pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0009458**
Facility Type	**Industrial**	APS ID	**1087416**
Major / Minor	**Minor**	Authorization ID	**1437570**

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

Applicant and Facility Information

Applicant Name	**Pittsburgh Glass Works LLC**	Facility Name	**Pittsburgh Glass Works LLC**
Applicant Address	4408 E Pleasant Valley Boulevard	Facility Address	4408 E Pleasant Valley Boulevard
	Tyrone, PA 16686-7029		Tyrone, PA 16686-7029
Applicant Contact	Sean Griffith	Facility Contact	Sean Griffith
Applicant Phone	(814) 684-7050	Facility Phone	(814) 684-7050
Client ID	271962	Site ID	270366
SIC Code	3231	Municipality	Antis Township
SIC Description	Manufacturing - Products Of Purchased Glass	County	Blair
Date Application Received	April 11, 2023	EPA Waived?	Yes
Date Application Accepted	May 3, 2023	If No, Reason	
Purpose of Application	This is an application for NPDES renewal.		

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Pittsburgh Glass Works, LLC located at 408 East Pleasant Valley Boulevard, Tyrone, PA 16686 in Blair County, municipality of Antis Township. The existing permit became effective on November 1, 2018 and expired on October 31, 2023. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on April 11, 2023.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.043 MGD annual average flow rate treatment facility. The applicant anticipates proposed upgrades to the manufacturing facility. The proposed upgrades include addition of value-add production manufacturing for rear view mirror mount, rear window wiper box, window clips, and weather guard for automotive glass finishing. The NPDES application has been processed as an Industrial Waste facility due to the type of wastewater and the design flow rate for the facility. The

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	March 12, 2024
X		Daniel W. Martin, P.E. / Environmental Engineer Manager *Daniel W. Martin*	March 15, 2024

Summary of Review

applicant disclosed the Act 14 requirement to Blair County Commissioners and Antis Township and the notice was received by the parties on July 17, 2023.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Little Juniata River. The sequence of receiving streams that the Little Juniata River discharges into are Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay. The subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for trout stocking fish (TSF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Little Juniata River is a Category 2 stream listed in the 2022 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **Limits for TSS, Oil and Grease, nitrogen, and phosphorus have been eliminated.**
- **Temperature limits have been included for the cooling water.**
- **Part C condition includes chemical additive usage rates**

Sludge use and disposal description and location(s): The facility did not have sludge disposal.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name:	Pittsburgh Glass Works
NPDES Permit #	PA0009458
Physical Address:	4408 East Pleasant Valley Boulevard Tyrone, PA 16686
Mailing Address:	4408 East Pleasant Valley Boulevard Tyrone, PA 16686
Contact:	Sean Griffith EHS Manager SGRIFFITH@vitro.com
Consultant:	There was not consultant utilized for this NPDES renewal.

1.2 Permit History

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 4408 East Pleasant Valley Boulevard, Tyrone, PA 16686. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

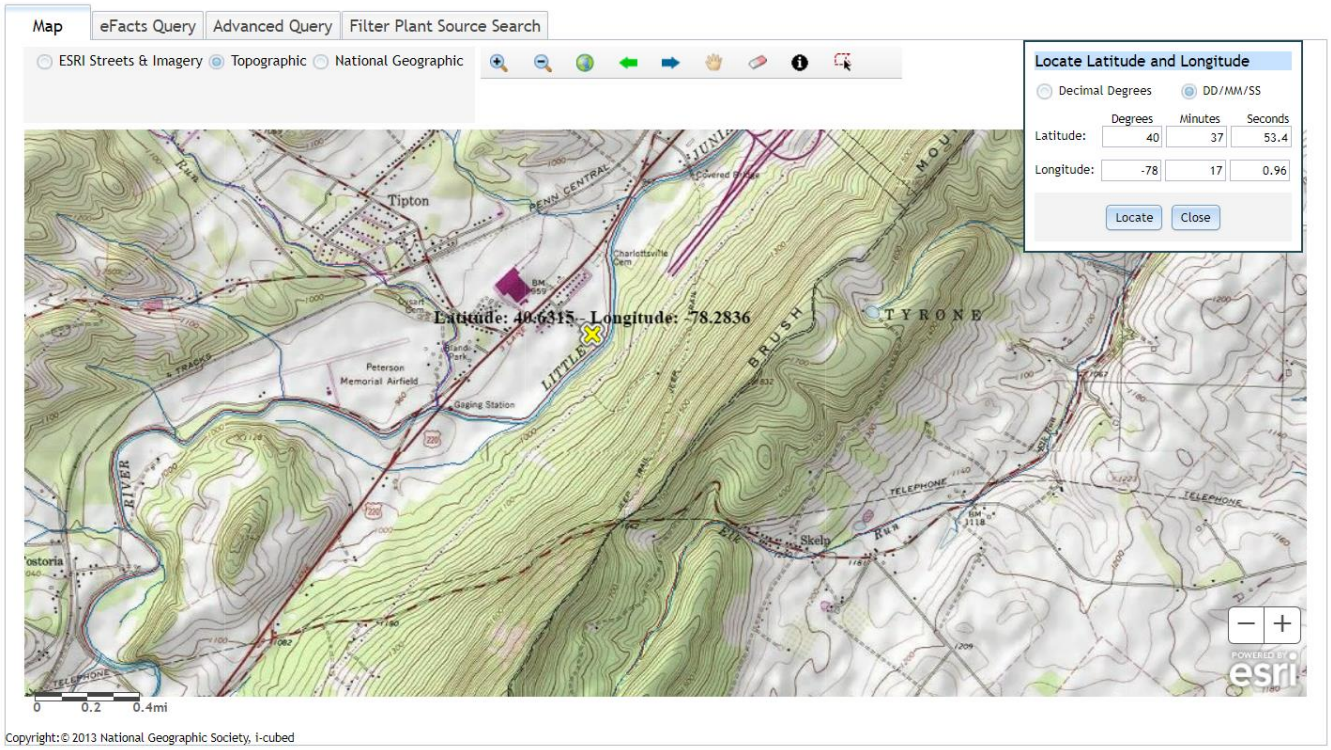
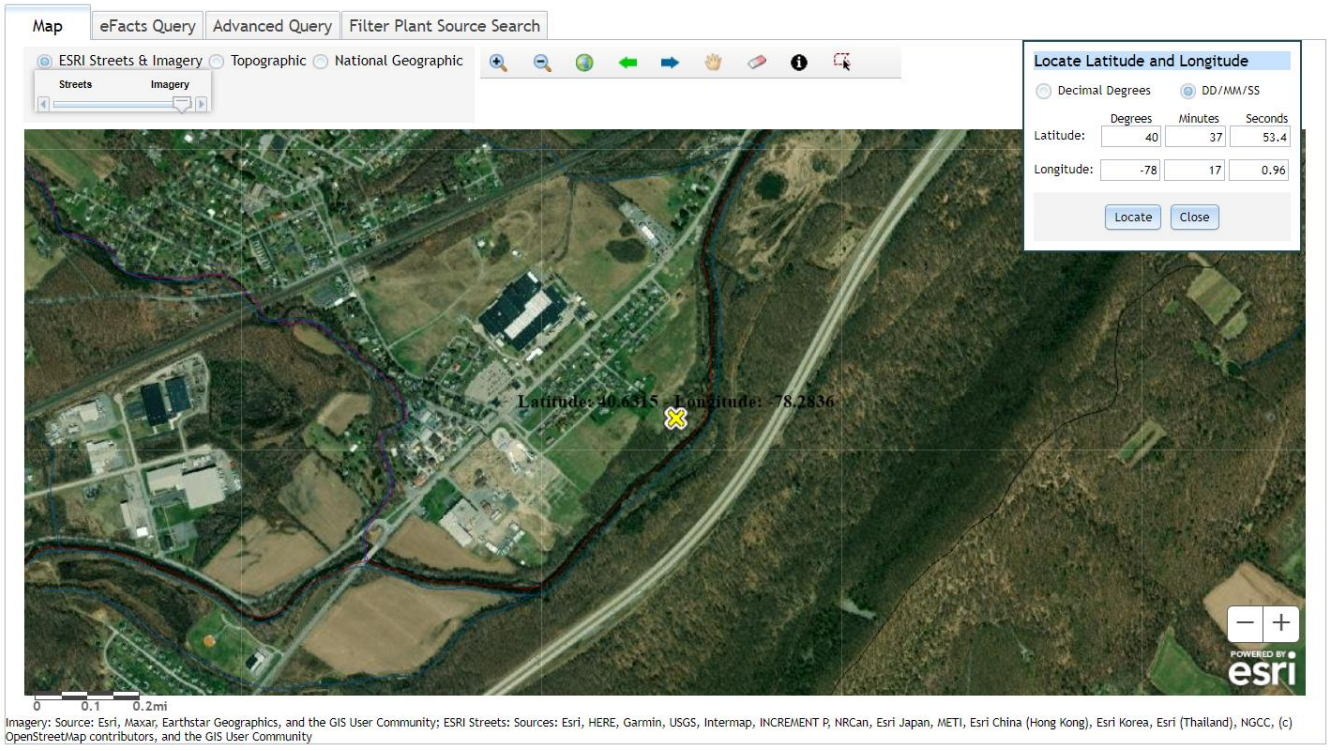


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

Pittsburgh Glass Works receives water from Altoona Municipal Water Authority. Sanitary wastewater from office restrooms and fountains is discharged to the sanitary sewer.

A second collection point receives wastewater from non-contact cooling process water used at the industrial facility. Discharge of the wastewater is through Outfall 001 to the Little Juniata River.

The facility has three (3) main unit processes- the Cold End Process, the Hot End Process, and the Laminating Process. The manufacturing process starts with flat glass being cut and edged to a desired shape. Next, the Cold End Process rinses and stores the flat glass.

Glass parts are then rinsed and processed through a screening system to add a decorative pattern and then transported through an electric furnace. Through tempering, the furnace heats and bends it to the required curvature and strengthens the glass by rapid cooling (Hot End Process). The Laminating Process matches selected parts and sandwiches with vinyl plastic. Laminated parts are then rinsed, inspected, packaged and transported to the customer.

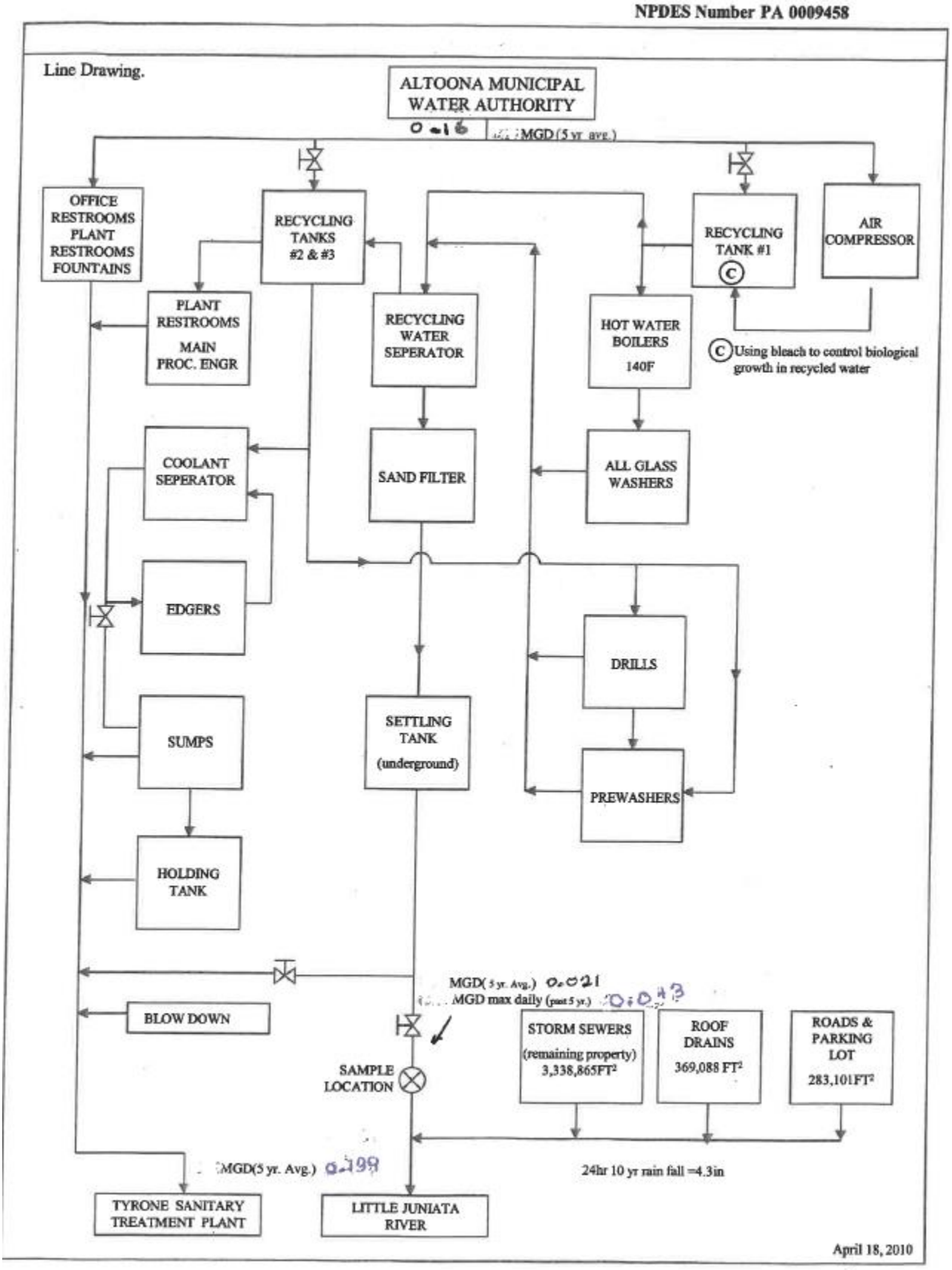
The facility reports that the unit processes do not utilize detergents. Non-process wastewater is generated from the facility via the cooling water for air compressors and for cooling water for glass-drilling operations.

Per Sean Griffith, EHS Manager, the facility utilizes non-contact cooling water for their process. He specifically states that there is no process water. (Correspondence on November 6, 2023)

The subject facility is a 0.043 MGD design flow facility. The subject facility treats wastewater using an oil water separator, sand filter, and a settling basin. The facility is being evaluated for flow, pH, temperature, TSS, oil and grease, nitrogen species, and phosphorus. The existing permit limits for the facility is summarized in Section 2.4.

Stormwater is collected and joins the process water prior to discharge to the Juniata River.

A process diagram for their manufacturing process is depicted.


NPDES Number PA 0009458
Line Drawing.
ALTOONA MUNICIPAL WATER AUTHORITY
0.16
MGD (5 yr. avg.)
OFFICE RESTROOMS PLANT RESTROOMS FOUNTAINS
RECYCLING TANKS #2 & #3
RECYCLING TANK #1
C
AIR COMPRESSOR
PLANT RESTROOMS MAIN PROC. ENGR
RECYCLING WATER SEPERATOR
HOT WATER BOILERS 140F
C Using bleach to control biological growth in recycled water
COOLANT SEPERATOR
SAND FILTER
ALL GLASS WASHERS
EDGERS
DRILLS
SUMPS
SETTLING TANK (underground)
PREWASHERS
HOLDING TANK
MGD (5 yr. Avg.) 0.021
MGD max daily (past 5 yr.) 0.043
BLOW DOWN
STORM SEWERS (remaining property) 3,338,865FT²
ROOF DRAINS 369,088 FT²
ROADS & PARKING LOT 283,101FT²
SAMPLE LOCATION
MGD (5 yr. Avg.) 0.199
24hr 10 yr rain fall =4.3in
TYRONE SANITARY TREATMENT PLANT
LITTLE JUNIATA RIVER
April 18, 2010

2.2.1 Stormwater Management

The subject facility is on 91-acre parcel. The plant area without detached buildings is 8.4 acres. The approximate paved area is 6.4 acres. The area permeable to rainfall is 76 acres.

The facility discharges non-contact cooling water from their manufacturing process.

No stormwater monitoring was recommended.

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	**Design Flow (MGD)**	.266
Latitude	40º 37' 52.00"	**Longitude**	-78º 17' 0.00"
Wastewater Description:	Noncontact Cooling Water (NCCW)		

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- Sodium hypochlorite to reduce algae buildup in system

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 37' 52.00" , **Longitude** 78° 17' 0.00" , **River Mile Index** 19.4 , **Stream Code** 15664

Receiving Waters: Little Juniata River

Type of Effluent: Contact Cooling Water (CCW), IW Process Effluent with ELG, Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **November 1, 2018** through **October 31, 2023**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Quarterly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (°F)	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	XXX	1/day	I-S
Total Suspended Solids	9.5	15.0	XXX	XXX	XXX	10.5	1/week	24-Hr Composite
Oil and Grease	4.5	4.5	XXX	XXX	XXX	5.5	1/week	Grab
Nitrate-Nitrite as N	Report Avg Qrtly	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Total Nitrogen	Report Avg Qrtly	XXX	XXX	Report	XXX	XXX	1/quarter	Calculation
Ammonia-Nitrogen	Report Avg Qrtly	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Total Kjeldahl Nitrogen	Report Avg Qrtly	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Total Phosphorus	8.5	8.5	XXX	XXX	XXX	9.5	1/week	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

03/20/2019: Nothing significant to report.

02/23/2022: Nothing significant to report.

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.080315 MGD in September 2022. The design capacity of the treatment system is 0.266 MGD.

The off-site laboratory used for the analysis of the parameters was Fairway Laboratories located at 2019 9th Avenue, Altoona, PA 16602.

NPDES Permit Fact Sheet **NPDES Permit No. PA0009458**
Pittsburgh Glass Works
DMR Data for Outfall 001 (from September 1, 2022 to August 31, 2023)

Parameter	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22
Flow (MGD) Average Monthly	~~0.447273~~ 0.044727	0.04911 72	0.04145 1	0.03706	0.03584 7	0.0408	0.03954	0.0472	0.05751 6	0.06745 11	0.0593	0.08031 3
Flow (MGD) Daily Maximum	0.05081 67	0.10309 3	0.08782 45	0.05663	0.09294 774	0.0583	0.04805	0.0552	0.07963 7	0.08078 5	0.0895	0.09322 57
pH (S.U.) Instantaneous Minimum	6.28	6.33	6.06	6.03	6.01	6.02	6.06	6.03	6.03	6.1	6.27	6.14
pH (S.U.) Instantaneous Maximum	7.20	7.41	7.24	7.64	7.09	7.4	7.33	7.63	7.49	7.08	7.1	1.04
Temperature (ºF) Average Monthly	90	85.2	83.2	79.0	74.8	78.5	76.6	76.7	79.8	77.8	81.6	87.7
Temperature (ºF) Daily Maximum	100	100.9	97.2	94.1	94.5	91.6	97.7	105.1	100.6	90.9	96.1	101.3
TSS (lbs/day) Average Monthly	5.0	< 3.0	4.0	4.0	3.0	< 1.0	< 4.0	7.0	< 1.0	< 4.0	< 4.0	7.0
TSS (lbs/day) Daily Maximum	9.0	5.0	5.0	7.0	4.0	4.0	7.0	13.0	0.7	12.0	9.0	11.0
Oil and Grease (lbs/day) Average Monthly	< 0.7	< 0.8	< 1.78	< 0.5	< 0.6	< 0.5	< 0.6	< 0.7	< 2.0	< 1.0	< 1.0	< 1.0
Oil and Grease (lbs/day) Daily Maximum	0.9	< 0.8	< 1.82	< 0.7	< 0.7	< 0.8	< 0.7	< 0.8	3.0	2.0	2.0	< 1.0
Oil and Grease (mg/L) Instantaneous Maximum	2.18	< 1.91	< 0.7	< 1.86	1.85	< 1.79	< 1.82	2.0	5.94	2.54	4.49	< 1.81
Nitrate-Nitrite (lbs/day) Average Quarterly			0.1			0.1			0.1			2.785
Nitrate-Nitrite (mg/L) Average Quarterly			0.365			0.394			0.313			1.0
Total Nitrogen (lbs/day) Average Quarterly			< 0.3			< 0.3			< 0.4			< 3.285
Total Nitrogen (mg/L) Average Quarterly			< 0.865			< 0.894			< 0.813			< 2.0
Ammonia (lbs/day) Average Quarterly			< 0.3			< 0.04			< 0.5			< 0.1
Ammonia (mg/L) Average Quarterly			< 1.0			< 0.1			< 1.0			< 0.05

TKN (lbs/day) Average Quarterly			< 0.2			< 0.2			< 0.2			< 0.5
TKN (mg/L) Average Quarterly			< 0.5			< 0.5			< 0.5			< 0.3
Total Phosphorus (lbs/day) Average Monthly	0.1	0.1	0.344	0.295	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2
Total Phosphorus (lbs/day) Daily Maximum	0.1	0.1	0.358	0.365	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2

Notes: The flow (MGD) average monthly for August 2023 was corrected by the facility via email correspondence on 11/2/23. The facility input the data incorrectly into Greenport.

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in November 1, 2018 to December 26, 2023, the following summarizes observed effluent non-compliances.

Summary of Non-Compliance with NPDES Effluent Limits
Beginning November 1, 2018 to December 26, 2023

NON_COMPLIANCE_DATE	NON_COMPL_TYPE_DESC	NON_COMPL_CATEGORY_DESC	PARAMETER	SAMPLE_VALUE	VIOLATION_CONDITION	PERMIT_VALUE	UNIT_OF_MEASURE	STAT_BASE_CODE	FACILITY_COMMENTS
10/28/2020	Violation of permit condition	Effluent	pH	5.91	<	6.0	S.U.	Instantaneous Minimum	We are not sure on why our PH was down on 9/27/2020. I have contacted the testing lab and notified them of this reading. They are going to notify me by phone and email if they would happen to get a test that is out of compliance. We are thinking that it was either an instrument issue or operator error being that our PH was in compliance the day before and the day after and nothing changed in our process.
1/30/2023	Late DMR Submission	Other Violations							
1/19/2023	Violation of permit condition	Effluent	Oil and Grease	5.94	>	5.5	mg/L	Instantaneous Maximum	Upon receiving recent notification of this exceedance an investigation was conducted. There were no known out of spec maintenance conditions, spills of materials, or any environmental condition that would lead to this .44 exceedance of the Oil and Gas Instantaneous Maximum Permit Limit. The lab was contacted to inquire of any analytical errors, but the sample was completely used in the initial testing thus couldn't be rerun. The following samples have returned to normal ranges under 2 and has remained there.
4/30/2023	Late DMR Submission	Other Violations							

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in November 1, 2018 to December 26, 2023, the following were observed enforcement actions.

Summary of Enforcement Actions
Beginning November 1, 2018 to December 26, 2023

ENF ID	ENF TYPE	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	VIOLATIONS	# OF VIOLATIONS	ENF FINAL STATUS	ENF CLOSED DATE
391172	NOV	Notice of Violation	01/06/2021	01/06/2021	92A.62	1	Comply/Closed	01/15/2021

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

The facility did not have any biosolids disposal.

3.5 Open Violations

No open violations existed as of January 2024.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Little Juniata River. The sequence of receiving streams that the Little Juniata River discharges into are Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown MA (PWS ID #4340008) located approximately 71 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2022 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2022 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2 waterbody. The surface waters is an attaining stream that supports aquatic life. The designated use has been classified as protected waters for trout stocking fishes (TSF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN station to the subject facility is the Little Juniata River (WQN217). This WQN station is located approximately 13 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Little Juniata River at Spruce Creek, PA (USGS station number 1558000). This gauge station is located approximately 13 miles downstream of the subject facility.

Major receptor points from upstream to downstream are the facility, Tyrone STP and the Little Juniata River at Spruce Creek, PA gauge station. Since the gauge station is further downstream then Tyrone STP, the flow rate from Tyrone STP was subtracted from the gauge station to estimate the Q7 at the facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 7.92 and the stream water temperature was estimated to be 18 C.

The hardness of the stream was estimated by collecting one (1) sample upstream of the facility. The sampling result was 39.9 mg/l $CaCO_3$.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data			
USGS Station Number	1558000		
Station Name	Little Juniata River at Spruce Creek, PA		
Q710	59	ft^3/sec	
Tyrone WWTP	13.9	ft^3/sec	
Adjusted Q710	45.1	ft^3/sec	
Drainage Area (DA)	220	mi^2	
Calculations			
The low flow yield of the gauge station is:			
Low Flow Yield (LFY) = Q710 / DA			
LFY =	(45.1 ft^3/sec / 220 mi^2)		
LFY =	0.2049	$ft^3/sec/mi^2$	
The low flow at the subject site is based upon the DA of		95.7	mi^2
Q710 = (LFY@gauge station)(DA@Subject Site)			
Q710 = (0.2049$ft^3/sec/mi^2$)(95.7 mi^2)			
Q710 =	19.607	ft^3/sec	

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.266
Latitude	40º 37' 51.16"	Longitude	-78º 16' 59.44"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Receiving Waters	Little Juniata River (TSF)	Stream Code	15664
NHD Com ID	65605306	RMI	19.68
Drainage Area	95.7	Yield (cfs/mi^2)	0.2049
Q_{7-10} Flow (cfs)	19.6	Q_{7-10} Basis	StreamStats/stream gauge
Elevation (ft)	939	Slope (ft/ft)	
Watershed No.	11-A	Chapter 93 Class.	TSF, MF
Existing Use	Same as chapter 93 class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s) supports aquatic life.		
Cause(s) of Impairment	Not appl.		
Source(s) of Impairment	Not appl.		
TMDL Status	Not appl.	Name	

Background/Ambient Data		Data Source
pH (SU)	7.92	WQN217; median July to September
Temperature (°C)	18.0	WQN217; median July to September
Hardness (mg/L)	39.9	Upstream sample collection for NPDES permit app (one sample)
Other:		

Nearest Downstream Public Water Supply Intake		Mifflintown MA	
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	71

5.0 Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3). Available TBEL requirements for the state of Pennsylvania are itemized in PA Code 25, Chapter 92a.47 or 95.2

The presiding sources for the basis for the effluent limitations are governed by either federal or state regulation. The reference sources for each of the parameters is itemized in the tables. The following technology-based limitations apply, subject to water quality analysis and best professional judgement (BPJ) where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
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)
Oil and Grease	15	Daily average	-	95.2.iii
Oil and Grease	30	Instantaneous Max		95.2.iii

The applicable ELG for this type of industrial facility are the Automotive Glass Tempering Subcategory and the Automotive Glass Laminating Subcategory (i.e. 40 CFR 426 F and G). Sean Griffith the EHS Manager of Vitro Automotive Glass confirmed that the cooling water does not come into contact with manufacturing product. Thus, the ELG limits do not apply.

5.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) and (3) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants.

The modeling point nodes utilized for this facility are summarized below.

General Data 1	***(Modeling Point #1)***	***(Modeling Point #2)***	***Units***
Stream Code	15664	15664	
River Mile Index	19.68	17.69	miles
Elevation	939	911	feet
Latitude	40.6315	40.65195	
Longitude	-78.2836	-78.261168	
Drainage Area	95.7	101	sq miles
Low Flow Yield	0.2049	0.2049	cfs/sq mile

5.3.1 Water Quality Modeling 7.0

The facility discharges non-contact cooling water. The facility is not subject to WQM modeling.

5.3.2 Toxics Modeling

The facility is not subject to toxics modeling.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody. The TMDL components are illustrated using the following equation:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was September 13, 2021.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Cap Loads will be established in permits as Net Annual TN and TP loads (lbs/yr) that apply during the period of October 1 – September 30. For facilities that have received Cap Loads in any other form, the Cap Loads will be modified accordingly when the permits are renewed.

Offsets have been incorporated into Cap Loads in several permits issued to date. From this point forward, permits will be issued with the WLAs as Cap Loads and will identify Offsets separately to facilitate nutrient trading activities and compliance with the TMDL.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C.as a non-significant dischargers include sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

For non-significant IW facilities, monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. In general, facilities that discharge groundwater and cooling water with no addition of chemicals containing N or P do not require monitoring.

Monitoring for facilities with other discharges will generally conform to the following minimum sampling frequencies, with the permit writer having final discretion:

• Cooling water or other discharges treated with chemical additives containing N and/or P – 1/year.

Non-significant IW facilities that propose expansion or production increases and as a result will discharge at least 75 lbs/day TN or 25 lbs/day TP (on an annual average basis), will be classified as Significant IW dischargers and receive Cap Loads in their permits based on existing performance (existing TN/TP concentrations at current average annual flow).

In general, for new non-significant IW discharges (including existing facilities discharging without a permit), DEP will issue permits containing Cap Loads of "0" and these facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

The facility discharges non-contact cooling water. Monitoring for nitrogen and phosphorus have been eliminated.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.l.1 and 40 CFR 122.l.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements.

The Fact Sheet dated for June 2011, included ELG limits. However, the facility EHS Manager confirmed that the facility only discharges non-contact cooling water. Thus, ELG limits were relaxed to technology based effluent limits for the proposed permit.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
b) a summary of changes from the existing NPDES permit to the proposed permit; and
c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The table is categorized by Conventional Pollutants and Disinfection and Toxics.

6.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection
Pittsburgh Glass Works, PA0009458

Parameter	Permit Limitation Required by[1]:	Recommendation	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by Chapter 95.2(1).
Temperature (F)	WQBEL	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits shall not exceed 110 F.
		Rationale:	Water quality based effluent limits recommend a maximum effluent temperature for effluent discharge

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.266 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.1.2 Toxics

Modeling for the chemical additive was conducted with DEP Toxics Management Spreadsheet. Two separate runs were completed. Run #1 used a flow rate of 0.043 MGD. This was the reported design flow rate without stormwater. Run #2 used a flow rate of 0.266 MGD. This was the estimated flow rate for the discharge and stormwater.

Both runs resulted is usage rates of 0.12 lbs/day as a monthly average and 0.19 lbs/day as a maximum daily limit for sodium hypochlorite. The limits will be placed as a Part C condition in the NPDES permit.

Options allowed for either usage rate limitation or a limit in the NPDES permit for TRC. Since the TRC would result in frequent onerous sampling, DEP elected to include a usage rate limit.

Summary of Proposed NPDES Parameter Details for Toxics

Pittsburgh Glass Works, PA0009458

Parameter	Permit Limitation Required by[1]:	Recommendation	
Sodium Hypochlorite	WQBEL	Monitoring:	No monitoring requirement
		Effluent Limit:	The facility shall be limited to 0.12 lbs/day as a monthly average and 0.19 lbs/day as a maximum daily limit.
		Rationale:	Water quality modeling recommends maximum additive usages

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.266 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.1.3 Stormwater No Exposure

The table summarizes stormwater sampling on March 15, 2023.

Summary of Stormwater Sampling Results					
Parameter		**Sample Result**		**Benchmark**	**Is Sample Result < Benchmark (Y/N)**
Oil and Grease	<	1.77	<	5	Yes
BOD5	<	20	<	10	No
COD		9.01	<	30	Yes
TSS		1.6	<	30	Yes
TN		0.9538	<	2	Yes
TP		0.326	<	1	Yes
pH		7.28		9	Yes
Notes:					
- Sample collected on March 15, 2023					
-The sample result for TN was determined through sum of NO3+N02+TKN+NH3					

The facility has requested no exposure. The sample results had an exceedance for BOD for benchmark. The lab was unable to lower the detection limits. Other parameters did not exceed the benchmark.

Since the facility discharges non-contact cooling water, the risk for elevated BOD is mitigated. No exposure shall continue for the proposed permit

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

- **Limits for TSS, Oil and Grease, nitrogen, and phosphorus have been eliminated**
- **Temperature limits have been included for the cooling water.**
- **Pact C condition includes chemical additive usage rates**

6.3.1 Summary of Proposed NPDES Effluent Limits

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

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 37' 52.00" , **Longitude** 78° 17' 0.00" , **River Mile Index** 19.68 , **Stream Code** 15664

Receiving Waters: Little Juniata River (TSF)

Type of Effluent: Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (°F)	XXX	XXX	XXX	110	Report Daily Max	XXX	1/day	I-S

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- Solids Management for Lagoons

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☒	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: New and Reissuance Industrial Waste and Industrial Stormwater, Revised, October 11, 2013
☐	Other:

Attachment A

Stream Stats/Gauge Data

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

Hong, Nicholas

From: Griffith, Sean <SGRIFFITH@vitro.com>
Sent: Monday, November 6, 2023 1:38 PM
To: Hong, Nicholas
Cc: Kloss,Tony; emoretti@moretticonsulting.com
Subject: RE: [External] RE: NPDES renewal / PA009458

Mr. Hong,

I do apologize for the delay in responding I have been in and out of the office over the last week. I have investigated your question below and the water used for cooling water system is a closed loop system and at no time come into direct contact with any raw material, intermediate product, waste product or finished product. So, this is not a contact cooling system. If you have any additional questions, please feel free to reach out. Thank you and have a safe day.

Vitro Automotive Glass

Sean Griffith
EHS Manager
4408 E. Pleasant Valley Blvd.
Tyrone, PA 16686
T: 814-684-7050 | M: 724-549-8408
sgriffith@vitro.com | www.vitro.com

From: Hong, Nicholas <nhong@pa.gov>
Sent: Monday, November 6, 2023 7:46 AM
To: Griffith, Sean <SGRIFFITH@vitro.com>
Cc: Kloss,Tony <JKLOSS@vitro.com>
Subject: RE: [External] RE: NPDES renewal / PA009458

Sean.

Please respond to the 2nd bullet item.

- Confirm if the facility has any contact cooling water in the process. If so the facility will need to collect a total of three different 24-hour composite samples for Pollutant Groups 2 and 5 over three different weeks (i.e. See Attachment A. The facility is a glass manufacturing facility.) The list of parameter to collect are attached. Be advised to have the lab analyze the pollutant to not exceed the DEP target limits (Attachment C).

Nick Hong, PE | Environmental Engineer
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THE SOUTHCENTRAL REGIONAL OFFICE AFTER HOURS REPORTING & 24 HOUR EMERGENCY RESPONSE NUMBER IS 1-800-541-2050

1

From: Griffith, Sean <SGRIFFITH@vitro.com>
Sent: Thursday, November 2, 2023 12:33 PM
To: Hong, Nicholas <nhong@pa.gov>
Cc: Kloss,Tony <JKLOSS@vitro.com>
Subject: [External] RE: NPDES renewal / PA009458

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Mr. Hong,

I apologize for the confusion but with your request I see that a manual data entry error was made it the system when August DMR was submitted. As per our phone conversation earlier, The Flow (MGD) for August 2023 should have been 0.044727 not 0.44727 (I have included a snip from the Daily Effluent Monitoring Report showing the flow numbers below). I have corrected the entry in the Greenport system as we had discussed also. Thank you for your assistance and understanding with this matter.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Facility Name: Pittsburgh Glass Works Tip
Municipality: Antis Township
Watershed: 11-A
Laboratories: Fairway Laboratories

Parameter			Flow		Tempera
Stage			1		
Week	Day	Date	MGD	Q	
1	Sun	7/30/23	0.04359		6
	Mon	7/31/23	0.04294		10
	Tue	8/1/23	0.04294		9
	Wed	8/2/23	0.05043		9
	Thu	8/3/23	0.04934		10
	Fri	8/4/23	0.04872		9
	Sat	8/5/23	0.04506		6
2	Sun	8/6/23	0.04706		6
	Mon	8/7/23	0.04606		9
	Tue	8/8/23	0.04893		9
	Wed	8/9/23	0.04283		9
	Thu	8/10/23	0.04315		9
	Fri	8/11/23	0.04365		9
	Sat	8/12/23	0.04821		6
3	Sun	8/13/23	0.04421		7
	Mon	8/14/23	0.04621		9
	Tue	8/15/23	0.03837		9
	Wed	8/16/23	0.03718		9
	Thu	8/17/23	0.03552		9
	Fri	8/18/23	0.03636		9
	Sat	8/19/23	0.04682		8
4	Sun	8/20/23	0.05082		7
	Mon	8/21/23	0.04882		9
	Tue	8/22/23	0.04819		9
	Wed	8/23/23	0.04137		9
	Thu	8/24/23	0.04756		9
	Fri	8/25/23	0.04768		9
	Sat	8/26/23	0.04493		6
5	Sun	8/27/23	0.04393		6
	Mon	8/28/23	0.04593		9
	Tue	8/29/23	0.04377		9
	Wed	8/30/23	0.03983		9
	Thu	8/31/23	0.04272		9
	Fri	9/1/23			
	Sat	9/2/23			
Statistics for DMR					
		Daily Minimum (Conc.):			6
		Daily Maximum (Conc):			1
		Max Avg Weekly (Conc.):			9
		Avg Monthly (Conc.):			9
		Geometric Mean (Conc.):			
		Max Avg Weekly (Load):	0.047051		
		Avg Monthly (Load):	0.0447273		
		Total Monthly (Load):	1.386547		
		Daily Minimum (Load):	0.035515		
		Daily Maximum (Load):	0.0508167		

I certify under penalty of law that this document was prepared un
inquiry of the person or persons who manage the system or those
that there are significant penalties for submitting false information,

Prepared By: Sean M. G
Title: EHS Mana

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EHS Manager
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From: Hong, Nicholas <nhong@pa.gov>
Sent: Monday, October 30, 2023 3:13 PM
To: Griffith, Sean <SGRIFFITH@vitro.com>
Subject: RE: NPDES renewal / PA009458

Sean.

We have the following comments on the application package.

- The design flow rate for the facility is 0.266 MGD. Please review the average flow rate for August 2023. The reported flow rate is 0.44727 MGD which is much larger than the other 11 months and much larger than the design flow rate of 0.266 MGD.

DMR Data for Outfall 001 (from September 1, 2022 to August 31, 2023)

Parameter	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	F
Flow (MGD) Average Monthly	0.44727 3	0.04911 72	0.04145 1	0.03706	0.03584 7	0.0408	0
Flow (MGD) Daily Maximum	0.05081 67	0.10309 3	0.08782 45	0.05663	0.09294 774	0.0583	0

- Confirm if the facility has any contact cooling water in the process. If so the facility will need to collect a total of three different 24-hour composite samples for Pollutant Groups 2 and 5 over three different weeks (i.e. See Attachment A. The facility is a glass manufacturing facility.) The list of parameter to collect are attached. Be advised to have the lab analyze the pollutant to not exceed the DEP target limits (Attachment C).

Nick Hong, PE | Environmental Engineer
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THE SOUTHCENTRAL REGIONAL OFFICE AFTER HOURS REPORTING & 24 HOUR EMERGENCY RESPONSE NUMBER IS 1-800-541-2050

From: Griffith, Sean <SGRIFFITH@vitro.com>
Sent: Monday, July 31, 2023 1:16 PM
To: Hong, Nicholas <nhong@pa.gov>
Cc: emoretti@moretticonsulting.com; Kloss,Tony <JKLOSS@vitro.com>
Subject: RE: [External] RE: NPDES renewal / PA009458

Mr. Hong,

Please find attached the reply to your questions and inquiries for the PGW Tipton NPDES Renewal. If you have any additional questions, please let me know. Thank you for your time.

Sean Griffith
EHS Manager
4408 E. Pleasant Valley Blvd.
Tyrone, PA 16686
T: 814-684-7050 | M: 724-549-8408
sgriffith@vitro.com | www.vitro.com

From: Hong, Nicholas <nhong@pa.gov>
Sent: Monday, July 17, 2023 6:40 AM
To: Griffith, Sean <SGRIFFITH@vitro.com>
Subject: RE: [External] RE: NPDES renewal / PA009458

Please confirm that Basic H was an approved chemical additive.

Below is a link to the DEP approved chemical additive

WMS_Chem_Add_Approv_ext - Report Viewer (pa.gov)

The original email has the links to the documents to apply for a new chemical additive.

Nick Hong, PE | Environmental Engineer
PA Department of Environmental Protection
Clean Water Programs
Southcentral Regional Office
909 Elmerton Avenue | Harrisburg, PA 17110
Phone: 717.705.4824 | Fax: 717.705.4760
www.dep.pa.gov

THE SOUTHCENTRAL REGIONAL OFFICE AFTER HOURS REPORTING & 24 HOUR EMERGENCY RESPONSE NUMBER IS 1-800-541-2050

From: Griffith, Sean <SGRIFFITH@vitro.com>
Sent: Thursday, July 13, 2023 10:18 AM
To: Hong, Nicholas <nhong@pa.gov>
Subject: [External] RE: NPDES renewal / PA009458

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Mr. Hong,

I have received your email and am working to pull together the requested information. I will get this together and get it back to you as soon as I am able. However, we are unsure why PADEP is requesting information about Basic H; we believe we have included it in previous applications as a chemical additive. Could you please provide additional guidance for the request to approve Basic H?

Thank you for your time.

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sgriffith@vitro.com | www.vitro.com

From: Hong, Nicholas <nhong@pa.gov>
Sent: Monday, July 10, 2023 1:42 PM
To: Griffith, Sean <SGRIFFITH@vitro.com>
Subject: NPDES renewal / PA009458

Sean Griffith:

This message acknowledges that DEP has received the NPDES renewal application for Pittsburgh Glass Works.

We have the following preliminary comments on the renewal package.

- Confirm if the facility anticipates any proposed upgrades in the next five years
- Submit copies of the Act 14 notice tracking numbers or green receipts confirming the letter was mailed and received by the county/township
- Provide sludge disposal for 2022 if any
- Submit flow diagram for the process. Include flow rates.
- Submit request to approve Basic H as a chemical additive

Links to the forms are below

Chemical Additives Notification Form
- DEP eLibrary (state.pa.us)

New Chemical Additives Request Form
- DEP eLibrary (state.pa.us)

Nick Hong, PE | Environmental Engineer
PA Department of Environmental Protection
Clean Water Programs
Southcentral Regional Office
909 Elmerton Avenue | Harrisburg, PA 17110

Hong, Nicholas

From: Griffith, Sean <SGRIFFITH@vitro.com>
Sent: Tuesday, March 12, 2024 7:13 AM
To: Hong, Nicholas
Cc: emoretti@moretticonsulting.com; Kloss,Tony
Subject: [External] NPDES Renewal / PA 009458 - No Exposure

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Mr. Hong,

I apologize that it has taken a little to get this back to you but we wanted to ensure we had the right answer for you. Your questions prompted us to review the discharge characterization we included in the NPDES application. We discussed with site engineers the projected actual flows to the outfall and believe the current flowrate of 0.266 MGD is still appropriate going forward. Thank you for your patience and as always please let me know if you have any additional questions.

Vitro Automotive Glass

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Title 40 —Protection of Environment
Chapter I —Environmental Protection Agency
Subchapter N —Effluent Guidelines and Standards

Part 426 Glass Manufacturing Point Source Category

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
COD	0.33	.165
BOD_5	0.024	.012
TSS	0.03	.015
pH	(1)	(1)
	English units (pounds per 1,000 lb. of product)	
Phenol	0.0006	0.0003
COD	0.33	.165
BOD_5	0.024	.012
TSS	0.03	.015
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 2565, Jan. 22, 1974; 39 FR 4760, Feb. 7, 1974]

§ 426.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: There shall be no discharge of process waste water pollutants to navigable waters.

§ 426.14 [Reserved]

§ 426.15 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§ 426.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

(a) *Applicability.* The provisions of this section shall apply to discharges of process waste water pollutants into publicly owned treatment works except for that portion of the waste stream which constitutes cullet water.

(b) [Reserved]

[39 FR 2565, Jan. 22, 1974, as amended at 60 FR 33958, June 29, 1995]

§ 426.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kg of product)	
Phosphorus	0.05	.05
	English units (lb/ton of product)	
Phosphorus	0.0001	.0001

[39 FR 5714, Feb. 14, 1974, as amended at 44 FR 50746, Aug. 29, 1979]

§ 426.54 [Reserved]

§ 426.55 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of product)	
TSS	0.70	0.70
Oil	1.40	1 .40
Phosphorus	0.05	.05
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	0.0014	0.0014
Oil	0.0028	.0028
Phosphorus	0.0001	.0001
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.56 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33958, June 29, 1995]

§ 426.57 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.52 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart F—Automotive Glass Tempering Subcategory

Source: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.60 Applicability; description of the automotive glass tempering subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the processes in which glass is cut and then passed through a series of processes that grind and polish the edges, bend the glass, and then temper the glass to produce side and back windows for automobiles.

§ 426.61 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR part 401 shall apply to this subpart.

(b) The term "tempering" shall mean the process whereby glass is heated near the melting point and then rapidly cooled to increase its mechanical and thermal endurance.

§ 426.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	1.95	1.22
Oil	0.64	.64
pH	(1)	(1)
	English units (lb/1,060 sq ft of product)	
TSS	0.40	0.25

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Oil	0.13	.13
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33959, June 29, 1995]

§ 426.63 [Reserved]

§ 426.64 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, the following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
Oil	Do.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.65 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	0.24	0.24
Oil	0.49	.49
pH	(1)	(1)
	English units (lb/1,000 sq ft of product)	
TSS	0.05	0.05
Oil	0.10	.10
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.66 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33959, June 29, 1995]

§ 426.67 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.62 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart G—Automotive Glass Laminating Subcategory

Source: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.70 Applicability; description of the automotive glass laminating subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the processes which laminate a plastic sheet between two layers of glass, and which prepare the glass for lamination such as cutting, bending and washing, to produce automobile windshields.

§ 426.71 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR part 401 shall apply to this subpart.

§ 426.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	4.40	4.40
Oil	1.76	1.76

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Phosphorus	1.07	1.07
pH	(1)	(1)
	English units (lb/1,000 sq ft of product)	
TSS	0.90	0.90
Oil	0.36	.36
Phosphorus	0.22	.22
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33959, June 29, 1995]

§ 426.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of products)	
Phosphorus	0.30	.30
	English units (lb/1,000 sq ft of product)	
Phosphorus	0.06	.06

[39 FR 5714, Feb. 14, 1974, as amended at 44 FR 50746, Aug. 29, 1979]

§ 426.74 [Reserved]

§ 426.75 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new point source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	0.88	0.88
Oil	1.76	1.76

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Phosphorus	0.30	.30
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.18	0.18
Oil	0.36	.36
Phosphorus	0.06	.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.76 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33959, June 29, 1995]

§ 426.77 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.72 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart H—Glass Container Manufacturing Subcategory

Source: 40 FR 2956, Jan. 16, 1975, unless otherwise noted.

§ 426.80 Applicability; description of the glass container manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into glass containers.

§ 426.81 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter shall apply to this subpart.

Toxic Management Spreadsheet (TMS outputs)

Run #1 utilized discharge flow rate of 0.043 MGD

Run #2 utilized discharge flow rate of 0.266 MGD.

RUN 1

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Pittsburgh Glass Works** NPDES Permit No.: **PA0009458** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **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
0.043	100	6.45						

					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											
	Chloride (PWS)	mg/L		10.2									
	Bromide	mg/L	<	0.036									
	Sulfate (PWS)	mg/L		9.6									
	Fluoride (PWS)	mg/L	<	0.05									
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L											
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L											
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Pittsburgh Glass Works, NPDES Permit No. PA0009458, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Little Juniata 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	015664	19.68	939	95.7			Yes
End of Reach 1	015664	17.69	911	101			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	19.68	0.2049										39.9	7.92		
End of Reach 1	17.69	0.2049										39.9	7.92		

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	19.68														
End of Reach 1	17.69														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Pittsburgh Glass Works, NPDES Permit No. PA0009458, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.334 Analysis Hardness (mg/l): 40.505 Analysis pH: 7.81

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
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	
Sodium Hypochlorite	0	0		0	10	10.0	993	

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 40.103 Analysis pH: 7.88

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
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	
Sodium Hypochlorite	0	0		0	1.1	1.1	325	

☑ ***THH*** CCT (min): ###### 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
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	
Sodium Hypochlorite	0	0		0	21,000	21,000	6,211,339	

☑ ***CRL*** CCT (min): 46.301 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
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	
Sodium Hypochlorite	0	0		0	N/A	N/A	N/A	

☑ ***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
Sodium Hypochlorite	0.12	0.18	0.33	0.51	0.81	mg/L	0.33	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
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	Discharge Conc < TQL

RUN 2

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Pittsburgh Glass Works** NPDES Permit No.: **PA0009458** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **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
0.266	100	6.45						

					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											
	Chloride (PWS)	mg/L		10.2									
	Bromide	mg/L	<	0.036									
	Sulfate (PWS)	mg/L		9.6									
	Fluoride (PWS)	mg/L	<	0.05									
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L											
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L											
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Pittsburgh Glass Works, NPDES Permit No. PA0009458, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Little Juniata 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	015664	19.68	939	95.7			Yes
End of Reach 1	015664	17.69	911	101			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	19.68	0.2049										39.9	7.92		
End of Reach 1	17.69	0.2049										39.9	7.92		

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	19.68														
End of Reach 1	17.69														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Pittsburgh Glass Works, NPDES Permit No. PA0009458, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.338 Analysis Hardness (mg/l): 43.416 Analysis pH: 7.49

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
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	
Sodium Hypochlorite	0	0		0	10	10.0	171	

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 41.135 Analysis pH: 7.72

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
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	
Sodium Hypochlorite	0	0		0	1.1	1.1	53.5	

☑ ***THH*** CCT (min): ###### 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
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	
Sodium Hypochlorite	0	0		0	21,000	21,000	1,021,694	

☑ ***CRL*** CCT (min): 46.858 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
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	
Sodium Hypochlorite	0	0		0	N/A	N/A	N/A	

☑ ***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
Sodium Hypochlorite	0.12	0.19	0.054	0.083	0.13	mg/L	0.054	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
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	Discharge Conc < TQL

Thermal Evaluation

Facility:	**Pittsburgh Glass Works**
Permit Number:	PA0009458
Stream Name:	Little Juniata River
Analyst/Engineer:	DEP
Stream Q7-10 (cfs):	19.607

	Facility Flows				Stream Flows			
	Intake (Stream) (MGD)	Intake (External) (MGD)	Consumptive Loss (MGD)	Discharge Flow (MGD)	PMF	Upstream Stream Flow (cfs)	Adjusted Stream Flow (cfs)	Downstream Stream Flow (cfs)
Jan 1-31	0	0.266	0	0.266	1.00	60.59	60.59	61.00
Feb 1-29	0	0.266	0	0.266	1.00	68.62	68.62	69.04
Mar 1-31	0	0.266	0	0.266	1.00	127.45	127.45	127.86
Apr 1-15	0	0.266	0	0.266	1.00	175.68	175.68	176.09
Apr 16-30	0	0.266	0	0.266	1.00	175.68	175.68	176.09
May 1-15	0	0.266	0	0.266	1.00	99.60	99.60	100.02
May 16-31	0	0.266	0	0.266	1.00	99.60	99.60	100.02
Jun 1-15	0	0.266	0	0.266	1.00	58.04	58.04	58.45
Jun 16-30	0	0.266	0	0.266	1.00	58.04	58.04	58.45
Jul 1-31	0	0.266	0	0.266	1.00	26.67	26.67	27.08
Aug 1-15	0	0.266	0	0.266	1.00	27.25	27.25	27.67
Aug 16-31	0	0.266	0	0.266	1.00	27.25	27.25	27.67
Sep 1-15	0	0.266	0	0.266	1.00	21.18	21.18	21.59
Sep 16-30	0	0.266	0	0.266	1.00	21.18	21.18	21.59
Oct 1-15	0	0.266	0	0.266	1.00	25.10	25.10	25.51
Oct 16-31	0	0.266	0	0.266	1.00	25.10	25.10	25.51
Nov 1-15	0	0.266	0	0.266	1.00	35.49	35.49	35.90
Nov 16-30	0	0.266	0	0.266	1.00	35.49	35.49	35.90
Dec 1-31	0	0.266	0	0.266	1.00	58.82	58.82	59.23

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.

Version 2.0 -- 07/01/2005 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017

NOTE: The user can only edit fields that are blue.

NOTE: MGD x 1.547 = cfs.

Facility:	**Pittsburgh Glass Works**							
Permit Number:	PA0009458							
Stream:	Little Juniata River							
	TSF			**TSF**		**TSF**		**PMF**
	Ambient Stream	Ambient Stream	Target Maximum	Daily		Daily		
	Temperature (ºF)	Temperature (ºF)	Stream Temp.[1]	WLA[2]		WLA[3]	at Discharge	
	(Default)	(Site-specific data)	(ºF)	(Million BTUs/day)		(ºF)	Flow (MGD)	
Jan 1-31	34	0	40	N/A -- Case 2		110.0	0.266	1.00
Feb 1-29	35	0	40	N/A -- Case 2		110.0	0.266	1.00
Mar 1-31	39	0	46	N/A -- Case 2		110.0	0.266	1.00
Apr 1-15	46	0	52	N/A -- Case 2		110.0	0.266	1.00
Apr 16-30	52	0	58	N/A -- Case 2		110.0	0.266	1.00
May 1-15	56	0	64	N/A -- Case 2		110.0	0.266	1.00
May 16-31	60	0	68	N/A -- Case 2		110.0	0.266	1.00
Jun 1-15	65	0	70	N/A -- Case 2		110.0	0.266	1.00
Jun 16-30	69	0	72	N/A -- Case 2		110.0	0.266	1.00
Jul 1-31	73	0	74	N/A -- Case 2		110.0	0.266	1.00
Aug 1-15	72	0	80	N/A -- Case 2		110.0	0.266	1.00
Aug 16-31	70	0	87	N/A -- Case 2		110.0	0.266	1.00
Sep 1-15	68	0	84	N/A -- Case 2		110.0	0.266	1.00
Sep 16-30	62	0	78	N/A -- Case 2		110.0	0.266	1.00
Oct 1-15	57	0	72	N/A -- Case 2		110.0	0.266	1.00
Oct 16-31	53	0	66	N/A -- Case 2		110.0	0.266	1.00
Nov 1-15	47	0	58	N/A -- Case 2		110.0	0.266	1.00
Nov 16-30	41	0	50	N/A -- Case 2		110.0	0.266	1.00
Dec 1-31	36	0	42	N/A -- Case 2		110.0	0.266	1.00

[1] This is the maximum of the TSF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for TSF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.

TRC Evaluation

Pittsburgh Glass Works
PA 0009458

January 2024

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	19.60717914	= Q stream (cfs)		0.5	= CV Daily	
5	0.266	= 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)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 15.219		1.3.2.iii	WLA cfc = 14.829
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 5.671		5.1d	LTA_cfc = 8.621
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)**