Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0027626**
Facility Type	**Municipal**	APS ID	**920819**
Major / Minor	**Major**	Authorization ID	**1147112**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Kiski Valley Water Pollution Control Authority**	Facility Name	**Kiski Valley WPCA WWTP**
Applicant Address	1361 School Road	Facility Address	1361 School Road
	Leechburg, PA 15656-4904		Leechburg, PA 15656-4904
Applicant Contact	Dennis Duryea	Facility Contact	Same as Applicant
Applicant Phone	(724) 568-3655	Facility Phone	Same as Applicant
Client ID	42731	Site ID	238775
Ch 94 Load Status	Not Overloaded	Municipality	Allegheny Township
Connection Status	Dept. Imposed Connection Prohibitions	County	Westmoreland
Date Application Received	August 4, 2016	EPA Waived?	No
Date Application Accepted	August 9, 2016	If No, Reason	Major Facility, Pretreatment

Purpose of Application: Application for the renewal of an NPDES permit for the discharge of treated Sewage.

Summary of Review

Introduction

The Authority has applied for the renewal of existing NPDES Permit No. PA0027626, which was previously issued on January 25, 2012, and expired on January 31, 2017.

Facility Overview

WQM Permit No. 6571417 A-5 authorized plant expansion with a rated annual average design flow & design hydraulic capacity of 7.0 MGD, and a design organic capacity of 11,700 lbs./day.

Sewage from this plant is treated with Sequential Batch Reactors (SBRs). The resulting effluent is disinfected via UV light and discharges to the Kiskiminetas River which is designated as a Warm Water Fishery (WWF) per 25 Pa. Chapter 93 Designated Use and is located in State Watershed 18-B. A comprehensive listing of outfalls can be found below.

001	—	Treated Sewage
021	Diversion Chamber 19	CSO
023	Diversion Chamber 21	CSO
040	—	Stormwater
041	—	Stormwater

Combined Sewer Overflow (CSO) Outfalls 021 and 023 will again be permitted. These outfalls serve as CSOs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Part C.II, Combined Sewer Overflows, has been incorporated into the permit.

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Project Manager	April 16, 2025
X		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	April 17, 2025

Summary of Review

Stormwater Outfalls 040 and 041 will again be permitted for the discharge of uncontaminated stormwater runoff from the areas in and around the treatment plant. Part C.VII, Requirements Applicable to Stormwater Outfalls, has been added to the permit.

Combined Sewer Overflows

Part C requires the permittee to continue implementation of the NMCs and demonstrate system-wide compliance with the NMCs. Site specific O&M obligations were taken from the NMC Plan, received September 28, 1998. A Department NMC inspection will occur after permit issuance to ensure continued compliance.

Part C requires the permittee to implement the LTCP, dated August 9, 2004, and later updated in 2007 & 2008. The LTCP complies with the EPA CSO Policy's Presumption Approach criteria to meet receiving Water Quality Standards (WQS) by capturing no less than at least **85%** of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions. The Department approved the LTCP on May 22, 2008. All planned CSO Control Measures discussed in the LTCP have been completed.

The permittee's Post-Construction Compliance Monitoring (PCCM) Plan, which is part of the LTCP and is designed to verify compliance with water quality standards and the effectiveness of LTCP implementation, was approved on March 28, 2025. The permittee shall implement the PCCM Plan during the term of this permit, and in accordance with LTCP Implementation Schedule, Part C.II.C.3.

EPA-Administered Pretreatment Program Requirements

The EPA Administers a National Pretreatment Program as a part of the National Pollutant Discharge Elimination System (NPDES) administration. The goal of the National Pretreatment Program is to prevent the introduction of pollutants to Publicly Owned Treatment Works (POTWs) that will interfere with the operation of the POTW, pass through the POTW untreated, thereby improving opportunities to recycle and reclaim municipal and industrial wastewaters and sludges. The general pretreatment regulations that require certain POTWs to establish a local pretreatment program can be found at 40 CFR Part 403.8(a).

Kiski Valley Water Pollution Control Authority is already enrolled in the pretreatment program so the Part C condition "Pretreatment Program Implementation" will again be included in the permit. The industrial users report on the 2016 application include a metal finisher and a centralized waste treatment facility.

Summary of Changes Since Last Permit Issuance

- Ammonia-Nitrogen monitoring added
- UV monitoring added
- *E. Coli* monitoring added
- Annual PFOA, PFOS, PFBS, and HFPO-DA monitoring added
- Total copper and total zinc monitoring added based upon TMS
- Total Antimony monitoring added, as sampling did not meet TQL
- Toxaphene limit imposed, as sampling did not meet TQL
- Concentration based effluent limits for total aluminum, total iron, and total manganese were imposed due to TMDL
- TRC limit was removed because the facility no longer uses chlorine for disinfection
- Revised Part C, Combined Sewer Overflow, language revised
- Revised Part C, Whole Effluent Toxicity, language revised (annual Chronic WET testing required, and updates were made to the Dilution Series & TIWC)

Sludge use and disposal description and location(s): Seneca Landfill, Harmony, PA (Permit #10043)

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-

Summary of Review
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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	7.0
Latitude	40º 36' 34.00"	Longitude	-79º 35' 3.00"
Quad Name	Vandergrift	Quad Code	1409
Wastewater Description:	Sewage Effluent		
Receiving Waters	Kiskiminetas River (WWF)	Stream Code	42816
NHD Com ID	125290753	RMI	9.35
Drainage Area	1850	Yield (cfs/mi^2)	0.08054
Q_{7-10} Flow (cfs)	149	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	770	Slope (ft/ft)	0.00275
Watershed No.	18-B	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	NONE	Exceptions to Criteria	NONE
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, TOTAL SUSPENDED SOLIDS (TSS)		
Source(s) of Impairment	ACID MINE DRAINAGE, ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority - Freeport		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	29.4	Distance from Outfall (mi)	10.1

Changes Since Last Permit Issuance: UV was installed to replace chlorine for disinfection.

Other Comments:

Kiskiminetas-Conemaugh River Watershed TMDL

A TMDL for the Kiskiminetas-Conemaugh River Watershed ("Kiski-Conemaugh TMDL") was completed on January 29, 2010, for the control of acid mine drainage pollutants: aluminum, iron, manganese, sediment and pH. In accordance with 40 CFR § 122.44(d)(1)(vii)(B), when developing WQBELs, the permitting authority shall ensure that effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation (WLA) for the discharge prepared by the State and approved by EPA pursuant to 40 CFR § 130.7. The Kiski Valley WPCA WWTP was assigned WLAs for aluminum, iron, and manganese by the Kiski-Conemaugh TMDL. Therefore, pursuant to § 122.44(d)(1)(vii)(B), WQBELs will be imposed at Outfall 001. Only aluminum, iron, and manganese WQBELs are imposed because the TMDL does not establish WLAs for sediment or pH. The TMDL used a surrogate approach for both of those constituents by which reductions of in-stream concentrations of aluminum, iron, and manganese would result in acceptable reductions of sediment and mitigation of acidic pH.

The TMDL's allocated concentrations for aluminum, iron, and manganese are equivalent to the most stringent water quality criteria for those pollutants and those criteria will be imposed as end-of-pipe limits at Outfall 001. The methods used to

implement water quality criteria are described in 25 Pa. Code §§ 96.3 and 96.4. Also, DEP's *Water Quality Toxics Management Strategy* (Doc. No. 361-2000-003) addresses design conditions in detail (Table 1 in that document), including the appropriate durations to assign to water quality criteria. The design duration for Criteria Maximum Concentration (CMC) criteria is 1 hour (acute). The design duration for Criteria Continuous Concentration (CCC) criteria is 4 days (chronic). The design duration for Threshold Human Health (THH) criteria is 30 days (chronic). The design duration for Cancer Risk Level (CRL) criteria is 70 years (chronic).

The 750 µg/L aluminum criterion in 25 Pa. Code § 93.8c is a CMC (acute) criterion. Therefore, 750 µg/L is imposed as a maximum daily limit. There is no CCC criterion for aluminum necessitating the imposition of a more stringent average monthly limit. Imposing 750 µg/L as both a maximum daily and average monthly limit is protective of water quality uses.

The 1.5 mg/L iron criterion is given as a 30-day average in 25 Pa. Code § 93.7(a). Therefore, 1.5 mg/L is imposed as an average monthly limit and the maximum daily effluent limit is calculated using a multiplier of two times the average monthly limit based on DEP's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (Doc. No. 362-0400-001, Chapter 3, pp. 15 – 16).

The 1 mg/L potable water supply criterion for manganese in 25 Pa. Code § 93.7(a) is a human health criterion (chronic). Per Table 1 of the *Water Quality Toxics Management Strategy*, the duration for a THH criterion is 30 days. Therefore, an average monthly effluent limit of 1 mg/L is imposed, and the maximum daily effluent limit is calculated using a multiplier of two times the average monthly limit consistent with the technical guidance cited above for iron.

Since the allocated concentrations are equivalent to water quality criteria, the Kiski Valley WPCA WWTP's compliance with concentration limits for aluminum, iron, and manganese will not result in excursions above water quality criteria and the permit will be consistent with the TMDL's WLAs. Consequently, the TMDL's load limits are not required. The TMDL's WLAs and the applicable WQBELs are summarized in the table below.

TMDL Effluent Limits for Outfall 001

Pollutant	Average Monthly (mg/L)	Maximum Daily (mg/L)
Aluminum, Total	0.75	0.75
Iron, Total	1.5	3.0
Manganese, Total	1.0	2.0

Effluent concentrations (as reported in the renewal application) for aluminum, iron and manganese were significantly less than the proposed WQBELs found in the table above. As a result, no schedule of compliance is needed and the new TMDL WQBELs will take effect upon permit issuance.

Treatment Facility Summary

Treatment Facility Name: Kiski Valley WPCA WWTP

WQM Permit No.	Issuance Date	Purpose
6571418 A-8	May 15, 2023	Proposal to convert existing abandoned aeration tanks into sludge digestion tanks, install new blowers and air diffusers into the existing sludge digestion tanks, construction of a new belt filter press building, and installation of a new belt filter press.
6571417 A-7	10/25/2021	Modification of existing facilities including: removal of existing manually-cleaned bar screen and drainage rack, installation of mechanical bar screen, installation of a washer-compactor, installation of ultrasonic flow meter associated with the mechanical bar screen, and installation of grating.
6571417 A-6	4/8/2019	Modification of the existing Wean United Pump Station including: installation of a new 80 KW generator, installation of three new 2780 gpm raw sewage pumps, installation of new floor grating and a pump station roof, installation of a new heating and ventilation system, installation of new gate valves, check valves, and vacuum air release valves.
6571417 A-5	8/20/2012	Plant expansion for a hydraulic capacity of 7.0 MGD, peak instantaneous flow of 31.0 MGD, and a design organic capacity of 11,700 lbs/day. 4 SBR tanks were installed. The STP was converted from chlorine disinfection to UV disinfection.
6571417 A-4	11/5/2004	Modification and upgrade of the existing Beaver Run, East Vandergrift, Elder Run, Guffy Run, Leechburg Bridge, Penn Run, and Vandergrift pump stations. Modification of the existing sludge press at the STP.
6571417 A-3	3/15/2002	Modification to the existing STP including: new grit removal system, new comminutor, new influent VFD pump motors, new odor control/chemical scrubber system, new chemical storage building, new covers for the aerobic digester, new cover for the sludge thickener, new chlorine contact tank baffles, new piping, slide gates, and accessories.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	SBRs	UV	7.0

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
7.0	11,700	Not Overloaded	Aerobic Digestion	Dewatered and disposed in a landfill

Changes Since Last Permit Issuance: NONE

Other Comments: NONE

Compliance History

Operations Compliance Check Summary Report

Facility: KISKI VLY WPCA STP

NPDES Permit No.: PA0027626

Compliance Review Period: 3/1/20-3/3/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	INSPECTION COMMENT
03/20/2024	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted	
06/07/2023	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	DISCHARGE MONITORING REPORT (“DMR”) REVIEW (Jan. 2021 - Dec. 2022)
05/14/2021	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	
05/14/2021	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted	CSO/DMR SUPPLEMENTAL REPORTS REVIEW (January 2020 – December 2020): • eDMRs are consistently submitted on-time and complete. The CSO Supplemental Reports are attached to the eDMR submittals. • According to the Department’s records, the permittee began utilizing the eDMR system with the ~November 2014 DMR submittal.
05/14/2021	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted	

05/14/2021	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted	DISCHARGE MONITORING REPORT ("DMR") REVIEW (January 2019 – December 2020): • eDMRs are consistently submitted on-time and complete with the Non-Compliance, Biosolids, and CSO Supplemental Reports attached. • The eDMR review for the indicated period revealed two instantaneous maximum effluent exceedance; one during July 2020 and one during August 2020. • The eDMR review for the indicated period revealed zero reported unauthorized discharge(s). • The eDMR review for the indicated period revealed zero reported other non-compliance(s). • According to the Department's records, the permittee began utilizing the eDMR system with the ~November 2014 DMR submittal.

Violation Summary:

No violations noted during review period

Open Violations by Client ID:

No open violations for Client ID 42731

Enforcement Summary:

No enforcements executed during review period

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE
Sep-24	Fecal Coliform	2420	1000	CFU/100 ml	Instantaneous Maximum
Aug-24	Fecal Coliform	1414	1000	CFU/100 ml	Instantaneous Maximum
Jul-24	Fecal Coliform	2420	1000	CFU/100 ml	Instantaneous Maximum
Aug-22	Fecal Coliform	2420	1000	CFU/100 ml	Instantaneous Maximum
Aug-20	Fecal Coliform	1733	1000	CFU/100 ml	Instantaneous Maximum
Jul-20	Fecal Coliform	2420	1000	CFU/100 ml	Instantaneous Maximum

Compliance Status: Facility is generally in compliance with no open violations or pending enforcements.

Completed by: Amanda Illar

Completed date: 3/3/25

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	5.706824	2.952773	3.283001	2.833084	2.205166	2.265635	3.063959	2.551150	2.516510	4.758335	15.261210	4.303953
Flow (MGD) Daily Maximum	17.938019	9.572151	6.553083	5.577636	4.278023	3.534966	9.348101	6.662218	4.491112	8.670139	26.310408	13.118673
pH (S.U.) Minimum	6.61	6.37	6.51	6.56	6.64	6.63	6.56	6.73	6.67	6.47	6.64	6.60
pH (S.U.) Maximum	7.17	7.44	7.11	7.14	7.50	7.31	7.21	7.23	7.23	7.32	7.51	7.34
TRC (mg/L) Average Monthly	0.01	0.01	0.02	0.02	0.03	0.02	0.01	0.01	0.02	0.01	0.02	0.02
TRC (mg/L) Instantaneous Maximum	0.04	0.03	0.05	0.05	0.07	0.04	0.04	0.03	0.05	0.05	0.05	0.06
CBOD5 (lbs/day) Average Monthly	151.4	74.3	95.3	73.9	82.1	72.1	77.1	69.7	65.8	122.4	580.3	148.8
CBOD5 (lbs/day) Weekly Average	176.4	127.4	115.6	97.4	158.4	128.4	124.7	105.8	75.1	174.0	977.0	297.6
CBOD5 (mg/L) Average Monthly	3.2	3.0	3.5	3.1	4.2	3.7	3.0	3.2	3.1	3.1	4.4	3.9
CBOD5 (mg/L) Weekly Average	3.2	3.6	4.8	3.3	7.0	5.8	3.1	3.8	3.3	3.3	6.5	6.7
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	3436.6	2941.2	3169.6	3223.9	3017	3844	2995.5	3466.8	3054.3	4693.9	6770.4	4126
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	7646.3	8302.5	11203.8	6999.1	6957.3	7008	8891.3	9779.1	5209.6	9499.9	26989.7	12060
BOD5 (mg/L) Raw Sewage Influent Average Monthly	76.5	120.2	116.7	142.4	163.2	204.1	126.1	163	146.9	123.8	59.3	121.7
TSS (lbs/day) Average Monthly	260.2	79.3	97.7	99.9	221.0	155.8	87.5	124.3	68.4	125.6	1263.5	223.8
TSS (lbs/day) Raw Sewage Influent Average Monthly	2642	3481	4978	3017	3578	3622	3071	4541	4260	5832	8368	4239

TSS (lbs/day) Raw Sewage Influent Daily Maximum	4444	5342	12898	4301	9752	8582	6468	8847	6892	13089	26837	13400
TSS (lbs/day) Weekly Average	403.5	272.6	147.2	134.7	792.1	491.5	137.6	372.3	90.9	182.6	1334.7	553.6
TSS (mg/L) Average Monthly	5	3	3	4	10	8	3.0	5	3	3.13	8.43	4.84
TSS (mg/L) Raw Sewage Influent Average Monthly	70	149	150	139	182	187	138	214	178	143.44	80	116.13
TSS (mg/L) Weekly Average	5.4	6.6	4.9	5.3	34.7	22.4	3.4	13.7	4	3.3	15.6	9.4
Fecal Coliform (CFU/100 ml) Geometric Mean	22	29	10	3	32	64	46	27	41	15	8.1	14
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	771	437	22	25	867	2420	1414	2420	179	96	1554	42

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 7.0
Latitude 40º 36' 34.00" **Longitude** -79º 35' 3.00"
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)

Comments: The discharge was evaluated using WQM 7.0 Version 1.1 (Attachment 2) to evaluate $CBOD_5$, Ammonia Nitrogen, and Dissolved Oxygen. The modeling results show the above technology based effluent limitations are appropriate.

For existing discharges, if WQM modeling results for summer indicates that an average monthly limit of 25 mg/L (ammonia-nitrogen) is acceptable, the application manager will generally establish a year-round monitoring requirement for ammonia-nitrogen (Section I.A, Note 5, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (Attachment 3 - TMS Version 1.4) determined the following parameters were candidates for monitoring and/or limitations: Total Antimony, Total Copper, Total Zinc, and Toxaphene.

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

Parameter	Limit (ug/l)	SBC	Model
Toxaphene	0.002	Average Monthly	TMS Version 1.4

The recommended limits for Toxaphene are less than the reported concentration, and therefore, a compliance schedule is not necessary. The TMS Model recommended Monitoring be established for Total Antimony, Total Copper, and Total Zinc, as the discharge concentration of these pollutants are greater than 10% of the governing WQBELs (no RP).

Best Professional Judgment (BPJ) Limitations

Comments: A minimum Dissolved Oxygen (DO) limit of 4.0 mg/L will be established based on BPJ to ensure adequate operation and maintenance (Section I.A, Note 6, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

The facility is not seeking to revise the previously permitted effluent limits.

Per- and Polyfluoroalkyl Substances (PFAS)

In February 2024, DEP implemented a new monitoring initiative for PFAS consistent with an EPA memorandum that provides guidance to states for addressing PFAS discharges. PFAS are a family of thousands of synthetic organic chemicals that contain a chain of strong carbon-fluorine bonds. Many PFAS are highly stable, water- and oil-resistant, and exhibit other properties that make them useful in a variety of consumer products and industrial processes. PFAS are resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis and do not readily degrade naturally; thus, many PFAS accumulate over time. According to the United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), the environmental persistence and mobility of some PFAS, combined with decades of widespread use, have resulted in their presence in surface water, groundwater, drinking water, rainwater, soil, sediment, ice caps, outdoor and indoor air, plants, animal tissue, and human blood serum across the globe. ATSDR also reported that exposure to certain PFAS can lead to adverse human health impacts Due to their durability, toxicity, persistence, and pervasiveness, PFAS have emerged as potentially significant pollutants of concern.

In accordance with Section II.G of DEP's "Standard Operating Procedure (SOP) for Clean Water Program – Establishing Effluent Limitations for Individual Sewage Permits" [SOP No. BCW-PMT-033] and under the authority of 25 Pa. Code § 92a.61(b), DEP has determined that monitoring for a subset of common/well-studied PFAS including Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA) is necessary to help understand the extent of environmental contamination by PFAS in the Commonwealth and the extent to which point source dischargers are contributors. SOP BCW-PMT-033 directs permit writers to consider special monitoring requirements for PFOA, PFOS, PFBS, and HFPO-DA in the following instances:

a. If sampling that is completed as part of the permit renewal application reveals a detection of PFOA, PFOS, HFPO-DA or PFBS (any of these compounds), the application manager will establish a quarterly monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds) in the permit.

b. If sampling that is completed as part of the permit renewal application demonstrates non-detect values at or below the Target QLs for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds in a minimum of 3 samples), the application manager will establish an annual monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS in the permit.

c. In all cases the application manager will include a condition in the permit that the permittee may cease monitoring for PFOA, PFOS, HFPO-DA and PFBS when the permittee reports non-detect values at or below the Target QL for four consecutive monitoring periods for each PFAS parameter that is analyzed. Use the following language: The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detects at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees should enter a No Discharge Indicator (NODI) Code of "GG" on DMRs.

The Authority's application was submitted before the NPDES permit application forms were updated to require sampling for PFOA, PFOS, PFBS, and HFPO-DA. Therefore, annual reporting of PFOA, PFOS, PFBS, and HFPO-DA will be established consistent with Section II.G of SOP BCW-PMT-033 and under the authority of 25 Pa. Code § 92a.61(b).

As stated in Section II.G.3 of SOP BCW-PMT-0332, if non-detect values at or below DEP's Target QLs are reported for four consecutive monitoring periods (i.e., four consecutive annual results), then the monitoring may be discontinued. Footnote (3) has been added to Part A of the NPDES Permit, which further discusses monitoring and reporting requirements.

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 386-0400-001).

For POTWs, mass loading limits will be established for $CBOD_5$, TSS, NH_3-N, and where necessary Total P and Total N. In general, average monthly mass loading limits will be established for $CBOD_5$, TSS, NH_3-N, and where necessary Total P and Total N, and average weekly mass loading limits will be established for $CBOD_5$ and TSS. Mass loading limits will also be established for toxic pollutants with effluent concentration limits (Section IV, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

For POTWs with design flows greater than 2,000 GPD and for non-municipal sewage facilities that service municipalities or portions thereof, the application manager will establish influent BOD_5 and TSS monitoring in the permit using the same frequency and sample type as is used for other effluent parameters (Section IV.E.8, SOP No BCW-PWT-002, New and Reissuance Sewage Individual NPDES Permit Applications).

Sewage discharges will include monitoring, at a minimum, for *E. Coli*, in new and reissued permits, with a monitoring frequency of 1/month for design flows >= 1 MGD per 25 Pa. Code § 92a.061 and Section I.A, Note 12, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The discharge is to waters not impaired for nutrients. A 1/year monitoring requirement for Total N & Total P has been added to the permit per 25 Pa. Code § 92a.61 and Section I.A, Note 7 & 8, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits table(s) in Part A will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm2 or mWs/cm2 or mjoules/cm2) or UV intensity (µW/cm2 or mW/cm2) at the same monitoring frequency that would be used for TRC per Section I.A, Note 4, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Whole Effluent Toxicity (WET)

For Outfall 001, ☐ **Acute** ☒ **Chronic** WET Testing was completed:

☒ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☐ Other:

The dilution series used for the tests was: 100%, 60%, 30%, 4%, and 2%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 4%.

Summary of Four Most Recent Test Results

(NOTE – WET Testing data submitted with the renewal application reported Chronic test results, as required by the previous permit)

TST Data Analysis

(NOTE – In lieu of recording information below, the application manager may attach the DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
10/20/2015			PASS	PASS
01/26/2016			PASS	PASS
04/19/2016			PASS	PASS
05/24/2016			PASS	PASS

***** *A "passing" result is that in which the replicate data for the TIWC is not statistically significant from the control condition. This is exhibited when the calculated t value ("T-Test Result") is greater than the critical t value. A "failing" result is exhibited when the calculated t value ("T-Test Result") is less than the critical t value.*

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (*NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).*

☐ **YES** ☒ **NO**

Comments: This permit was last issued by the Department on January 25, 2012. The expired permit required that 4 WET Tests be submitted with the renewal application, which was received on August 4, 2016. The draft permit will require that WET Test be conducted annually, and Part C.V. language has been revised consistent with 40 CFR 122.21(j)(5)(iv).

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): **0.094** Chronic Partial Mix Factor (PMFc): **0.653**

1. Determine IWC – Acute (IWCa):

$(Q_d \times 1.547) / ((Q_{7\text{-}10} \times PMFa) + (Q_d \times 1.547))$

[(7.0 MGD x 1.547) / ((149 cfs x 0.094) + (7.0 MGD x 1.547))] x 100 = **43.60%**

Is IWCa < 1%? ☐ **YES** ☒ **NO** **(YES - Acute Tests Required OR NO - Chronic Tests Required)**

Type of Test for Permit Renewal: **Chronic Tests Required**

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = 43.60 / 0.3 = 100**%**

2b. Determine Target IWCc (If Chronic Tests Required)

$(Q_d \times 1.547) / (Q_{7\text{-}10} \times PMFc) + (Q_d \times 1.547)$

[(7 MGD x 1.547) / ((149 cfs x 0.653) + (7.0 MGD x 1.547))] x 100 = **10 %**

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 60%, 30%, 10%, and 5%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

N/A

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" (386-0400-001), 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	Weekly Average	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	1455	2335	XXX	25.0	40.0 Wkly Avg	50	1/day	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report Wkly Avg	XXX	1/day	24-Hr Composite
TSS	1750	2625	XXX	30.0	45.0 Wkly Avg	60	1/day	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report Wkly Avg	XXX	1/day	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/day	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/day	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/day	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite

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	Weekly Average	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Aluminum	43.78	43.78 Daily Max	XXX	0.75	0.75	XXX	1/week	24-Hr Composite
Total Antimony (ug/L)	Report	Report Daily Max	XXX	Report	Report	XXX	1/month	24-Hr Composite
Total Copper (ug/L)	Report	Report Daily Max	XXX	Report	Report	XXX	1/month	24-Hr Composite
Total Iron	87.57	175.14 Daily Max	XXX	1.5	3.0	XXX	1/week	24-Hr Composite
Total Manganese	58.38	116.76 Daily Max	XXX	1.0	2.0	XXX	1/week	24-Hr Composite
Total Zinc (ug/L)	Report	Report Daily Max	XXX	Report	Report	XXX	1/month	24-Hr Composite
Toxaphene (ug/L)	XXX	XXX	XXX	0.002	0.003	0.005	1/week	24-Hr Composite
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

Other Comments: NONE

Attachment 1 – USGS StreamStats Report

StreamStats Report PA0027626

Region ID: PA
Workspace ID: PA20250402184333668000
Clicked Point (Latitude, Longitude): 40.60944, -79.58342
Time: 2025-04-02 14:43:59 -0400

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1850	square miles
ELEV	Mean Basin Elevation	1714	feet
PRECIP	Mean Annual Precipitation	44	inches

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1850	square miles	2.33	1720
ELEV	Mean Basin Elevation	1714	feet	898	2700
PRECIP	Mean Annual Precipitation	44	inches	38.7	47.9

Low-Flow Statistics Disclaimers [Low Flow Region 3]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 3]

Statistic	Value	Unit
7 Day 2 Year Low Flow	246	ft^3/s
30 Day 2 Year Low Flow	320	ft^3/s
7 Day 10 Year Low Flow	149	ft^3/s
30 Day 10 Year Low Flow	183	ft^3/s

Statistic	Value	Unit
90 Day 10 Year Low Flow	251	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.28.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 2 – WQM 7.0 Version 1.1 – Summer Period

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18B	42816	KISKIMINETAS RIVER	9.350	770.00	1850.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.081	0.00	0.00	0.000	0.000	10.0	262.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Kiski WPCA	P0027626	7.0000	7.0000	7.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.38	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18B	42816	KISKIMINETAS RIVER	8.800	762.00	1860.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.081	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18B	42816	KISKIMINETAS RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
9.350	149.00	0.00	149.00	10.829	0.00275	.947	262	276.59	0.64	0.052	24.66	7.00
Q1-10 Flow												
9.350	95.36	0.00	95.36	10.829	0.00275	NA	NA	NA	0.51	0.066	24.49	7.00
Q30-10 Flow												
9.350	202.64	0.00	202.64	10.829	0.00275	NA	NA	NA	0.76	0.044	24.75	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18B	42816	KISKIMINETAS RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
9.350	Kiski WPCA	11.55	50	11.55	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
9.350	Kiski WPCA	1.39	25	1.39	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
9.35	Kiski WPCA	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18B	42816	KISKIMINETAS RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
9.350	7.000	24.661	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
262.000	0.947	276.589	0.644
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.56	0.696	1.69	1.002
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.015	9.243	Tsivoglou	5
Reach Travel Time (days)			
0.052			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.005	3.54	1.69	7.58
0.010	3.53	1.68	7.58
0.016	3.51	1.67	7.58
0.021	3.49	1.66	7.58
0.026	3.48	1.65	7.58
0.031	3.46	1.64	7.58
0.037	3.45	1.63	7.58
0.042	3.43	1.62	7.58
0.047	3.42	1.62	7.58
0.052	3.40	1.61	7.58

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18B	42816	KISKIMINETAS RIVER

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
9.350	Kiski WPCA	P0027626	7.000	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

Attachment 3 – TMS Version 1.4

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Kiski Valley WPCA** NPDES Permit No.: **PA0027626** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Treated Effluent**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
7	100	7						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Stream CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteria Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		441									
	Chloride (PWS)	mg/L		168									
	Bromide	mg/L	<	5									
	Sulfate (PWS)	mg/L		68.2									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L	<	50									
	Total Antimony	µg/L	<	6									
	Total Arsenic	µg/L	<	5									
	Total Barium	µg/L		40.9									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		211									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	0.1									
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L	<	5									
	Total Copper	µg/L		5.38									
	Free Cyanide	µg/L	<	5									
	Total Cyanide	µg/L		15									
	Dissolved Iron	µg/L	<	70									
	Total Iron	µg/L	<	70									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		97									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		18									
	Total Phenols (Phenolics) (PWS)	µg/L	<	50									
	Total Selenium	µg/L		0.767									
	Total Silver	µg/L	<	0.4									
	Total Thallium	µg/L	<	2									
	Total Zinc	µg/L		55									
	Total Molybdenum	µg/L	<	20									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	4									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	1										
	Chlorobenzene	µg/L		1										
	Chlorodibromomethane	µg/L	<	1										
	Chloroethane	µg/L	<	1										
	2-Chloroethyl Vinyl Ether	µg/L	<	2										
	Chloroform	µg/L	<	1										
	Dichlorobromomethane	µg/L	<	1										
	1,1-Dichloroethane	µg/L	<	1										
	1,2-Dichloroethane	µg/L	<	1										
	1,1-Dichloroethylene	µg/L	<	1										
	1,2-Dichloropropane	µg/L	<	1										
	1,3-Dichloropropylene	µg/L	<	1										
	1,4-Dioxane	µg/L	<	1										
	Ethylbenzene	µg/L	<	1										
	Methyl Bromide	µg/L	<	1										
	Methyl Chloride	µg/L	<	1										
	Methylene Chloride	µg/L	<	1										
	1,1,2,2-Tetrachloroethane	µg/L	<	1										
	Tetrachloroethylene	µg/L	<	1										
	Toluene	µg/L	<	1										
	1,2-trans-Dichloroethylene	µg/L	<	1										
	1,1,1-Trichloroethane	µg/L	<	1										
	1,1,2-Trichloroethane	µg/L	<	1										
	Trichloroethylene	µg/L	<	1										
	Vinyl Chloride	µg/L	<	0.5										
Group 4	2-Chlorophenol	µg/L	<	5.1										
	2,4-Dichlorophenol	µg/L	<	5.1										
	2,4-Dimethylphenol	µg/L	<	5.1										
	4,6-Dinitro-o-Cresol	µg/L	<	5.1										
	2,4-Dinitrophenol	µg/L	<	12.8										
	2-Nitrophenol	µg/L	<	5.1										
	4-Nitrophenol	µg/L	<	5.1										
	p-Chloro-m-Cresol	µg/L	<	5.1										
	Pentachlorophenol	µg/L	<	0.499										
	Phenol	µg/L	<	5.1										
	2,4,6-Trichlorophenol	µg/L	<	5.1										
Group 5	Acenaphthene	µg/L	<	5.1										
	Acenaphthylene	µg/L	<	5.1										
	Anthracene	µg/L	<	5.1										
	Benzidine	µg/L	<	0.61										
	Benzo(a)Anthracene	µg/L	<	0.271										
	Benzo(a)Pyrene	µg/L	<	0.249										
	3,4-Benzofluoranthene	µg/L	<	0.271										
	Benzo(ghi)Perylene	µg/L	<	5.1										
	Benzo(k)Fluoranthene	µg/L	<	0.334										
	Bis(2-Chloroethoxy)Methane	µg/L	<	5.1										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.27										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	5.1										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	1.58										
	4-Bromophenyl Phenyl Ether	µg/L	<	5.1										
	Butyl Benzyl Phthalate	µg/L	<	1.04										
	2-Chloronaphthalene	µg/L	<	5.1										
	4-Chlorophenyl Phenyl Ether	µg/L	<	5.1										
	Chrysene	µg/L	<	0.51										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.414										
	1,2-Dichlorobenzene	µg/L	<	5.1										
	1,3-Dichlorobenzene	µg/L	<	5.1										
	1,4-Dichlorobenzene	µg/L	<	5.1										
	3,3-Dichlorobenzidine	µg/L	<	0.745										
	Diethyl Phthalate	µg/L	<	5.1										
	Dimethyl Phthalate	µg/L	<	5.1										
	Di-n-Butyl Phthalate	µg/L	<	5.1										
	2,4-Dinitrotoluene	µg/L	<	0.465										

	2,6-Dinitrotoluene	µg/L	<	0.448										
	Di-n-Octyl Phthalate	µg/L	<	5.1										
	1,2-Diphenylhydrazine	µg/L	<	5.1										
	Fluoranthene	µg/L	<	5.1										
	Fluorene	µg/L	<	5.1										
	Hexachlorobenzene	µg/L	<	0.418										
	Hexachlorobutadiene	µg/L	<	0.266										
	Hexachlorocyclopentadiene	µg/L	<	0.403										
	Hexachloroethane	µg/L	<	0.474										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.392										
	Isophorone	µg/L	<	5.1										
	Naphthalene	µg/L	<	5.1										
	Nitrobenzene	µg/L	<	5.1										
	n-Nitrosodimethylamine	µg/L	<	0.24										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.422										
	n-Nitrosodiphenylamine	µg/L	<	5.1										
	Phenanthrene	µg/L	<	0.421										
	Pyrene	µg/L	<	5.1										
	1,2,4-Trichlorobenzene	µg/L	<	0.273										
Group 6	Aldrin	µg/L	<	0.02										
	alpha-BHC	µg/L	<	0.05										
	beta-BHC	µg/L	<	0.052										
	gamma-BHC	µg/L	<	0.052										
	delta BHC	µg/L	<	0.052										
	Chlordane	µg/L	<	0.52										
	4,4-DDT	µg/L	<	0.04										
	4,4-DDE	µg/L	<	0.04										
	4,4-DDD	µg/L	<	0.04										
	Dieldrin	µg/L	<	0.04										
	alpha-Endosulfan	µg/L	<	0.05										
	beta-Endosulfan	µg/L	<	0.05										
	Endosulfan Sulfate	µg/L	<	0.1										
	Endrin	µg/L	<	0.02										
	Endrin Aldehyde	µg/L	<	0.1										
	Heptachlor	µg/L	<	0.02										
	Heptachlor Epoxide	µg/L	<	0.04										
	PCB-1016	µg/L	<											
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<											
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<	1										
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L		0.598										
	Total Beta	pCi/L		8.13										
	Radium 226/228	pCi/L		1.223										
	Total Strontium	µg/L												
	Total Uranium	µg/L		0.089										
	Osmotic Pressure	mOs/kg												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Kiski Valley WPCA, NPDES Permit No. PA0027626, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Kiskiminetas River**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	042816	9.35	770	1850			Yes
End of Reach 1	042816	8.8	762	1860			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	9.35	0.08054			10	262						100	7		
End of Reach 1	8.8	0.08054			10										

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	9.35														
End of Reach 1	8.8														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Kiski Valley WPCA, NPDES Permit No. PA0027626, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
9.35	149.00		149.00	10.829	0.003	0.947	262.	10.	0.644	0.052	1689.835
8.8	149.80		149.8044					10.000			

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
9.35	589.32		589.32	10.829	0.003	1.695	262.	154.528	1.351	0.025	782.938
8.8	592.103		592.10								

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 15 PMF: 0.094 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	1,722	
Total Antimony	0	0		0	1,100	1,100	2,526	
Total Arsenic	0	0		0	340	340	781	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	48,223	
Total Boron	0	0		0	8,100	8,100	18,600	
Total Cadmium	0	0		0	2.014	2.13	4.9	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	4,140	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	37.4	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	218	
Total Copper	0	0		0	13.439	14.0	32.1	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	50.5	

Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.581	81.6	187	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	3.78	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	1,077	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.217	3.78	8.69	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	149	
Total Zinc	0	0		0	117.180	120	275	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	6.89	
Acrylonitrile	0	0		0	650	650	1,493	
Benzene	0	0		0	640	640	1,470	
Bromoform	0	0		0	1,800	1,800	4,133	
Carbon Tetrachloride	0	0		0	2,800	2,800	6,430	
Chlorobenzene	0	0		0	1,200	1,200	2,756	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	41,334	
Chloroform	0	0		0	1,900	1,900	4,363	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	34,445	
1,1-Dichloroethylene	0	0		0	7,500	7,500	17,223	
1,2-Dichloropropane	0	0		0	11,000	11,000	25,260	
1,3-Dichloropropylene	0	0		0	310	310	712	
Ethylbenzene	0	0		0	2,900	2,900	6,659	
Methyl Bromide	0	0		0	550	550	1,263	
Methyl Chloride	0	0		0	28,000	28,000	64,297	
Methylene Chloride	0	0		0	12,000	12,000	27,556	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	2,296	
Tetrachloroethylene	0	0		0	700	700	1,607	
Toluene	0	0		0	1,700	1,700	3,904	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	15,615	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	6,889	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	7,808	
Trichloroethylene	0	0		0	2,300	2,300	5,282	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	1,286	
2,4-Dichlorophenol	0	0		0	1,700	1,700	3,904	
2,4-Dimethylphenol	0	0		0	660	660	1,516	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	184	
2,4-Dinitrophenol	0	0		0	660	660	1,516	
2-Nitrophenol	0	0		0	8,000	8,000	18,371	
4-Nitrophenol	0	0		0	2,300	2,300	5,282	
p-Chloro-m-Cresol	0	0		0	160	160	367	
Pentachlorophenol	0	0		0	8.723	8.72	20.0	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	1,056	

Acenaphthene	0	0		0	83	83.0	191	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	689	
Benzo(a)Anthracene	0	0		0	0.5	0.5	1.15	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	68,890	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	10,334	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	620	
Butyl Benzyl Phthalate	0	0		0	140	140	321	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	1,883	
1,3-Dichlorobenzene	0	0		0	350	350	804	
1,4-Dichlorobenzene	0	0		0	730	730	1,676	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	9,185	
Dimethyl Phthalate	0	0		0	2,500	2,500	5,741	
Di-n-Butyl Phthalate	0	0		0	110	110	253	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	3,674	
2,6-Dinitrotoluene	0	0		0	990	990	2,273	
1,2-Diphenylhydrazine	0	0		0	15	15.0	34.4	
Fluoranthene	0	0		0	200	200	459	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	23.0	
Hexachlorocyclopentadiene	0	0		0	5	5.0	11.5	
Hexachloroethane	0	0		0	60	60.0	138	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	22,963	
Naphthalene	0	0		0	140	140	321	
Nitrobenzene	0	0		0	4,000	4,000	9,185	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	39,038	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	689	
Phenanthrene	0	0		0	5	5.0	11.5	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	299	
Aldrin	0	0		0	3	3.0	6.89	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.95	0.95	2.18	
Chlordane	0	0		0	2.4	2.4	5.51	
4,4-DDT	0	0		0	1.1	1.1	2.53	
4,4-DDE	0	0		0	1.1	1.1	2.53	

4,4-DDD	0	0		0	1.1	1.1	2.53	
Dieldrin	0	0		0	0.24	0.24	0.55	
alpha-Endosulfan	0	0		0	0.22	0.22	0.51	
beta-Endosulfan	0	0		0	0.22	0.22	0.51	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	0.2	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	1.19	
Heptachlor Epoxide	0	0		0	0.5	0.5	1.15	
Toxaphene	0	0		0	0.73	0.73	1.68	

☑ *CFC* CCT (min): 720 PMF: 0.653 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	2,196	
Total Arsenic	0	0		0	150	150	1,497	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	40,923	
Total Boron	0	0		0	1,600	1,600	15,970	
Total Cadmium	0	0		0	0.246	0.27	2.7	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	860	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	104	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	190	
Total Copper	0	0		0	8.956	9.33	93.1	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	51.9	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	22,139	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	31.8	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	9.04	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	521	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	49.8	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	130	
Total Zinc	0	0		0	118.139	120	1,196	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	29.9	
Acrylonitrile	0	0		0	130	130	1,298	
Benzene	0	0		0	130	130	1,298	
Bromoform	0	0		0	370	370	3,693	
Carbon Tetrachloride	0	0		0	560	560	5,590	
Chlorobenzene	0	0		0	240	240	2,396	

Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	34,935	
Chloroform	0	0		0	390	390	3,893	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	30,942	
1,1-Dichloroethylene	0	0		0	1,500	1,500	14,972	
1,2-Dichloropropane	0	0		0	2,200	2,200	21,959	
1,3-Dichloropropylene	0	0		0	61	61.0	609	
Ethylbenzene	0	0		0	580	580	5,789	
Methyl Bromide	0	0		0	110	110	1,098	
Methyl Chloride	0	0		0	5,500	5,500	54,897	
Methylene Chloride	0	0		0	2,400	2,400	23,955	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	2,096	
Tetrachloroethylene	0	0		0	140	140	1,397	
Toluene	0	0		0	330	330	3,294	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	13,974	
1,1,1-Trichloroethane	0	0		0	610	610	6,089	
1,1,2-Trichloroethane	0	0		0	680	680	6,787	
Trichloroethylene	0	0		0	450	450	4,492	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	1,098	
2,4-Dichlorophenol	0	0		0	340	340	3,394	
2,4-Dimethylphenol	0	0		0	130	130	1,298	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	160	
2,4-Dinitrophenol	0	0		0	130	130	1,298	
2-Nitrophenol	0	0		0	1,600	1,600	15,970	
4-Nitrophenol	0	0		0	470	470	4,691	
p-Chloro-m-Cresol	0	0		0	500	500	4,991	
Pentachlorophenol	0	0		0	6.693	6.69	66.8	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	908	
Acenaphthene	0	0		0	17	17.0	170	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	589	
Benzo(a)Anthracene	0	0		0	0.1	0.1	1.	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	59,888	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	9,083	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	539	
Butyl Benzyl Phthalate	0	0		0	35	35.0	349	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	

Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	1,597	
1,3-Dichlorobenzene	0	0		0	69	69.0	689	
1,4-Dichlorobenzene	0	0		0	150	150	1,497	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	7,985	
Dimethyl Phthalate	0	0		0	500	500	4,991	
Di-n-Butyl Phthalate	0	0		0	21	21.0	210	
2,4-Dinitrotoluene	0	0		0	320	320	3,194	
2,6-Dinitrotoluene	0	0		0	200	200	1,996	
1,2-Diphenylhydrazine	0	0		0	3	3.0	29.9	
Fluoranthene	0	0		0	40	40.0	399	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	20.0	
Hexachlorocyclopentadiene	0	0		0	1	1.0	9.98	
Hexachloroethane	0	0		0	12	12.0	120	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	20,961	
Naphthalene	0	0		0	43	43.0	429	
Nitrobenzene	0	0		0	810	810	8,085	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	33,936	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	589	
Phenanthrene	0	0		0	1	1.0	9.98	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	260	
Aldrin	0	0		0	0.1	0.1	1.	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.043	
4,4-DDT	0	0		0	0.001	0.001	0.01	
4,4-DDE	0	0		0	0.001	0.001	0.01	
4,4-DDD	0	0		0	0.001	0.001	0.01	
Dieldrin	0	0		0	0.056	0.056	0.56	
alpha-Endosulfan	0	0		0	0.056	0.056	0.56	
beta-Endosulfan	0	0		0	0.056	0.056	0.56	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.36	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.038	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.038	
Toxaphene	0	0		0	0.0002	0.0002	0.002	

☑ *THH* CCT (min): 720 PMF: 0.653 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	55.9	
Total Arsenic	0	0		0	10	10.0	99.8	
Total Barium	0	0		0	2,400	2,400	23,955	
Total Boron	0	0		0	3,100	3,100	30,942	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	4	4.0	39.9	
Dissolved Iron	0	0		0	300	300	2,994	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	9,981	
Total Mercury	0	0		0	0.050	0.05	0.5	
Total Nickel	0	0		0	610	610	6,089	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	2.4	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	29.9	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	998	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	56.9	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	329	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	679	
Methyl Bromide	0	0		0	100	100.0	998	

Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	569	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	998	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	99,813	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	299	
2,4-Dichlorophenol	0	0		0	10	10.0	99.8	
2,4-Dimethylphenol	0	0		0	100	100.0	998	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	20.0	
2,4-Dinitrophenol	0	0		0	10	10.0	99.8	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	39,925	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	699	
Anthracene	0	0		0	300	300	2,994	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	1,996	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	1.	
2-Chloronaphthalene	0	0		0	800	800	7,985	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	9,981	
1,3-Dichlorobenzene	0	0		0	7	7.0	69.9	
1,4-Dichlorobenzene	0	0		0	300	300	2,994	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	5,989	
Dimethyl Phthalate	0	0		0	2,000	2,000	19,963	
Di-n-Butyl Phthalate	0	0		0	20	20.0	200	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	

1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	200	
Fluorene	0	0		0	50	50.0	499	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	39.9	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	339	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	99.8	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	200	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.7	
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	4.2	4.2	41.9	
Chlordane	0	0		0	N/A	N/A	N/A	
4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDE	0	0		0	N/A	N/A	N/A	
4,4-DDD	0	0		0	N/A	N/A	N/A	
Dieldrin	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan	0	0		0	20	20.0	200	
beta-Endosulfan	0	0		0	20	20.0	200	
Endosulfan Sulfate	0	0		0	20	20.0	200	
Endrin	0	0		0	0.03	0.03	0.3	
Endrin Aldehyde	0	0		0	1	1.0	9.98	
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.959 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	

Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	3.19	
Benzene	0	0		0	0.58	0.58	30.8	
Bromoform	0	0		0	7	7.0	372	
Carbon Tetrachloride	0	0		0	0.4	0.4	21.3	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	42.5	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	50.5	
1,2-Dichloroethane	0	0		0	9.9	9.9	527	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	47.9	
1,3-Dichloropropylene	0	0		0	0.27	0.27	14.4	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	1,064	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	10.6	
Tetrachloroethylene	0	0		0	10	10.0	532	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.55	0.55	29.3	
Trichloroethylene	0	0		0	0.6	0.6	31.9	
Vinyl Chloride	0	0		0	0.02	0.02	1.06	

2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	1.6	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	79.8	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.005	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.053	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.005	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.053	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.53	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	1.6	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	17.0	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	6.38	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.005	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	2.66	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	2.66	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	2.66	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	1.6	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.004	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.53	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	5.32	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.053	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	

Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.037	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.27	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	176	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	
Aldrin	0	0		0	0.0000008	8.00E-07	0.00004	
alpha-BHC	0	0		0	0.0004	0.0004	0.021	
beta-BHC	0	0		0	0.008	0.008	0.43	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.016	
4,4-DDT	0	0		0	0.00003	0.00003	0.002	
4,4-DDE	0	0		0	0.00002	0.00002	0.001	
4,4-DDD	0	0		0	0.0001	0.0001	0.005	
Dieldrin	0	0		0	0.000001	0.000001	0.00005	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000006	0.000006	0.0003	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.002	
Toxaphene	0	0		0	0.0007	0.0007	0.037	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Antimony	Report	Report	Report	Report	Report	µg/L	55.9	THH	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	20.6	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	176	AFC	Discharge Conc > 10% WQBEL (no RP)
Toxaphene	0.0001	0.0002	0.002	0.003	0.005	µg/L	0.002	CFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	1,104	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	99.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	23,955	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	11,922	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	2.7	µg/L	Discharge Conc < TQL
Total Chromium (III)	860	µg/L	Discharge Conc < TQL
Hexavalent Chromium	24.0	µg/L	Discharge Conc < TQL
Total Cobalt	140	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	32.4	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	2,994	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	22,139	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	31.8	µg/L	Discharge Conc < TQL
Total Manganese	9,981	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.5	µg/L	Discharge Conc < TQL
Total Nickel	521	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	49.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	5.57	µg/L	Discharge Conc < TQL
Total Thallium	2.4	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	4.42	µg/L	Discharge Conc < TQL
Acrylonitrile	3.19	µg/L	Discharge Conc < TQL
Benzene	30.8	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	372	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	21.3	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	998	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	42.5	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	26,493	µg/L	Discharge Conc < TQL
Chloroform	56.9	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	50.5	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	527	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	329	µg/L	Discharge Conc ≤ 25% WQBEL

1,2-Dichloropropane	47.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	14.4	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	679	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	810	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	41,212	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	1,064	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	10.6	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	532	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	569	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	998	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	4,416	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	29.3	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	31.9	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	1.06	µg/L	Discharge Conc < TQL
2-Chlorophenol	299	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	99.8	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	971	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	20.0	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	99.8	µg/L	Discharge Conc ≤ 25% WQBEL
2-Nitrophenol	11,775	µg/L	Discharge Conc < TQL
4-Nitrophenol	3,385	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	235	µg/L	Discharge Conc < TQL
Pentachlorophenol	1.6	µg/L	Discharge Conc < TQL
Phenol	39,925	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	79.8	µg/L	Discharge Conc < TQL
Acenaphthene	122	µg/L	Discharge Conc ≤ 25% WQBEL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	2,994	µg/L	Discharge Conc ≤ 25% WQBEL
Benzidine	0.005	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.053	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.005	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.053	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.53	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	1.6	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	1,996	µg/L	Discharge Conc ≤ 25% WQBEL
Bis(2-Ethylhexyl)Phthalate	17.0	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	397	µg/L	Discharge Conc ≤ 25% WQBEL
Butyl Benzyl Phthalate	1.	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	7,985	µg/L	Discharge Conc ≤ 25% WQBEL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	6.38	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.005	µg/L	Discharge Conc < TQL

1,2-Dichlorobenzene	1,207	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	69.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	1,074	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	2.66	µg/L	Discharge Conc < TQL
Diethyl Phthalate	5,887	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	3,680	µg/L	Discharge Conc ≤ 25% WQBEL
Di-n-Butyl Phthalate	162	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	2.66	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	2.66	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	1.6	µg/L	Discharge Conc < TQL
Fluoranthene	200	µg/L	Discharge Conc ≤ 25% WQBEL
Fluorene	499	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorobenzene	0.004	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.53	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	7.36	µg/L	Discharge Conc < TQL
Hexachloroethane	5.32	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.053	µg/L	Discharge Conc < TQL
Isophorone	339	µg/L	Discharge Conc ≤ 25% WQBEL
Naphthalene	206	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	99.8	µg/L	Discharge Conc ≤ 25% WQBEL
n-Nitrosodimethylamine	0.037	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.27	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	176	µg/L	Discharge Conc ≤ 25% WQBEL
Phenanthrene	7.36	µg/L	Discharge Conc < TQL
Pyrene	200	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	0.7	µg/L	Discharge Conc < TQL
Aldrin	0.00004	µg/L	Discharge Conc < TQL
alpha-BHC	0.021	µg/L	Discharge Conc < TQL
beta-BHC	0.43	µg/L	Discharge Conc ≤ 25% WQBEL
gamma-BHC	1.4	µg/L	Discharge Conc ≤ 25% WQBEL
delta BHC	N/A	N/A	No WQS
Chlordane	0.016	µg/L	Discharge Conc < TQL
4,4-DDT	0.002	µg/L	Discharge Conc < TQL
4,4-DDE	0.001	µg/L	Discharge Conc < TQL
4,4-DDD	0.005	µg/L	Discharge Conc < TQL
Dieldrin	0.00005	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.32	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.32	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	200	µg/L	Discharge Conc ≤ 25% WQBEL
Endrin	0.13	µg/L	Discharge Conc < TQL
Endrin Aldehyde	9.98	µg/L	Discharge Conc ≤ 25% WQBEL
Heptachlor	0.0003	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.002	µg/L	Discharge Conc < TQL
Gross Alpha	N/A	N/A	No WQS

Total Beta	N/A	N/A	No WQS
Radium 226/228	N/A	N/A	No WQS
Total Uranium	N/A	N/A	No WQS

Attachment 4 – DEP WET Analysis Spreadsheet

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.04
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Kiski Valley WPCA

Permit No.: PA0027626

Test Completion Date: 10/20/2015

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4

T-Test Result	17.8623
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 1/26/2016

Replicate No.	Control	TIWC
1	1	1
2	0.9	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	1.000
Std Dev.	0.050	0.000
# Replicates	4	4

T-Test Result	26.1497
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 4/19/2016

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.8
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.925
Std Dev.	0.000	0.096
# Replicates	4	4

T-Test Result	8.0674
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 5/24/2016

Replicate No.	Control	TIWC
1	0.9	0.9
2	0.8	0.9
3	0.9	0.9
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.925
Std Dev.	0.082	0.050
# Replicates	4	4

T-Test Result	11.7701
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.04
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Kiski Valley WPCA

Permit No.: PA0027626

Replicate No.	Test Completion Date: 10/20/2015 Control	TIWC
1	0.392	0.454
2	0.411	0.417
3	0.392	0.453
4	0.35	0.415
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.386	0.435
Std Dev.	0.026	0.022
# Replicates	4	4
T-Test Result	9.9911	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 1/26/2016 Control	TIWC
1	0.363	0.252
2	0.34	0.276
3	0.378	0.296
4	0.362	0.295
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.361	0.280
Std Dev.	0.016	0.021
# Replicates	4	4
T-Test Result	0.7733	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 4/19/2016 Control	TIWC
1	0.282	0.327
2	0.341	0.261
3	0.312	0.343
4	0.329	0.316
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.316	0.312
Std Dev.	0.026	0.036
# Replicates	4	4
T-Test Result	3.6959	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 5/24/2016 Control	TIWC
1	0.302	0.277
2	0.264	0.264
3	0.302	0.309
4	0.296	0.315
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.291	0.291
Std Dev.	0.018	0.025
# Replicates	4	4
T-Test Result	5.1781	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

WET Summary and Evaluation

Facility Name	Kiski Valley WPCA
Permit No.	PA0027626
Design Flow (MGD)	7
Q_{7-10} Flow (cfs)	149
PMF_a	0.094
PMF_c	0.653

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	10/20/15	1/26/16	4/19/16	5/24/16
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	10/20/15	1/26/16	4/19/16	5/24/16
Pimephales	Growth	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**				

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**				

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**
TIWC	**10** % Effluent
Dilution Series	**5, 10, 30, 60, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	