pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0221244**
Facility Type	**Industrial**	APS ID	**1010798**
Major / Minor	**Minor**	Authorization ID	**1304563**

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

Applicant and Facility Information

Applicant Name	**Salem Tube, Inc.**	Facility Name	**Salem Tube Manufacturing**
Applicant Address	951 Fourth Street	Facility Address	951 Fourth Street
	Greenville, PA 16125		Greenville, PA 16125
Applicant Contact	Yogesh Shukla	Facility Contact	Yogesh Shukla
Applicant Phone	(724) 646-4356	Facility Phone	(724) 646-4356
Client ID	6867	Site ID	246940
SIC Code	3312	Municipality	Pymatuning Township
SIC Description	Manufacturing - Blast Furnaces and Steel Mills	County	Mercer County
Date Application Received	January 29, 2020	EPA Waived?	Yes
Date Application Accepted	February 7, 2020	If No, Reason	-
Purpose of Application	The application is for a renewal of an NPDES permit for an existing discharge of treated Industrial Waste.		

Summary of Review

Act 14 - Proof of Notification was submitted and received.

This facility is not subject to any ELGs.

A Part II Water Quality Management permit is not required at this time.

The applicant should be able to continue to meet the limits of this permit, which will protect the uses of the receiving stream.

I. OTHER REQUIREMENTS:

- A. Right of Way
- B. Solids Handling
- C. NPDES Permit Supersedes WQM Permits
- D. Modification or Revocation for Changes to BAT or BCT
- E. Temperature
- F. No Net Addition of Pollutants

SPECIAL CONDITIONS:

- II. Chemical Additives
- III. Requirements Applicable to Stormwater Outfalls

There are no open violations in efacts associated with the subject Client ID (6867) as of 2/4/2021.

Approve	Deny	Signatures	Date
X		Stephen A. McCauley Stephen A. McCauley, E.I.T. / Environmental Engineering Specialist	2/4/2021
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	2/8/2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.108
Latitude	41º 21' 22.00"	Longitude	-80º 24' 35.00"
Quad Name	-	Quad Code	-
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	Unnamed Tributary to the Big Run (WWF)	Stream Code	N/A
NHD Com ID	130034266	RMI	N/A
Drainage Area	26.1	Yield (cfs/mi^2)	0.05
Q_{7-10} Flow (cfs)	1.3	Q_{7-10} Basis	calculated
Elevation (ft)	980	Slope (ft/ft)	0.005303
Watershed No.	20-A	Chapter 93 Class.	WWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-

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

Nearest Downstream Public Water Supply Intake	Reynolds Water Company		
PWS Waters	Shenango River	Flow at Intake (cfs)	8.0
PWS RMI	55.0	Distance from Outfall (mi)	1.0

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.

Narrative: This Fact Sheet details the determination of draft NPDES permit limits for an existing discharge of 0.108 MGD of Industrial-related wastewater from an existing groundwater cleanup treatment system in addition to contact cooling water from welding operations, NCCW, and stormwater (Outfall 001), and 0.0067 MGD of NCCW and stormwater from Outfall 002 in Pymatuning Township, Mercer County.

Existing treatment for groundwater consists of: A groundwater collection manhole, recovery wells, and the collection of groundwater from the degreaser sump. Treatment equipment includes a 500 gallon equalization tank, an air stripper, and two 1,000 pound liquid granulated activated carbon vessels in series. VOCs from the air stripper are treated with two 2,000 pound vapor granulated activated carbon vessels and one 1,000 pound vessel containing Hydrosil HS600 media.

Streamflow: Little Shenango River at Greenville, PA (USGS Gage no. 03102500):

Q_{7-10}:	5.5	cfs	(USGS StreamStats)
Drainage Area:	104	sq. mi.	(USGS StreamStats)
Yieldrate:	0.05	cfsm	(calculated)

Unnamed Tributary to the Big Run @ Outfall 001:

Yieldrate:	0.05	cfsm	(calculated above)
Drainage Area:	26.1	sq. mi.	(USGS StreamStats)
% of stream allocated:	100%	Basis:	No nearby discharges
Q_{7-10}:	1.3	cfs	

2. Wasteflow: Outfall 001

Maximum discharge: 0.108 MGD = 0.167 cfs

Runoff flow period: 24 hours Basis: Discharges with flow equalization

The calculated stream flow is more than 3 parts to the discharge flow. Therefore, in accordance with the SOP, no treatment requirements will be required from document number 391-2000-014, titled, “Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers”, dated April 12, 2008.

Flow will continue to be monitored as authorized under Chapter 92a.61, and as recommended in the SOP.

3. Parameters:

The following parameters were evaluated: pH and Total Suspended Solids.

a. pH

Between 6.0 and 9.0 at all times

Basis: Application of Chapter 95.2 technology-based limits.

b. Total Suspended Solids (TSS)

Production-based mass loading limits of 1.28 lbs/day as a monthly average and 3.43 lbs/day as a daily maximum were calculated, along with an instantaneous maximum concentration limit of 29.4 mg/l (see Attachment 1). However, since the previous limits for TSS are more stringent, and are attainable, the previous mass loading limits of 2.92 lbs/day as a monthly average and 7.8 lbs/day as a daily maximum, along with an instantaneous maximum concentration limit of 67 mg/l will be retained with this renewal.

Basis: Application of 40 CFR 420.72(d) technology-based limits adjusted for production.

c. Oil and Grease

A Production-based mass loading limit of 0.85 lbs/day as a daily maximum was calculated, along with an instantaneous maximum concentration limit of 30 mg/l (see Attachment 1). However, since the previous limits

for O&G are more stringent, and are attainable, the previous mass loading limit of 1.94 lbs/day as a daily maximum along with an instantaneous maximum concentration limit of 30 mg/l will be retained with this renewal.

Basis: Application of 40 CFR 420.72(d) technology-based limits adjusted for production.

4. Reasonable Potential Analysis:

A Reasonable Potential Analysis was performed in accordance with State practices for Outfall 001 by first using the Toxics Screening Analysis Spreadsheet to determine which parameters should be modeled using the Pentox program. Based on the Toxics Screening Analysis Spreadsheet (see Attachment 2), none of the parameters sampled in the renewal application were required to be modeled for Outfall 001.

Result: No WQBELs are necessary for this renewal.

However, due to the existing groundwater contamination, the previous TCE monitoring will be retained with this renewal. The previous concentration limits for Vinyl Chloride will also be retained with this renewal as the limits are attainable.

5. NO_2-NO_3, Fluoride, Phenolics, Sulfates, Chlorides, and TDS:

Nearest Downstream potable water supply (PWS): Reynolds Water Company

Distance downstream from the point of discharge: 1.0 miles (approximate)

☒ No limits necessary
☐ Limits needed

Basis: Significant dilution is available. While none of the parameters were sampled in the renewal application, the ratio of the downstream PWS flow to the discharge flow is greater than 47:1.

6. Attachment List:

Attachment 1 - Technology-Based Effluent Limits Calculation Spreadsheet
Attachment 2 - Toxics Screening Analysis Spreadsheet

(The Attachments above can be found at the end of this document)

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0.0067
Latitude	41º 21' 21.00"	Longitude	-80º 24' 34.00"
Quad Name	-	Quad Code	-
Wastewater Description:	Noncontact Cooling Water (NCCW), Stormwater		
Receiving Waters	Unnamed Tributary to the Big Run (WWF)	Stream Code	N/A
NHD Com ID	130034266	RMI	N/A
Drainage Area	26.1	Yield (cfs/mi^2)	0.05
Q_{7-10} Flow (cfs)	1.3	Q_{7-10} Basis	calculated
Elevation (ft)	980	Slope (ft/ft)	0.005303
Watershed No.	20-A	Chapter 93 Class.	WWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-

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

Nearest Downstream Public Water Supply Intake	Reynolds Water Company		
PWS Waters	Shenango River	Flow at Intake (cfs)	8.0
PWS RMI	55.0	Distance from Outfall (mi)	1.0

Compliance History

DMR Data for Outfall 001 (from December 1, 2019 to November 30, 2020)

Parameter	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19
Flow (MGD) Average Monthly	0.0042	0.0097	0.0086	0.0130	0.0103	0.0087	0.0075	0.0090	0.0090	0.0126	0.0056	0.0091
pH (S.U.) Minimum	7.0	6.8	7.4	7.4	7.4	7.4	7.6	7.4	7.5	6.5	6.4	6.0
pH (S.U.) Maximum	7.3	7.2	7.6	7.6	7.8	7.8	7.8	8.0	8.0	8.0	7.6	7.0
TSS (lbs/day) Average Monthly	0.25	< 0.27	< 0.39	< 0.37	< 0.20	< 0.26	0.500	1.04	0.24	< 0.09	0.135	0.53
TSS (lbs/day) Daily Maximum	0.38	< 0.43	< 0.72	< 0.43	< 0.32	< 0.45	0.73	1.83	0.49	< 0.18	0.271	1.07
TSS (mg/L) Average Monthly	10.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.5	12.5	2.5	< 2.5	2.5	6.00
TSS (mg/L) Daily Maximum	15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.0	20.0	5.0	< 5.0	5.0	12.00
Oil and Grease (lbs/day) Daily Maximum	0.134	< 0.43	< 0.72	0.42	< 0.21	< 0.45	< 0.35	< 0.45	0.47	< 0.18	< 0.271	0.44
Oil and Grease (mg/L) Daily Maximum	< 5.26	< 5.0	< 5.0	< 4.90	< 5.26	< 5.26	< 4.9	< 5.0	4.85	< 5.0	< 5.0	5.0
Trichloroethylene (mg/L) Daily Maximum	0.022	0.156	0.216	0.114	0.125	0.355	0.356	0.565	0.070	0.197	0.248	0.067
Vinyl Chloride (mg/L) Average Monthly	0.0026	< 0.0021	0.004	0.0022	0.0021	0.0043	0.0021	0.0013	0.0028	< 0.002	< 0.001	0.0005
Vinyl Chloride (mg/L) Instantaneous Maximum	0.0064	0.0024	0.0082	0.0027	0.0024	0.0056	0.0041	0.0026	0.0056	< 0.0020	< 0.0020	< 0.0020

DMR Data for Outfall 002 (from December 1, 2019 to November 30, 2020)

Parameter	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19
Flow (MGD) Average Monthly									0.010	0.0009	0.0052	
pH (S.U.) Minimum									7.5	8.0	6.8	
pH (S.U.) Maximum									7.5	8.0	7.3	

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
TSS	2.92	7.8	XXX	Report	Report	67	2/month	24-Hr Composite
Oil and Grease	XXX	1.94	XXX	XXX	Report	30	2/month	Grab
Trichloroethylene	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Vinyl Chloride	XXX	XXX	XXX	0.006	XXX	0.0145	1/week	Grab

Compliance Sampling Location: Outfall 001, prior to mixing with any other waters.

Flow and Trichloroethylene (TCE) are monitor only based on Chapter 92a.61. The limits for pH, Total Suspended Solids, and Oil and Grease are technology-based on 40 CFR 420.72(d). The limits for Vinyl Chloride are water quality-based on Chapter 16.

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	Weekly when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Weekly when Discharging	Grab

Compliance Sampling Location: Outfall 002, prior to mixing with any other waters.

Flow is monitor only based on Chapter 92a.61. The limits for pH are technology-based on Chapter 95.2.

Attachment 1

CALCULATION OF TECHNOLOGY BASED EFFLUENT LIMITS

Case Name: Salem Tube, Inc.
NPDES # PA0221244
Outfall: 001
Wasteflow: 0.014 MGD

Prepared By: Stephen McCauley
Date: 2/3/2021

Industry Category and Subcategory: Iron & Steel - Subpart G: Hot Forming (pipe and tube mills, carbon and specialty)

Applicable ELG: 40 CFR 420.72(d) - BPT = BAT

Production Rate: 16.20 tppd = 324(x1,000) lbs/month/26 days/month

The production value is based on the maximum monthly production during the previous 5 years (2015)

			ELG Information			Allowable Mass Loadings (lbs/day)		Allowable Concentrations (mg/l)			
Parameter	ELG #	Level	Max 1-day	Avg 30-day	Units	Avg Monthly	Max Daily	Avg Monthly	Max Daily	Inst Max.	
TSS	420.72	BPT	0.212	0.0795	Lb/1000 Lbs	1.288	3.434			29.414	*
Oil & Grease	420.72	BPT	0.053		Lb/1000 Lbs		0.859			30	**
pH	420.72	BPT	6 to 9 at all times					6 to 9 at all times			

* - The Instantaneous maximum concentration limit for TSS is the conversion of the technology-based maximum daily loading value

** - The Instantaneous maximum concentration limit for O&G is technology-based on Chapter 95.2(3)(ii)

Attachment 2

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.7

Facility: **Salem Tube MFG**
Analysis Hardness (mg/L): **100**
Stream Flow, Q_{7-10} (cfs): **1.3**

NPDES Permit No.: **PA0221244**
Discharge Flow (MGD): **0.108**

Outfall: **001**
Analysis pH (SU): **7.2**

	Parameter		Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Group 1	Total Dissolved Solids			500000			
	Chloride			250000			
	Bromide			N/A			
	Sulfate			250000			
	Fluoride			2000			
Group 2	Total Aluminum			750			
	Total Antimony			5.6			
	Total Arsenic			10			
	Total Barium			2400			
	Total Beryllium			N/A			
	Total Boron			1600			
	Total Cadmium			0.271			
	Total Chromium			N/A			
	Hexavalent Chromium			10.4			
	Total Cobalt			19			
	Total Copper			9.3			
	Total Cyanide			N/A			
	Total Iron			1500			
	Dissolved Iron			300			
	Total Lead			3.2			
	Total Manganese			1000			
	Total Mercury			0.05			
	Total Molybdenum			N/A			
	Total Nickel			52.2			
	Total Phenols (Phenolics)			5			
	Total Selenium			5.0			
	Total Silver			3.8			
	Total Thallium			0.24			
	Total Zinc			119.8			
Group 3	Acrolein			3			
	Acrylamide			0.07			
	Acrylonitrile			0.051			
	Benzene			1.2			
	Bromoform			4.3			
	Carbon Tetrachloride			0.23			
	Chlorobenzene			130			
	Chlorodibromomethane			0.4			
	Chloroethane			N/A			
	2-Chloroethyl Vinyl Ether			3500			
	Chloroform		0.0019	5.7	No		
	Dichlorobromomethane	<	0.001	0.55	No (Value < QL)		
	1,1-Dichloroethane			N/A			
	1,2-Dichloroethane			0.38			
	1,1-Dichloroethylene			33			
	1,2-Dichloropropane			2200			
	1,3-Dichloropropylene			0.34			
	Ethylbenzene			530			
	Methyl Bromide			47			
	Methyl Chloride			5500			
	Methylene Chloride			4.6			
	1,1,2,2-Tetrachloroethane			0.17			
	Tetrachloroethylene	<	0.001	0.69	No (Value < QL)		
	Toluene			330			
	1,2-trans-Dichloroethylene			140			
	1,1,1-Trichloroethane			610			
	1,1,2-Trichloroethane			0.59			
	Trichloroethylene		0.0195	2.5	No		
	Vinyl Chloride	<	0.001	0.025	No (Value < QL)		
Group 4	2-Chlorophenol			81			
	2,4-Dichlorophenol			77			
	2,4-Dimethylphenol			130			
	4,6-Dinitro-o-Cresol			13			
	2,4-Dinitrophenol			69			
	2-Nitrophenol			1600			
	4-Nitrophenol			470			
	p-Chloro-m-Cresol			30			
	Pentachlorophenol			0.27			
	Phenol			10400			
	2,4,6-Trichlorophenol			1.4			