month | 8-Hr Composite |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2,000 Geo Mean | XXX | 10,000 | 2/month | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1,000 | 2/month | Grab |
| Ammonia | XXX | XXX | XXX | 20.0 | XXX | 40.0 | 2/month | 8-Hr Composite |
| Total Phosphorus | 0.059 | XXX | XXX | 0.5 | XXX | 1.0 | 2/month | 8-Hr Composite |

Compliance Sampling Location:

Other Comments:

| Tools and References Used to Develop Permit | |
|---|---|
| | |
| ☒ | WQM for Windows Model (see Attachment ) |
| ☐ | PENTOXSD for Windows Model (see Attachment ) |
| ☒ | TRC Model Spreadsheet (see Attachment ) |
| ☐ | Temperature Model Spreadsheet (see Attachment ) |
| ☐ | Toxics Screening Analysis Spreadsheet (see Attachment ) |
| ☐ | Water Quality Toxics Management Strategy, 361-0100-003, 4/06. |
| ☒ | Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97. |
| ☐ | Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98. |
| ☐ | Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96. |
| ☐ | Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97. |
| ☐ | Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97. |
| ☐ | Pennsylvania CSO Policy, 385-2000-011, 9/08. |
| ☒ | Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03. |
| ☐ | Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97. |
| ☐ | Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97. |
| ☐ | Implementation Guidance Design Conditions, 391-2000-006, 9/97. |
| ☒ | Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004. |
| ☐ | Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997. |
| ☐ | Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99. |
| ☐ | Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004. |
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