Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0265560**
Facility Type	**Industrial**	APS ID	**1093675**
Major / Minor	**Minor**	Authorization ID	**1448833**

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

Applicant and Facility Information

Applicant Name	**Aqua Pennsylvania Inc.**	Facility Name	**Mount Jewett WTP**
Applicant Address	762 W Lancaster Avenue	Facility Address	11385 State Route 6
	Bryn Mawr, PA 19010-3489		Mt Jewett, PA 16740
Applicant Contact	Todd Duerr	Facility Contact	Mike Starr
Applicant Phone	(610) 645-1122	Facility Phone	(610) 645-1122
Client ID	309251	Site ID	240790
SIC Code	4941	Municipality	Hamlin Township
SIC Description	Trans. & Utilities - Water Supply	County	McKean
Date Application Received	June 29, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	NPDES Renewal.		

Summary of Review

The Mount Jewett WTP is a potable public water treatment plant (WTP). The source water is from a combination of six wells and one spring. Well water is treated with potassium permanganate, and is then filtered through iron and manganese green sand filters. The filters are generally backwashed once a day, 5 days a week, generating approximately 6,000 gpd of spent filter backwash. The backwash drains by gravity to a 9,000 gallon settling basin that overflows a weir to a 9,000 gallon overflow basin. The wastewater stream also includes a continuous flow of instrument sample water that drains through the same drain as the spent filter backwash. The flow of the sample water is approximately 400 gpd. The overflow basin drains by gravity to Kane Creek through the outfall pipe. The settling basin and overflow basin are periodically pumped down and accumulated solids are trucked for further treatment off-site.

Changes to the permit: A Total Cadmium limit, and Total Copper, Total Silver, and Total Mercury monitoring have been added to the permit. The Total Cadmium limit and Total Copper and Total Silver monitoring may be removed if additional effluent sampling is provided at the Target Quantitation Limits provided in the NPDES application instructions.

There are no open violations for this Applicant.

Public Participation

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

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	April 6, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	April 9, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0064
Latitude	41º 43' 16"	Longitude	78º 36' 38"
Quad Name		Quad Code	
Wastewater Description:	Treated filter backwash and instrument sample water		
Receiving Waters	Kane Creek (CWF)	Stream Code	57802
NHD Com ID	112377085	RMI	1.81
Drainage Area	0.82 mi^2	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.0493	Q_{7-10} Basis	USGS PA StreamStats
Elevation (ft)	2177	Slope (ft/ft)	
Watershed No.	16-C	Chapter 93 Class.	CWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	PA/NY State Line		
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	32

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	There were no effluent violations reported in the last year of eDMR data.
Summary of Inspections:	2/22/2024: An inspection was conducted. It was noted that the discharge from the treatment plant was carrying out pieces of D-chlor tablets. The Applicant is investigating this issue, and why the effluent trough is holding water.

Other Comments: None

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	0.00121	0.000553	0.0005	0.00588703	0.006366	0.00526357	0.005221	0.0024417	0.004347	0.0046631	0.0005177	0.00649
Flow (MGD) Daily Maximum	0.01873	0.006361	0.0067	0.00698978	0.0087836	0.00707569	0.01277832	0.0036718	0.00472	0.005124	0.0005342	0.012843
pH (S.U.) Instantaneous Minimum	7.78	7.48	7.7	7.8	7.8	7.7	7.7	8.0	8.1	7.9	8.0	7.84
pH (S.U.) Instantaneous Maximum	7.88	7.87	7.8	7.8	7.8	7.8	8.0	8.0	8.1	8.1	8.0	7.91
TRC (mg/L) Average Monthly	0.11	0.12	0.12	0.2	0.2	0.17	0.03	< 0.01	0.03	< 0.02	< 0.02	0.03
TRC (mg/L) Instantaneous Maximum	0.15	0.10	0.12	0.2	0.2	0.26	0.04	0.01	0.03	0.03	0.02	0.04
TSS (mg/L) Average Monthly	2.8	2.3	< 1.6	2.5	2.0	10.0	8.3	2.3	2.4	2.6	3.2	< 0.9
TSS (mg/L) Instantaneous Maximum	3.0	3.0	3.0	3.0	3.0	18.0	13.0	4.4	2.4	3.6	4.4	1.6
Total Aluminum (mg/L) Average Monthly	0.02	0.03	0.03	0.02	0.03	0.02	0.05	0.02	0.01	0.01	< 0.01	0.01
Total Aluminum (mg/L) Instant. Maximum	0.02	0.03	0.04	0.02	0.03	0.03	0.05	0.02	0.01	0.01	0.01	0.01
Total Iron (mg/L) Average Monthly	0.16	0.23	0.31	0.47	0.27	0.52	0.29	0.37	0.12	0.52	0.42	0.34
Total Iron (mg/L) Instantaneous Maximum	0.39	0.26	0.45	0.52	0.35	0.74	0.41	0.61	0.15	0.88	0.65	0.39
Total Manganese (mg/L) Average Monthly	0.24	0.3	0.32	0.49	0.52	0.69	0.31	0.33	0.12	0.26	0.28	0.39
Total Manganese (mg/L) Instant. Maximum	0.39	0.43	0.41	0.66	0.68	0.89	0.45	0.58	0.12	0.41	0.4	0.41

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0064
Latitude 41º 43' 16" **Longitude** 78º 36' 38"
Wastewater Description: Treated filter backwash and instrument sample water

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
Total Suspended Solids	30	Average Monthly		362-2183-001
Total Suspended Solids	60	Daily Maximum		362-2183-001
Aluminum	4.0	Average Monthly		362-2183-001
Aluminum	8.0	Daily Maximum		362-2183-001
Manganese	1.0	Average Monthly		362-2183-001
Manganese	2.0	Daily Maximum		362-2183-001
Total Iron	2.0	Average Monthly		362-2183-001
Total Iron	4.0	Daily Maximum		362-2183-001
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
Total Residual Chlorine	1.0	Daily Maximum		362-2183-001
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)

Comments: The DEP Guidance “Technology-based Control Requirements for Water Treatment Plant Wastes” (362-2183-001) provides these limits that are based on Best Practical Control Technology (BPT).The Mount Jewett WTP is not subject to Federal Effluent Limitation Guidelines (ELGs) as the SIC code is not listed under 40 CFR parts 405 through 471.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP’s Toxics Management Spreadsheet Version 1.3 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP’s Toxics Screening Analysis. The TMS spreadsheet recommended a limit for Total Cadmium, and monitoring for Total Aluminum, Total Copper, Total Iron, Total Mercury, and Total Silver. The NPDES permit already contains monitoring requirements for Total Aluminum and Total Iron.

This data was analyzed based on the guidelines found in DEP’s Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP’s SOP No. BPNPSM-PMT-033. Spreadsheet results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

a. Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

A Total Cadmium limit will be placed in the draft permit with an average monthly limit of 0.0017 mg/l, daily maximum limit of 0.0026 mg/l, and an instantaneous maximum limit of 0.0042 mg/l. A monitoring requirement will be added to the permit for Total Copper, Total Silver, and Total Mercury. The sampling reported in the application for Total Cadmium, Total Copper, and Total Silver were all non-detect results. The Applicant will be allowed to re-sample these parameters at the Target Quantitation Limits (Target QLs) provided in the NPDES application instructions. Any resampling completed by the Applicant may result in modification or removal of the proposed Total Cadmium limitation and Total Copper and Total Silver monitoring requirements.

Total Dissolved Solids

DEP’s SOP No. BPNPSM-PMT-032 recommends monitoring for TDS when the discharge concentrations exceed 1,000 mg/l. Outfall 001 sampling results did not exceed 1,000 mg/l for TDS, so TDS monitoring is not included in the permit.

Additional Considerations

Monitoring for PFAS parameters – PFOA, PFOS, PFBS, and HFPO-DA will not be required at this time because the facility does not currently have treatment to remove PFAS. The current permit TRC limits are more stringent than the BPT limits listed above.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit.

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.

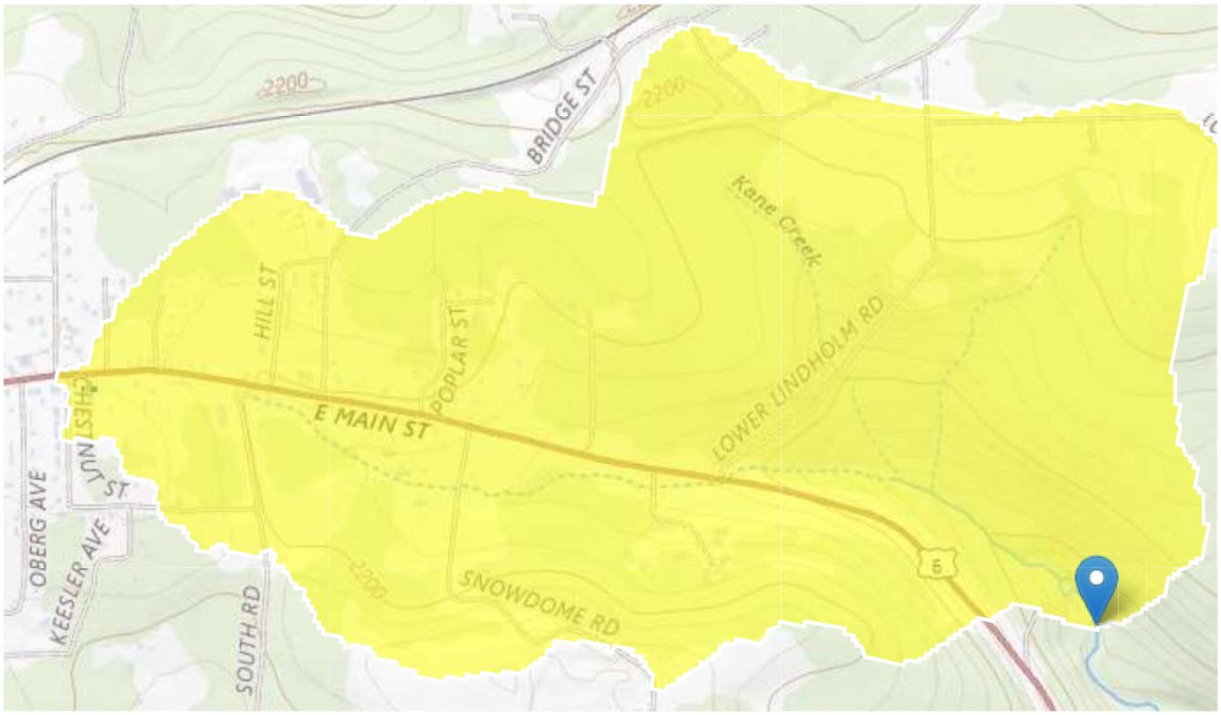
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/month	Grab
TRC	XXX	XXX	XXX	0.3	XXX	0.6	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Total Aluminum	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab
Total Iron	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab
Total Manganese	XXX	XXX	XXX	1.0	XXX	2.0	2/month	Grab
Total Cadmium	XXX	XXX	XXX	0.0017	0.0026	0.0042	2/month	Grab
Total Mercury	XXX	XXX	XXX	XXX	Report	XXX	2/month	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	2/month	Grab
Total Silver	XXX	XXX	XXX	XXX	Report	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001

Other Comments: None

Aqua Pennsylvania Inc. PA0265560 Outfall 001

Region ID: PA
Workspace ID: PA20250405010657311000
Clicked Point (Latitude, Longitude): 41.72106, -78.61048
Time: 2025-04-04 21:07:22 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.82	square miles
ELEV	Mean Basin Elevation	2177	feet
PRECIP	Mean Annual Precipitation	45	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	0.82	square miles	2.33	1720
ELEV	Mean Basin Elevation	2177	feet	898	2700
PRECIP	Mean Annual Precipitation	45	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]

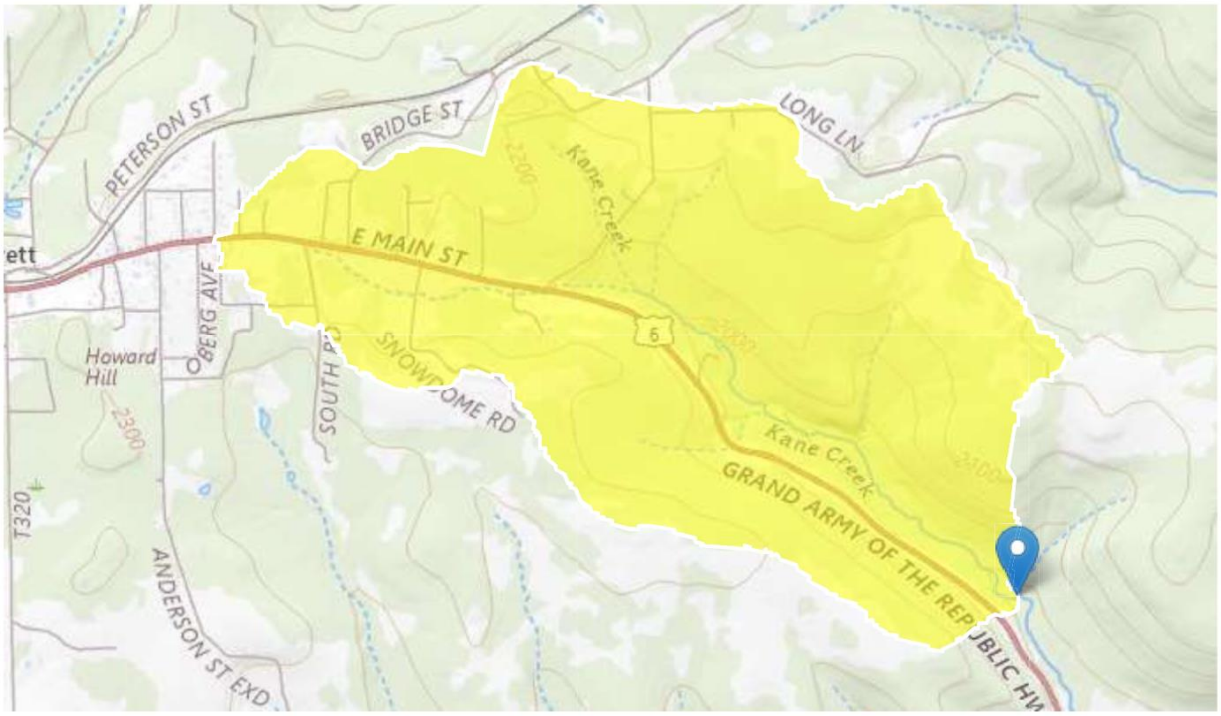
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.118	ft^3/s
30 Day 2 Year Low Flow	0.173	ft^3/s
7 Day 10 Year Low Flow	0.0493	ft^3/s
30 Day 10 Year Low Flow	0.0675	ft^3/s
90 Day 10 Year Low Flow	0.101	ft^3/s

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/)

Aqua Pennsylvania Inc. PA0265560 RMI = 0.73

Region ID: PA
Workspace ID: PA20250405011232561000
Clicked Point (Latitude, Longitude): 41.71258, -78.59675
Time: 2025-04-04 21:12:54 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.68	square miles
ELEV	Mean Basin Elevation	2126	feet
PRECIP	Mean Annual Precipitation	45	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	1.68	square miles	2.33	1720
ELEV	Mean Basin Elevation	2126	feet	898	2700
PRECIP	Mean Annual Precipitation	45	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	0.241	ft^3/s
30 Day 2 Year Low Flow	0.35	ft^3/s
7 Day 10 Year Low Flow	0.104	ft^3/s
30 Day 10 Year Low Flow	0.142	ft^3/s
90 Day 10 Year Low Flow	0.209	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/)

TRC_CALC

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	0.0493	= Q stream (cfs)		0.5	= CV Daily	
5	0.0064	= Q discharge (MGD)		0.5	= CV Hourly	
6	30	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)			=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 1.607		1.3.2.iii	WLA cfc = 1.560
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.599		5.1d	LTA_cfc = 0.907
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 1.231			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ	
18			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)**

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Mount Jewett WTP** NPDES Permit No.: **PA0265560** Outfall No.: **001**

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

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
0.0064	138	8.1						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		192									
	Chloride (PWS)	mg/L		11.9									
	Bromide	mg/L	<	0.4									
	Sulfate (PWS)	mg/L		19.4									
	Fluoride (PWS)	mg/L	<	2									
Group 2	Total Aluminum	µg/L		960									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L		3.8									
	Total Barium	µg/L		283									
	Total Beryllium	µg/L	<	2.5									
	Total Boron	µg/L		599									
	Total Cadmium	µg/L	<	2.5									
	Total Chromium (III)	µg/L	<	5									
	Hexavalent Chromium	µg/L	<	0.25									
	Total Cobalt	µg/L	<	2									
	Total Copper	µg/L	<	12.5									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	10									
	Dissolved Iron	µg/L											
	Total Iron	µg/L		1700									
	Total Lead	µg/L	<	0.5									
	Total Manganese	µg/L		1.2									
	Total Mercury	µg/L		0.14									
	Total Nickel	µg/L	<	2.5									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5									
	Total Selenium	µg/L	<	2.5									
	Total Silver	µg/L	<	2.5									
	Total Thallium	µg/L	<	0.5									
	Total Zinc	µg/L	<	12.5									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	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	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Mount Jewett WTP, NPDES Permit No. PA0265560, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Kane Creek**

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	057802	1.81	2177	0.82			Yes
End of Reach 1	057802	0.73	2126	1.68			Yes

Q_{7-10}

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	1.81	0.1	0.0493									100	7		
End of Reach 1	0.73	0.1	0.104									100	7		

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	1.81														
End of Reach 1	0.73														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Mount Jewett WTP, NPDES Permit No. PA0265560, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.841 PMF: 1 Analysis Hardness (mg/l): 106.36 Analysis pH: 7.07

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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	4,485	
Total Antimony	0	0		0	1,100	1,100	6,577	
Total Arsenic	0	0		0	340	340	2,033	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	125,567	
Total Boron	0	0		0	8,100	8,100	48,433	
Total Cadmium	0	0		0	2.138	2.27	13.6	Chem Translator of 0.941 applied
Total Chromium (III)	0	0		0	599.253	1,896	11,339	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	97.4	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	568	
Total Copper	0	0		0	14.242	14.8	88.7	Chem Translator of 0.96 applied
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	69.058	88.3	528	Chem Translator of 0.782 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	9.85	Chem Translator of 0.85 applied
Total Nickel	0	0		0	493.290	494	2,955	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	3.576	4.21	25.2	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	389	
Total Zinc	0	0		0	123.460	126	755	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 0.841 PMF: 1 Analysis Hardness (mg/l): 106.36 Analysis pH: 7.07

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	
Fluoride (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	1,315	
Total Arsenic	0	0		0	150	150	897	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	24,516	
Total Boron	0	0		0	1,600	1,600	9,567	
Total Cadmium	0	0		0	0.257	0.28	1.69	Chem Translator of 0.906 applied
Total Chromium (III)	0	0		0	77.950	90.6	542	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	62.2	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	114	
Total Copper	0	0		0	9.440	9.83	58.8	Chem Translator of 0.96 applied
Total Iron	0	0		0	1,500	1,500	8,969	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.691	3.44	20.6	Chem Translator of 0.782 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	5.42	Chem Translator of 0.85 applied
Total Nickel	0	0		0	54.789	55.0	329	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	29.8	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	77.7	
Total Zinc	0	0		0	124.470	126	755	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 0.841 PMF: 1 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	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	33.5	
Total Arsenic	0	0		0	10	10.0	59.8	
Total Barium	0	0		0	2,400	2,400	14,351	
Total Boron	0	0		0	3,100	3,100	18,536	
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	
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	5,979	
Total Mercury	0	0		0	0.050	0.05	0.3	
Total Nickel	0	0		0	610	610	3,647	
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	1.44	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 0.270 PMF: 1 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	
Fluoride (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	
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	

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

No. Samples/Month: 4

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Aluminum	Report	Report	Report	Report	Report	µg/L	2,874	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.00009	0.0001	1.69	2.64	4.23	µg/L	1.69	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	56.9	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Iron	Report	Report	Report	Report	Report	µg/L	8,969	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Mercury	Report	Report	Report	Report	Report	µg/L	0.3	THH	Discharge Conc > 10% WQBEL (no RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	16.1	AFC	Discharge Conc > 10% WQBEL (no 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
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	59.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	14,351	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	9,567	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	542	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	62.2	µg/L	Discharge Conc < TQL
Total Cobalt	114	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Total Lead	20.6	µg/L	Discharge Conc < TQL
Total Manganese	5,979	µg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	329	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	29.8	µg/L	Discharge Conc < TQL
Total Thallium	1.44	µg/L	Discharge Conc < TQL
Total Zinc	484	µg/L	Discharge Conc ≤ 10% WQBEL