pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0012203**
Facility Type	**Industrial**	APS ID	**658823**
Major / Minor	**Minor**	Authorization ID	**1416487**

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

Applicant and Facility Information

Applicant Name	**Allen Organ Company, LLC**	Facility Name	**Allen Organ Company, LLC**
Applicant Address	150 Locust Street	Facility Address	150 Locust Street
	Macungie, PA 18062-1165		Macungie, PA 18062-1165
Applicant Contact	Steve A. Markowitz, President	Facility Contact	Steve A. Markowitz, President
Applicant Phone	(610) 966-2200	Facility Phone	(610) 966-2200
Client ID	51848	Site ID	515996
SIC Code	3931	Municipality	Macungie Borough
SIC Description	Manufacturing - Musical Instruments	County	Lehigh
Date Application Received	October 20, 2022	EPA Waived?	Yes
Date Application Accepted	November 9, 2022	If No, Reason	-

Purpose of Application: Renewal of NPDES permit to discharge industrial wastewater and stormwater.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.44 MGD of non-contact cooling water (NCCW) from the facility air conditioning system and industrial stormwater into Swabia Creek, a High Quality, Cold-Water Fishery, Migratory Fish (HQ, CWF, MF) receiving stream in State Water Plan Basin 2-C (Lower Lehigh River). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

Allen Organ Company manufactures wood console electronic organs. Two separate wells supply the water to be used as NCCW. The water is discharged to three different outfalls (Outfalls 001, 002, and 003). The previous permit fact sheet describes Outfall 001 as a ditch, Outfall 002 is an 18-inch steel pipe, and Outfall 003 is an 18-inch concrete pipe. The NPDES Renewal application lists the average flow during production/operation for Outfalls 001, 002 and 003 as 0.256 MGD, 0.171, and 0.085 MGD respectively.

The flow was modeled using DEP's Thermal Discharge Limit Calculation Spreadsheet. The previous permit used data from Stream Gage 1451500 Lehigh Creek at Allentown, PA. The LFY and $Q_{7\text{-}10}$ value derived from Stream Gage in the previous permit was 0.4158 cfs/mi^2 and 3.28 cfs respectfully. Updated stream gage data from the same stream gage was used to derive a new LFY of 0.356 cfs/mi^2 and a $Q_{7\text{-}10}$ of 2.83 cfs. These updated values were used in the Thermal Discharge Limit Calculation Spreadsheet. The Spreadsheet recommended stricter temperature limits. The updated limitations will come into effect three (3) years after the permit effective date (see tables in Parts A.I.B, Part A.I.D, and Part A.I.F.). The limitations for Temperature from the previously issued permit will be in effect the first three (3) years of the permit.

RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	April 2, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Environmental Manager	4-29-24

Summary of Review

Oil & Grease, pH, and Dissolved Oxygen (DO) limitations have been carried over from the previous permit.

Outfalls 004 and 005 are stormwater outfalls onsite. Outfall 004 drains stormwater from the northern side of the facility via conveyance ditch. Outfall 005 drains stormwater from the areas around Spring Street. Stormwater drains over land before entering the catch basin associated with a NCCW outfall. Outfall 005 samples should be taken from the stormwater as it enters the catch basin since the flows mix with NCCW from the facility before being discharged. Wording in Part C.I.F. instructs the permittee to refrain from sampling NCCW outfalls that mix with stormwater during rain events. If this isn't possible during any of the permittee's weekly sampling requirements (because of constant precipitation), the permittee should indicate it on their DMR.

The facility is categorized by SIC code 3931 (Manufacturing – Musical Instruments) and falls under Appendix S monitoring requirements of the PAG-03 general permit. The PAG-03 General Permit was recently updated; therefore, the monitoring/reporting parameters were updated to be consistent with the PAG-03 updated appendix. Semi-annual monitoring and reporting for Total Nitrogen, Total Phosphorous, pH, Total Suspended Solids (TSS), and Total Zinc are required under the PAG-03. Please note that Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample.

Benchmark values exist for pH and TSS. A benchmark value is the concentration of a pollutant in stormwater discharges that serves as a threshold for the determination of whether existing site BMPs are effective in controlling stormwater pollution. The benchmark values can be found in Part C. III. F. of the permit.

Permit Part C. III. conditions include Requirements Applicable to Stormwater Outfalls. The permit requires implementation of a PPC plan and requires completion of an annual inspection and compliance evaluation.

The special condition regarding chemical additives is carried over from the previous permit. Wording in the condition has been updated as per the latest template.

The existing permit expired on May 31, 2023 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on December 12, 2022 a Compliance Evaluation was performed.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001, 002, 003	Design Flow (MGD)	0.44
Latitude	Outfall 001: 40º 30' 55.2" Outfall 002: 40º 30' 55.4" Outfall 003: 40º 30' 56.1"	Longitude	Outfall 001: -75º 33' 35.9" Outfall 002: -75º 33' 37.1" Outfall 003: -75º 33' 41.1"
Quad Name	Allentown West	Quad Code	1441
Wastewater Description:	Non-contact Cooling Water (NCCW)		

Receiving Waters	Swabia Creek (HQ-CWF)	Stream Code	3579
NHD Com ID	26295643	RMI	2.04
Drainage Area	7.94 mi^2	Yield (cfs/mi^2)	0.356
Q_{7-10} Flow (cfs)	2.83	Q_{7-10} Basis	Stream Gage 1451500 – Lehigh Creek at Allentown, PA
Elevation (ft)	373.24	Slope (ft/ft)	-
Watershed No.	2-C	Chapter 93 Class.	HQ-CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	HABITAT ALTERATIONS, PATHOGENS, SILTATION		
Source(s) of Impairment	AGRICULTURE, SOURCE UNKNOWN, URBAN RUNOFF/STORM SEWERS		
TMDL Status	-	Name	-

Nearest Downstream Public Water Supply Intake	LCA Allentown		
PWS Waters	Little Lehigh Creek	Flow at Intake (cfs)	-
PWS RMI	2.15	Distance from Outfall (mi)	~ 11.6

Modeling Using USGS Stream Gage

Stream Gage: 1451500 Leigh Creek at Allentown, PA
Period of Record: 9/30/1945 – 03/25/2024

Basin Dimensional Characteristics

Characteristic Name	Value	Units
Drainage Area	80.8	square miles

Low-Flow Statistics

Statistic Name	Value	Units	Preferred?	Years of Record	Standard Error, percent	Citation	Comments
1 Day 10 Year Low Flow	27.6	cubic feet per second	✓	62		49	Statistic Date Range 4/1/1946 - 3/31/2008
7 Day 2 Year Low Flow	43.4	cubic feet per second	✓	62		49	Statistic Date Range 4/1/1946 - 3/31/2008
7 Day 10 Year Low Flow	28.8	cubic feet per second	✓	62		49	Statistic Date Range 4/1/1946 - 3/31/2008

$$Low\ Flow\ Yield\ using\ StreamStats\ Gage\ Data = \frac{28.8\ ft^3/sec}{80.8\ mi^2} = \mathbf{0.356}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

$$Q_{7-10}\ at\ Outfall\ 001\ using\ StreamStats\ Gage\ Data = 0.356\ ft^3/sec \times 7.94\ mi^2 = 2.83\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

Modeling with State-Wide default LFY of 0.1 cfs/mi²:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 7.94\ mi^2 = \frac{\mathbf{0.794}\ \boldsymbol{ft^3}}{\boldsymbol{sec}}$$

Modeling Using StreamStats:

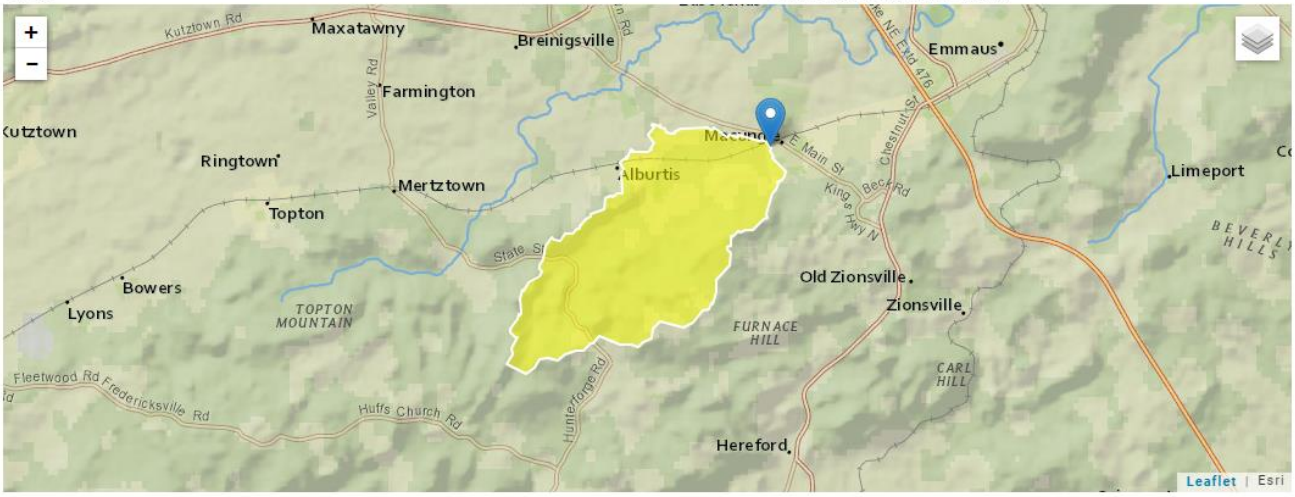
At Outfall 001 on Swabia River:

RMI	Elevation (ft)	Drainage Area (mi^2)	$Q_{7\text{-}10}$ Flow (cfs)
2.04	373.24	7.94	1.11

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{1.11\ ft^3/sec}{7.94\ mi^2} = \mathbf{0.14}\frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240327132531164000
Clicked Point (Latitude, Longitude):	40.51540, -75.55993
Time:	2024-03-27 09:25:54 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	7.94	square miles

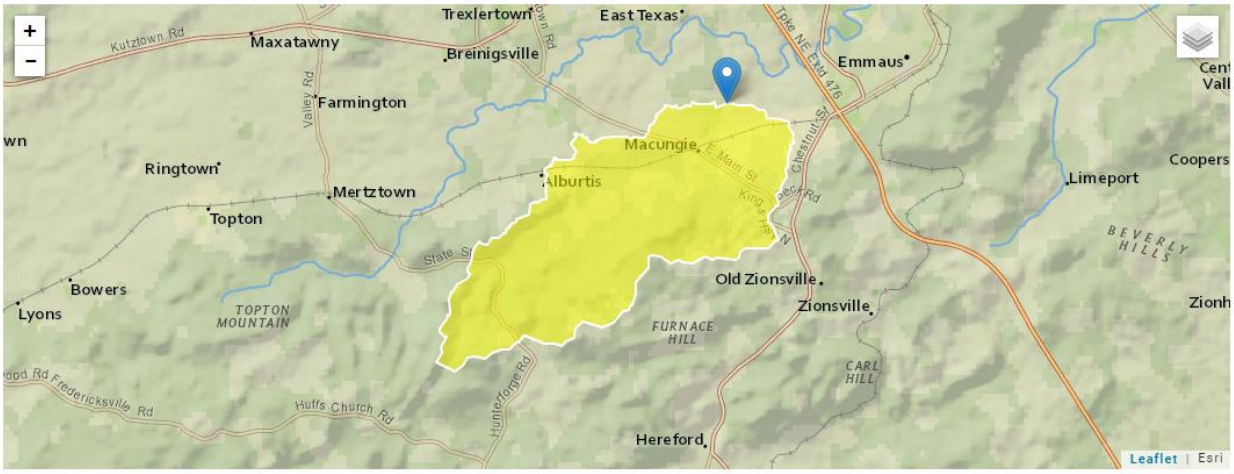
Statistic	Value	Unit
7 Day 2 Year Low Flow	1.94	ft^3/s
30 Day 2 Year Low Flow	2.35	ft^3/s
7 Day 10 Year Low Flow	1.11	ft^3/s

At confluence with Unnamed Tributary to Swabia Creek (3580):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.965	351.63	11.9

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240327133329870000
Clicked Point (Latitude, Longitude):	40.52687, -75.54813
Time:	2024-03-27 09:33:52 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	11.9	square miles

Flow Data for Thermal Discharge Analysis

Facility: Allen Organ Company
Permit Number: PA0012203
Stream Name: Swabia Creek
Analyst/Engineer: A. Seyfried
Stream Q7-10 (cfs): 2.83

	Facility Flows[1]				Stream Flows	
	Stream (Intake) (MGD)	External (Intake) (MGD)	Consumptive (Loss) (MGD)	Discharge (MGD)	Adj. Q7-10 Stream Flow (cfs)	Downstream[2] Stream Flow (cfs)
Jan 1-31	0	0.44	0	0.44	9.1	9.7
Feb 1-29	0	0.44	0	0.44	9.9	10.6
Mar 1-31	0	0.44	0	0.44	19.8	20.5
Apr 1-15	0	0.44	0	0.44	26.3	27.0
Apr 16-30	0	0.44	0	0.44	26.3	27.0
May 1-15	0	0.44	0	0.44	14.4	15.1
May 16-31	0	0.44	0	0.44	14.4	15.1
Jun 1-15	0	0.44	0	0.44	8.5	9.2
Jun 16-30	0	0.44	0	0.44	8.5	9.2
Jul 1-31	0	0.44	0	0.44	4.8	5.5
Aug 1-15	0	0.44	0	0.44	4.0	4.6
Aug 16-31	0	0.44	0	0.44	4.0	4.6
Sep 1-15	0	0.44	0	0.44	3.1	3.8
Sep 16-30	0	0.44	0	0.44	3.1	3.8
Oct 1-15	0	0.44	0	0.44	3.4	4.1
Oct 16-31	0	0.44	0	0.44	3.4	4.1
Nov 1-15	0	0.44	0	0.44	4.5	5.2
Nov 16-30	0	0.44	0	0.44	4.5	5.2
Dec 1-31	0	0.44	0	0.44	6.8	7.5

[1] Facility flows are not required (and will not affect the permit limits) if all intake flow is from the receiving stream (Case 1), consumptive losses are small, and permit limits will be expressed as Million BTUs/day.
[2] Downstream Stream Flow includes the discharge flow.

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.
Version 1.0 – 08/01/2004 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: **Allen Organ Company**
Permit Number: PA0012203
Stream: Swabia Creek

	WWF Criteria (°F)	CWF Criteria (°F)	TSF Criteria (°F)	316 Criteria (°F)	Q7-10 Multipliers (Used in Analysis)	Q7-10 Multipliers (Default - Info Only)
Jan 1-31	40	38	40	0	3.2	3.2
Feb 1-29	40	38	40	0	3.5	3.5
Mar 1-31	46	42	46	0	7	7
Apr 1-15	52	48	52	0	9.3	9.3
Apr 16-30	58	52	58	0	9.3	9.3
May 1-15	64	54	64	0	5.1	5.1
May 16-30	72	58	68	0	5.1	5.1
Jun 1-15	80	60	70	0	3	3
Jun 16-30	84	64	72	0	3	3
Jul 1-31	87	66	74	0	1.7	1.7
Aug 1-15	87	66	80	0	1.4	1.4
Aug 16-31	87	66	87	0	1.4	1.4
Sep 1-15	84	64	84	0	1.1	1.1
Sep 16-30	78	60	78	0	1.1	1.1
Oct 1-15	72	54	72	0	1.2	1.2
Oct 16-31	66	50	66	0	1.2	1.2
Nov 1-15	58	46	58	0	1.6	1.6
Nov 16-30	50	42	50	0	1.6	1.6
Dec 1-31	42	40	42	0	2.4	2.4

NOTES:
WWF= Warm water fishes
CWF= Cold water fishes
TSF= Trout stocking

Facility: **Allen Organ Company**
Permit Number: PA0012203
Stream: Swabia Creek

	CWF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	CWF Daily WLA[2] (Million BTUs/day)	CWF Daily WLA[3] (°F)	at Discharge Flow (MGD)
Jan 1-31	34	0	38	N/A -- Case 2	91.2	0.44
Feb 1-29	35	0	38	N/A -- Case 2	81.7	0.44
Mar 1-31	39	0	42	N/A -- Case 2	110.0	0.44
Apr 1-15	46	0	48	N/A -- Case 2	110.0	0.44
Apr 16-30	52	0	53	N/A -- Case 2	91.7	0.44
May 1-15	55	0	56	N/A -- Case 2	77.2	0.44
May 16-30	59	0	60	N/A -- Case 2	81.2	0.44
Jun 1-15	63	0	64	N/A -- Case 2	76.5	0.44
Jun 16-30	67	0	68	N/A -- Case 2	80.5	0.44
Jul 1-31	71	0	72	N/A -- Case 2	79.1	0.44
Aug 1-15	70	0	71	N/A -- Case 2	76.8	0.44
Aug 16-31	70	0	71	N/A -- Case 2	76.8	0.44
Sep 1-15	66	0	67	N/A -- Case 2	71.6	0.44
Sep 16-30	60	0	61	N/A -- Case 2	65.6	0.44
Oct 1-15	55	0	56	N/A -- Case 2	61.0	0.44
Oct 16-31	51	0	52	N/A -- Case 2	57.0	0.44
Nov 1-15	46	0	47	N/A -- Case 2	53.7	0.44
Nov 16-30	40	0	42	N/A -- Case 2	55.3	0.44
Dec 1-31	35	0	40	N/A -- Case 2	89.9	0.44

[1] This is the maximum of the CWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for CWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1°F 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 °F 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 110°F are displayed as 110°F.


Thermal Discharge Limit Calculation Sp


Watershed Info - Allen Organ.pdf