pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	**NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER**	Application No.	**PA0008893**
Facility Type	**Industrial**		APS ID	**492510**
Major / Minor	**Minor**		Authorization ID	**1222926**

Applicant and Facility Information

Applicant Name	**Team Ten LLC**	Facility Name	**Team Ten LLC dba American Eagle Paper Mills**
Applicant Address	1600 Pennsylvania Avenue	Facility Address	1600 Pennsylvania Avenue
	Tyrone, PA 16686-1758		Tyrone, PA 16686-1758
Applicant Contact	John Boyle	Facility Contact	John Boyle
Applicant Phone	(814) 684-6176	Facility Phone	(814) 684-6176
Client ID	212348	Site ID	513764
SIC Code	2621	Municipality	Tyrone Borough
SIC Description	Manufacturing - Paper Mills	County	Blair
Date Application Received	March 3, 2018	EPA Waived?	Yes
Date Application Accepted	April 12, 2018	If No, Reason	

Purpose of Application: This is a request for a NPDES renewal.

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / ENVIRONMENTAL ENGINEER Nick Hong (via electronic signature)	May 13, 2021
x		Daniel W. Martin, P.E. / ENVIRONMENTAL ENGINEER MANAGER Maria D. Bebenek for Daniel W. Martin	May 19, 2021
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	May 19, 2021

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Team Ten, LLC DBA American Eagle Paper Mills located at 1600 Pennsylvania Avenue, Tyrone, PA 16686 in Blair County, municipality of Tyrone. The NPDES became effective on September 1, 2013 expired on August 31, 2018. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on March 3, 2018 with supplementary supporting information on July 2, 2018 and other correspondence through email to the application engineer.

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 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 0.3744 MGD (260 gpm) treatment facility. The applicant anticipates an additional seal water cooler upgrade to the treatment facility in the next five years. This would raise the flow rate from 160 gpm to 260 gpm. The NPDES application has been processed as an Industrial Wastewater (Minor Facility without ELG) due to the type of wastewater and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County Board of Commissioners, Borough of Tyrone, and Snyder Township Supervisors and the notice was received by the parties on January 29, 2018. A planning approval letter was not necessary as the facility is neither new or expanding.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Bald Eagle Creek. The sequence of receiving streams that the Bald Eagle Creek discharges into are the Little Juniata River, the 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 evaluation of anti-degradation requirements

Bald Eagle Creek is a Category 2 stream listed in the 2020 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed. The local TMDL is the Bald Eagle Creek TMDL.

The existing permit and proposed permit differ as follows:

- **The proposed permit will require measurement of the waste discharge flow rate and waste discharge temperature on a 1x/wk basis. Temperature limits will be 110 F in all months except July. July temperature limits have been recommended to be 83.6 F.**

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: Team Ten, LLC dba American Eagle Paper Mills

NPDES Permit # PA0008893

Physical Address: 1600 Pennsylvania Avenue
Tyrone, PA 16686

Mailing Address: 1600 Pennsylvania Avenue
Tyrone, PA 16686

Contact: John Boyle
EHS Manager
jboyle@aepaper.com
(814) 684-6176

Consultant: James Greg Myers, PE
Earth Systems Engineering, LLC
286 Meredith Lane
Bellefonte, PA 16823
jmyers@earthse.com
(814) 571-1690

1.2 Permit History

American Eagle Paper Mill was formerly owned and operated by Westvaco Corporation for over 100 years. The facility is now owned by Team Ten, LLC by a group of key former managers and local investors. American Eagle Paper Mill manufactures high quality, uncoated paper. The facility manufactures 100% recycled paper. The facility is in production 24 hrs/day for 365 days/yr.

The facility has three outfalls.

Outfall 001 discharges approximately 374,400 gal/day of non-contact cooling water.

Outfalls 002 and 004 are permitted stormwater outfalls.

- Outfall 002 is a point source discharge at the former pulp wood storage area that discharges to Bald Eagle Creek. This area is located northeast of the manufacturing area and is currently used as a tractor trailer storage lot.
- Outfall 004 is a point source discharge for the facility roof drains. This outfall discharges to the Borough storm water system.

The consultant has corresponded with DEP on the facility's NPDES renewal application and has offered the following in support of the facility's renewal application:

- In July 2016, the subject facility shut down their coal fired boiler. The shut down resulted in a reduction of non-contact cooling water at Outfall 001 from an average of 7.5 MGD to an average of 0.046 MGD. The consultant stated that the temperature of the discharge has dropped to the mid to high 70 F. Since the in-stream monitoring equipment is expensive to operate and the flow rate for cooling water has reduced, the facility is requesting monitoring for pH and temperature on a weekly basis. (Letter dated for September 8, 2017). [The volume of non-

contact cooling water was revised to 150 gpm (0.216 MGD) in an email to the application engineer on December 7, 2018].

- On March 19, 2021, the facility EHS manager confirmed that the total flow rate shall be 260 gpm once the seal water cooler is installed. The design discharge temperature shall be 70 F.
- On May 4, 2021, the facility provided an updated flow diagram with flow rates. The reported cooling water effluent on the diagram was 250 gpm. The facility's design flow rate given to DEP were both 250 gpm and 260 gpm. For water quality modeling purposes, the flow rate was modelled for worst case at 260 gpm.

The NPDES permit issued on September 1, 2013 and expiring August 31, 2018 was permitted for a discharge rate of 10.1 MGD.

The proposed NPDES permit will reduce the discharge rate to 0.374 MGD (260 GPM) for non-contact cooling water. Approximately 2.5 MGD (average) is used for paper making process with final discharge of the wastewater to the borough wastewater treatment plant.

Phone Conversation

September 4, 2018: During a phone consultation with Greg Myers (consultant), Mr. Myers stated that the subject facility wishes to have a NPDES permit for the non-contact cooling water or discharge to surface waters as opposed to commingling the wastewater from the paper making process and non-contact cooling water together for POTW discharge.

2.0 Treatment Facility Summary

2.1 Site location

The physical address for the facility is 1600 Pennsylvania Avenue, 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

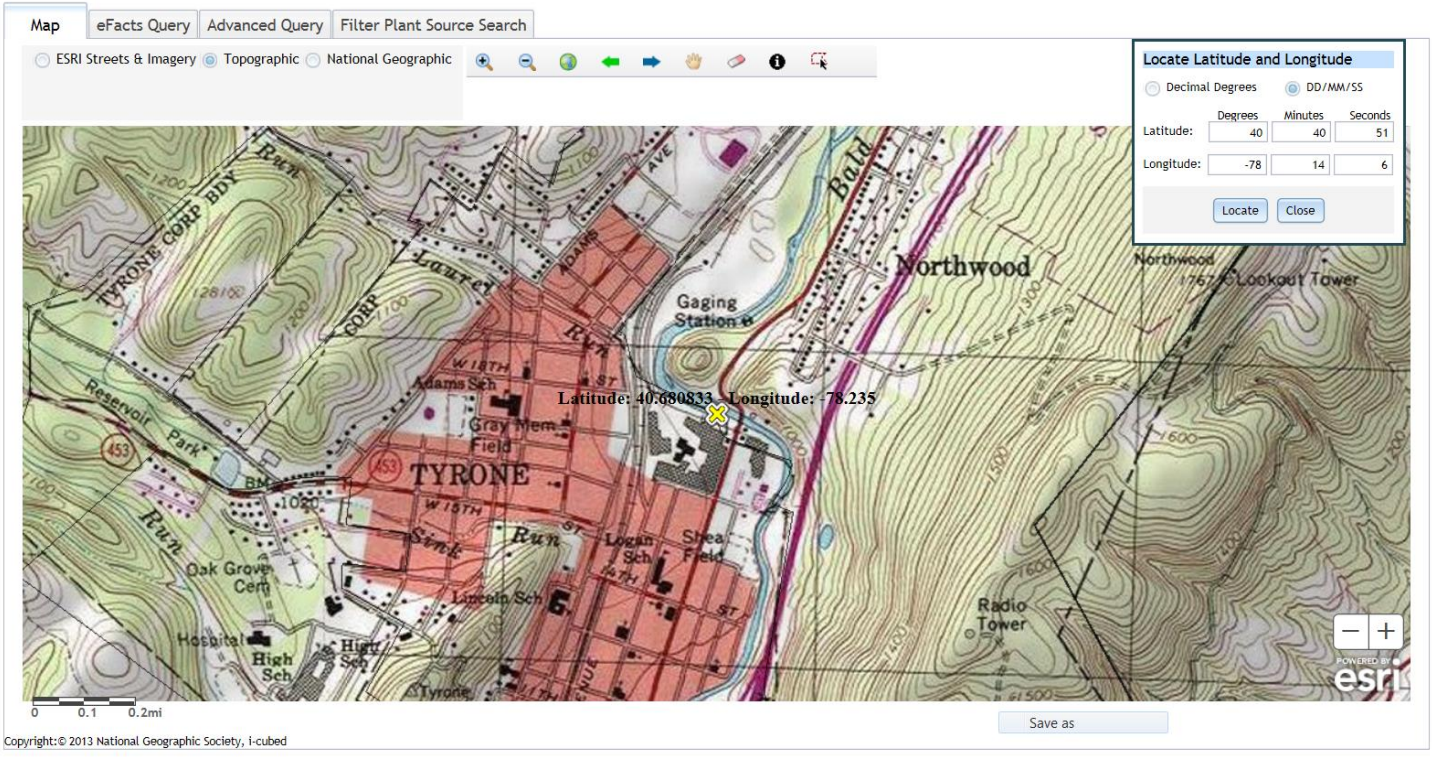
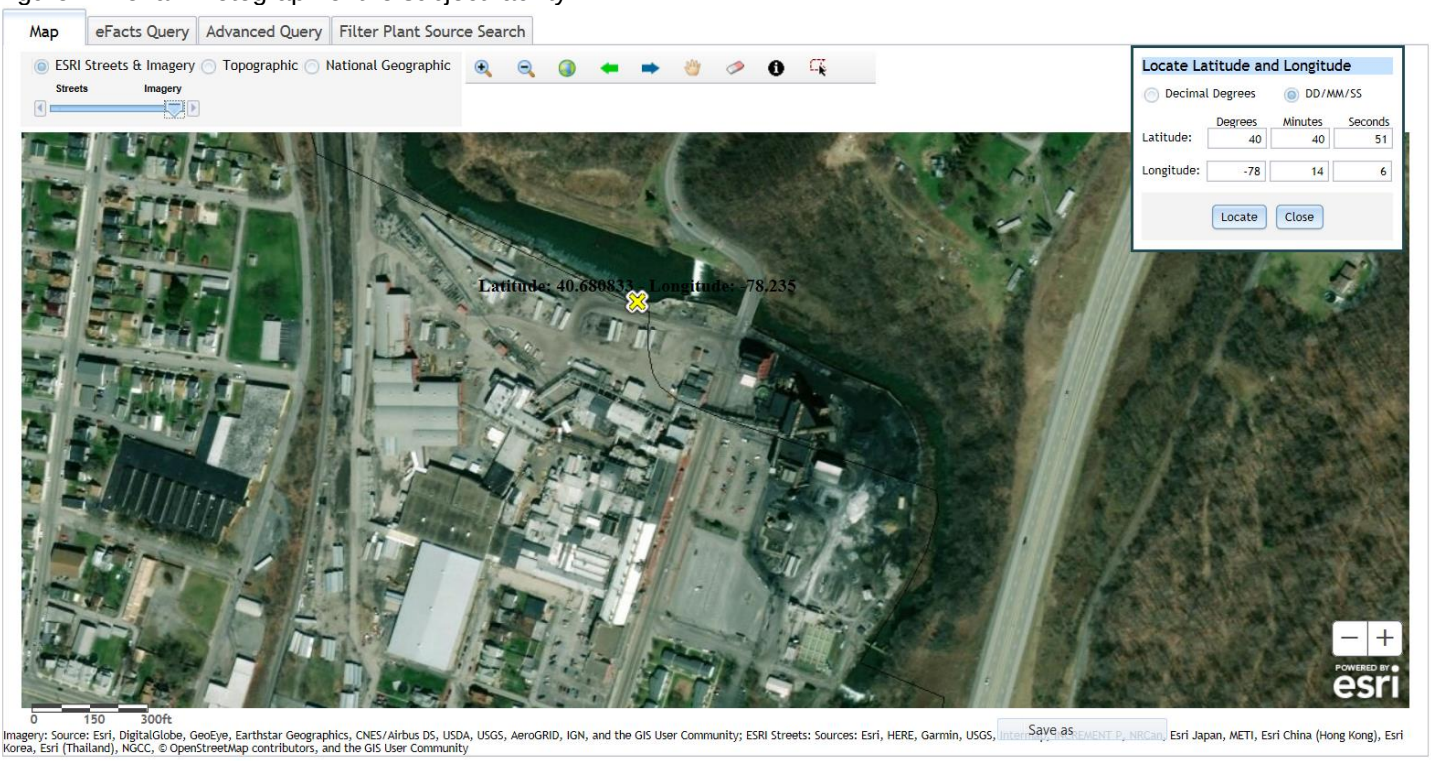


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The total estimated amount of water withdrawn from the spring ranges from 2.73 MGD (1,900 gpm) to 3.88 MGD (2,700 gpm). Water withdrawal from Cold Springs occurs intermittently typically on weekends. The estimated flow from Cold Springs ranges between 700 gpm to 900 gpm.

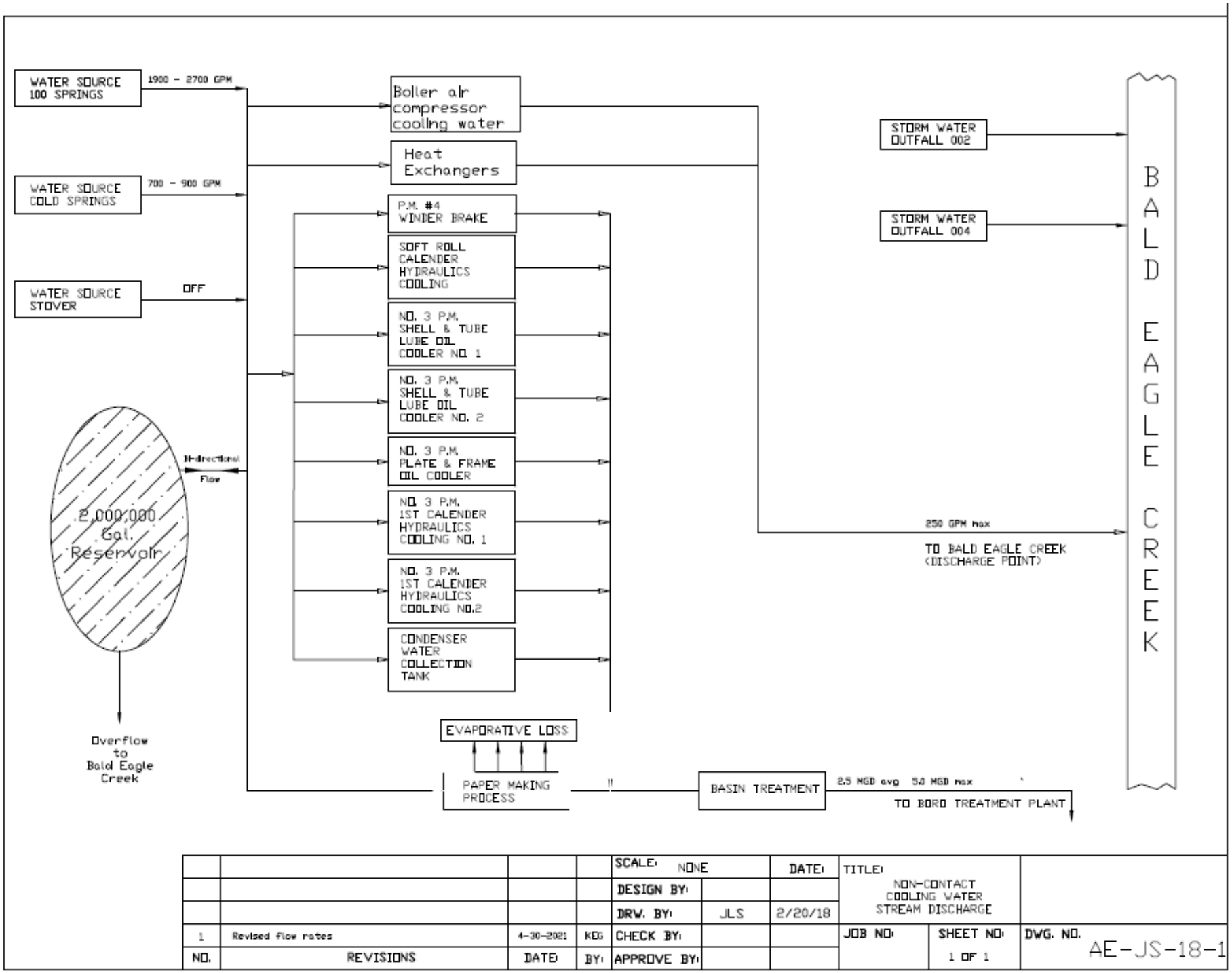
The subject facility treats 2.5 MGD (average) of pretreated wastewater by discharging to the POTW for treatment at the Tyrone WWTP. The facility discharges approximately 0.3744 gpd of non-contact cooling water.

The subject facility has been rated as a 0.3744 MGD design flow facility.

A schematic of the subject facility's process flow diagram is shown in the figure.

The facility evaluates Outfall 001 for flow, pH and temperature.

The existing permits limits for the facility are summarized in Section 2.4.


WATER SOURCE
100 SPRINGS
1900 - 2700 GPM
WATER SOURCE
COLD SPRINGS
700 - 900 GPM
WATER SOURCE
STOVER
OFF
2,000,000
Gal.
Reservoir
Bi-directional
Flow
Overflow
to
Bald Eagle
Creek
Boiler air
compressor
cooling water
Heat
Exchangers
P.M. #4
WINDER BRAKE
SOFT ROLL
CALENDER
HYDRAULICS
COOLING
NO. 3 P.M.
SHELL & TUBE
LUBE OIL
COOLER NO. 1
NO. 3 P.M.
SHELL & TUBE
LUBE OIL
COOLER NO. 2
NO. 3 P.M.
PLATE & FRAME
OIL COOLER
NO. 3 P.M.
1ST CALENDER
HYDRAULICS
COOLING NO. 1
NO. 3 P.M.
1ST CALENDER
HYDRAULICS
COOLING NO.2
CONDENSER
WATER
COLLECTION
TANK
EVAPORATIVE LOSS
PAPER MAKING
PROCESS
BASIN TREATMENT
2.5 MGD avg 5.0 MGD max
TO BORO TREATMENT PLANT
STORM WATER
OUTFALL 002
STORM WATER
OUTFALL 004
250 GPM max
TO BALD EAGLE CREEK
(DISCHARGE POINT)
BALD EAGLE CREEK
SCALE: NONE
DATE:
DESIGN BY:
DRW. BY: JLS 2/20/18
CHECK BY:
APPROVE BY:
TITLE: NON-CONTACT COOLING WATER STREAM DISCHARGE
JOB NO:
SHEET NO: 1 OF 1
DWG. NO. AE-JS-18-1
1 Revised flow rates 4-30-2021 KEG
NO. REVISIONS DATE BY:

2.2.1 Stormwater Management

For stormwater, the facility evaluates Outfalls 002 and 004 for pH, CBOD, COD, TSS, Oil and Grease, TKN, TP, and dissolved iron.

Since the facility had sample results exceeding benchmarks for no exposure, the facility does not qualify for non-exposure exemption. Applicable benchmarks are those itemized in the PAG-03 Fact Sheet and the PAG-03 Sample Permit, Appendix E, Paper and Allied Products.

The sample results from the stormwater sampling are summarized in the DMR Data for Stormwater Outfalls 002 and 004 table.

DMR Data for Stormwater Outfalls 002 and 004

Monitoring Period Begin Date	Monitoring Period End Date	Outfall	Monitoring Location	Parameter Name	DMR Value	Benchmark (from PAG-03 Stormwater Fact Sheet and/or Sample Permit)	Units	Statistical Base Code
01/01/2020	06/30/2020	002	Final Effluent	Carbonaceous Biochemical Oxygen	< 3.00	30	mg/L	Instantaneous
			Final Effluent	Chemical Oxygen Demand (COD)	< 15.0	120	mg/L	Instantaneous
			Final Effluent	Iron, Dissolved	< 0.200	-----	mg/L	Instantaneous
			Final Effluent	Oil and Grease	< 5.25	30	mg/L	Instantaneous
			Final Effluent	pH	7.85	9	S.U.	Maximum
			Final Effluent	Total Kjeldahl Nitrogen	< 0.5000	-----	mg/L	Instantaneous
			Final Effluent	Total Phosphorus	< 0.0250	-----	mg/L	Instantaneous
			Final Effluent	Total Suspended Solids	< 1.6	100	mg/L	Instantaneous
		004	Final Effluent	Carbonaceous Biochemical Oxygen	3.47	30	mg/L	Instantaneous
			Final Effluent	Chemical Oxygen Demand (COD)	< 15.0	120	mg/L	Instantaneous
			Final Effluent	Iron, Dissolved	< 0.200	-----	mg/L	Instantaneous
			Final Effluent	Oil and Grease	< 5.7	30	mg/L	Instantaneous
			Final Effluent	pH	7.9	9	S.U.	Maximum
			Final Effluent	Total Kjeldahl Nitrogen	< 2.5000	-----	mg/L	Instantaneous
			Final Effluent	Total Phosphorus	0.085	-----	mg/L	Instantaneous
			Final Effluent	Total Suspended Solids	77	100	mg/L	Instantaneous
07/01/2020	12/31/2020	002	Final Effluent	Carbonaceous Biochemical Oxygen	3	30	mg/L	Instantaneous
			Final Effluent	Chemical Oxygen Demand (COD)	9	120	mg/L	Instantaneous
			Final Effluent	Iron, Dissolved	< 0.05	-----	mg/L	Instantaneous
			Final Effluent	Oil and Grease	< 5.0	30	mg/L	Instantaneous
			Final Effluent	pH	7.1	9	S.U.	Maximum
			Final Effluent	Total Kjeldahl Nitrogen	< 1.00	-----	mg/L	Instantaneous
			Final Effluent	Total Phosphorus	< 0.15	-----	mg/L	Instantaneous
			Final Effluent	Total Suspended Solids	< 2	100	mg/L	Instantaneous
		004	Final Effluent	Carbonaceous Biochemical Oxygen	3	30	mg/L	Instantaneous
			Final Effluent	Chemical Oxygen Demand (COD)	19	120	mg/L	Instantaneous
			Final Effluent	Iron, Dissolved	0.08	-----	mg/L	Instantaneous
			Final Effluent	Oil and Grease	< 5.0	30	mg/L	Instantaneous
			Final Effluent	pH	7.3	9	S.U.	Maximum
			Final Effluent	Total Kjeldahl Nitrogen	2.24	-----	mg/L	Instantaneous
			Final Effluent	Total Phosphorus	< 0.15	-----	mg/L	Instantaneous
			Final Effluent	Total Suspended Solids	5460	100	mg/L	Instantaneous

Notes:
Highlighted are exceedances to benchmark values

The existing stormwater permits limits for the facility are summarized in Section 2.4.

2.3 Facility Outfall Information

The facility has the following outfall information. The outfall locations are marked on the map.

Outfall No.	001	**Design Flow (MGD)**	0.374
Latitude	40º 40' 51.00"	**Longitude**	-78º 14' 6.00"
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Outfall No.	002	**Design Flow (MGD)**	0
Latitude	40º 41' 1.00"	**Longitude**	-78º 14' 9.00"
Wastewater Description:	Stormwater		

Outfall No.	004	**Design Flow (MGD)**	0
Latitude	40º 40' 43.00"	**Longitude**	-78º 14' 11.00"
Wastewater Description:	Stormwater		

Figure 1 shows the location of the flow direction of the surface water, the non-contact cooling water discharge, and the downstream in-situ monitoring point.

Figure 1

2.3.1 Operational Considerations- Chemical Additives

This is not applicable to the subject facility.

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° 40' 51.00" , **Longitude** 78° 14' 6.00" , **River Mile Index** 0.93 , **Stream Code** 15835

Receiving Waters: Bald Eagle Creek

Type of Effluent: Non –contact cooling water

1. The permittee is authorized to discharge during the period from September 1, 2013 through August 31, 2018.
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	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/week	Grab
Temperature (ºF)	XXX	XXX	XXX	Report	Report	XXX	Continuous	I-S

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

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

I. B. For Outfall 002 , **Latitude** 40° 41' 1.00" , **Longitude** 78° 14' 9.00" , **River Mile Index** _____ , **Stream Code** 15835

Receiving Waters: Bald Eagle Creek

Type of Effluent: Stormwater

1. The permittee is authorized to discharge during the period from September 1, 2013 through August 31, 2018
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		Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
CBOD5	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Chemical Oxygen Demand	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 002

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

I. C. For Outfall 004 , **Latitude** 40° 40' 43.00" , **Longitude** 78° 14' 11.00" , **River Mile Index** _____ , **Stream Code** 15835

Receiving Waters: Bald Eagle Creek

Type of Effluent: Stormwater

1. The permittee is authorized to discharge during the period from September 1, 2013 through August 31, 2018

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		Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
CBOD5	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Chemical Oxygen Demand	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 004

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.

08/27/2014: The DEP inspector noted the following during the site visit at the subject facility.

- The subject facility discharges non-contact cooling water to the stream through multiple spray nozzles.
- In-line pH and temperature meters tracks readings throughout the day and are tracked on the computer
- The subject facility was advised to submit self-inspection reports for stormwater inspection annually.

02/18/2016: The DEP inspector noted the following during the site visit at the subject facility.

- The subject facility draws water from Bald Eagle Creek for use as non-contact cooling water. The water is directed back to the stream through closed piping and a series of spray nozzles. Water can also be drawn from a spring near the facility.
- The pH and temperature probe was observed downstream of the dam. A utility box houses as ISCO pH datalogger. The data is downloaded and transferred to an office computer.
- An ISCO ultrasonic meter is used to track flow.
- The 2015 stormwater reports contained lab results but the report forms were missing values for each test.

03/17/2016: The DEP inspector noted the following during the site visit at the subject facility.

- The environmental manager, Zack Burke, showed the location of the upstream and downstream monitoring equipment.
- The facility reported that during the winter months (approx. Dec to Apr) the effluent spray nozzles are not used and the NCCW is split between two pipes and discharged to the receiving stream just upstream of the dam.
- The paper mill was anticipating switching from coal to natural gas sometime this year and will no longer store coal and may cease the discharge of the non-contact cooling water. The facility was advised to contact DEP if the discharge ends permanently which, in turn, would terminate the NPDES discharge permit

05/10/2017: The DEP inspector noted the following during the site visit at the subject facility.

- The environmental manager, Jarrod Good, was present for the inspection.
- The subject facility is now monitoring for pH and temperature of the non-contact cooling water. Samples are collected from a spigot in the boiler room. The operator is currently storing results on a computer spreadsheet but will also keep a paper hardcopy of the spreadsheet to record results.
- An appendix was added to the facility's PPC plan to address the two stormwater outfalls.
- The facility has registered to submit eDMR
- DEP adjusted the temperature measurement frequency in the NPDES permit from continuous to once/week. This was the minimum frequency and the facility is encouraged to test more often.

04/12/2017: The DEP inspector noted the following during the site visit at the subject facility.

- The environmental manager, Jarrod Good, was present for the inspection.
- The old coal boiler was replaced with a natural gas unit last year and the amount of cooling water discharged by the facility has been reduced from approximately 7 MGD to less than 0.1 MGD. The temperature of the discharge was reportedly not as warm and the spray head is no longer in use. All the effluent is now discharged through a single pipe located just downstream of the spray heads.
- The facility was advised that the pH and the temperature measurements required by the NPDES permit for outfall 001 should be taken from the effluent only and not a combination of effluent and stream water. An effluent sampling port was recommended to be installed to retrieve test samples. The facility was using stream data to report effluent results.
- The subject facility has a PPC plan that was last updated in December 2015. The plan does not contain information concerning the storm water outfalls as required by Part C of the NPDES permit.

07/11/2019: The DEP inspector noted the following during the site visit at the subject facility.

- A routine inspection was completed with John Boyle, Fred Clark, Kristen Bardell, Kristen Schlauderaff, and Nick Hong. Bardell and Schlauderaff were present primarily to address 316 a/b issues.
- During the inspection of the facility in May 10, 2017, DEP was told that the sampling point for Outfall 001 was a spigot located in the boiler room.
- During the inspection on July 11, 2019, DEP noted that the facility had been collecting a sample using a bucket from stream water from Bald Eagle Creek. The location is downstream of the outfall and the dam. The facility had been using this procedure for collecting the sample for about one year. The NPDES permit requires the temperature of the non-contact cooling water to be monitored on a continuous basis and for the flow rate and pH to be checked and recorded weekly. A sample taken from the stream is not a representative sample. DEP advised the facility to prepare a SOP to outline the proper procedure for collecting samples.

08/18/2020: The DEP inspector conducted an administrative inspection.

- The facility had submitted their monthly DMRs and semi-annual DMRs on time and completely
- During the last full inspection on July 1, 2019, that facility was cited for failure to properly monitor the effluent. Effluent samples were being collected from the receiving stream and not from the end of pipe conveying the cooling water.
- In conversation with John Boyle, John stated that after the inspection in July 2019 the facility had been taking effluent samples from a bypass pipe near the end of the discharge pipe before entering the stream.

01/19/2021: The DEP inspector noted the following during the site visit at the subject facility.

- A discharge of pulp fiber and lime slurry was observed being discharged from the facility into Bald Eagle Creek. The facility was cited to be in violation of the Clean Streams Law in a letter to the facility on January 27, 2021.

3.2 Summary of DMR Data

DMR Data for Outfall 001 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
Flow (MGD) Average Monthly	0.02275	0.0218	0.02025	0.0302	0.02175	0.0265	0.013	0.018	0.016	0.0132	0.01375	0.0205
Flow (MGD) Daily Maximum	0.027	0.029	0.024	0.041	0.033	0.036	0.02	0.034	0.022	0.02	0.017	0.030
pH (S.U.) Minimum	7.51	7.10	7.44	7.20	6.90	7.69	7.25	7.41	7.49	6.91	7.55	7.40
pH (S.U.) Instantaneous Maximum	7.77	7.73	7.74	7.83	7.61	8.05	7.65	7.72	8.02	7.6	7.77	7.61
Temperature (ºF) Average Monthly	35.77	37.10	45.01	54.84	64.47	72.66	74.37	65.43	54.79	47.45	43.87	39.27
Temperature (ºF) Daily Maximum	38.80	42.73	51.86	60.08	71.46	75.34	77.40	71.06	65.65	52.71	48.49	43.45

DMR Data for Outfall 002 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
pH (S.U.) Maximum		7.10						7.85				
CBOD5 (mg/L) Instantaneous Maximum		3.0						< 3.00				
COD (mg/L) Instantaneous Maximum		9						< 15.0				
TSS (mg/L) Instantaneous Maximum		< 2						< 1.6				
Oil and Grease (mg/L) Instantaneous Maximum		< 5.0						< 5.25				
TKN (mg/L) Instantaneous Maximum		< 1.00						< 0.5000				

Total Phosphorus (mg/L) Instantaneous Maximum		< 0.15						< 0.0250				
Dissolved Iron (mg/L) Instantaneous Maximum		< 0.05						< 0.200				

DMR Data for Outfall 004 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
pH (S.U.) Maximum		7.30						7.90				
CBOD5 (mg/L) Instantaneous Maximum		3.0						3.47				
COD (mg/L) Instantaneous Maximum		19.0						< 15.0				
TSS (mg/L) Instantaneous Maximum		5460						77.0				
Oil and Grease (mg/L) Instantaneous Maximum		< 5.0						< 5.7				
TKN (mg/L) Instantaneous Maximum		2.24						< 2.5000				
Total Phosphorus (mg/L) Instantaneous Maximum		< 0.15						0.0850				
Dissolved Iron (mg/L) Instantaneous Maximum		0.08						< 0.200				

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.

Summary of Effluent Non-Compliance with NPDES Permit
Beginning September 1, 2013 and Ending March 4, 2021

DATE	PARAMETER	SAMPLE VALUE	CONDITION	PERMIT VALUE	MEASURE	STATISTICAL BASE CODE
03/06/2018	pH	0.00	<	6.0	S.U.	Minimum
04/18/2018	pH	0.0	<	6.0	S.U.	Minimum
05/16/2018	pH	0.0	<	6.0	S.U.	Minimum

The pH violations are believed to be issues with monitoring equipment.

3.3.2 Non-Compliance- Enforcement Actions

A discharge of pulp fiber and lime slurry was observed being discharged from the facility into Bald Eagle Creek. The facility was cited to be in violation of the Clean Streams Law in a letter to the facility on January 27, 2021.

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

Summary of Enforcement Actions
Beginning September 1, 2013 and Ending March 4, 2021

ENF ID	ENF TYPE	ENF TYPE DESC	DATE	EXECUTED DATE	VIOLATIONS
391635	NOV	Notice of Violation	01/27/2021	01/27/2021	CSL301

3.4 Summary of Sludge/Biosolids Disposal

The facility generates non-contact cooling water. Thus, no biosolids/sludge generation was suspected.

3.5 Open Violations

As of May 2021, there were no open violations.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Bald Eagle Creek. The sequence of receiving streams that the Bald Eagle Creek discharges into are the Little Juniata River, the 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 Municipal Authority (PWS ID #4340008) located approximately 81 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 2020 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 2020 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 Bald Eagle Creek station at Tyrone, PA (WQN217). This WQN station is located approximately 10.3 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Bald Eagle Creek station at Tyrone, PA (USGS station number 01557500). This gauge station is located approximately 0.45 miles upstream of the subject facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 8.2 and the stream water temperature was estimated to be 17.9 C. The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data			
USGS Station Number	01557500		
Station Name	Bald Eagle Creek at Tyrone, PA		
Q710	3.2	ft^3/sec	
Drainage Area (DA)	44.1	mi^2	
Calculations			
The low flow yield of the gauge station is:			
Low Flow Yield (LFY) = Q710 / DA			
LFY =	(3.2 ft^3/sec / 44.1 mi^2)		
LFY =	0.0726	$ft^3/sec/mi^2$	
The low flow at the subject site is based upon the DA of		45.1	mi^2
Q710 = (LFY@gauge station)(DA@Subject Site)			
Q710 = (0.0726 $ft^3/sec/mi^2$)(45.1 mi^2)			
Q710 =	3.273	ft^3/sec	

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.374
Latitude	40º 40' 51.52"	Longitude	-78º 14' 5.92"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Receiving Waters	Bald Eagle Creek	Stream Code	15835
NHD Com ID	65604248	RMI	0.93
Drainage Area	45.1	Yield (cfs/mi^2)	0.0726
Q_{7-10} Flow (cfs)	3.273	Q_{7-10} Basis	StreamStats/Streamgauge
Elevation (ft)	916	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	None
Assessment Status	Attaining Use(s) supports aquatic life		
Cause(s) of Impairment	Not applicable		
Source(s) of Impairment	Not applicable		
TMDL Status	Final	Name	Bald Eagle Creek

Background/Ambient Data		Data Source
pH (SU)	8.2	Median July to Sept; WQN 0217
Temperature (°C)	17.9	Median July to Sept; WQN 0217
Hardness (mg/L)	106	Median Jan to Dec; WQN 0217
Other:		

Nearest Downstream Public Water Supply Intake		Mifflintown Municipal Authority	
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	81

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 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).

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. pH is regulated by Chapter 95.2(1) while temperature of the receiving stream for thermal discharges is regulated by Chapter 93.7.

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)

SYMBOL: CRITICAL USE: PERIOD	TEMP (F) TSF
January 1-31	40
February 1-29	40
March 1-31	46
April 1-15	52
April 16-30	58
May 1-15	64
May 16-31	68
June 1-15	70
June 16-30	72
July 1-31	74
August 1-15	80
August 16-30	87
September 1-15	84
September 16-30	78
October 1-15	72
October 16-31	66
November 1-15	58
November 16-30	50
December 1-31	42
Note:	
Chapter 93.7	

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 utilized the following computing programs for WQBEL permit limitations- DEP worksheet on Thermal Modeling.

5.3.1 Water Quality Modeling 7.0 (for CBOD, TSS, and ammonia-nitrogen)

Since the facility discharges non-contact cooling water only, this is not applicable to the subject facility.

5.3.1.1 Thermal Modeling

Due to potential thermal impacts to the environment, the facility was evaluated for (a) compliance with PA DEP Implementation Guidance for Temperature Criteria, (b) 316(a) requirements, and (c) 316(b) requirements.

Compliance with PA DEP Implementation Guidance for Temperature Criteria

PA DEP regulates thermal effluent limits consistent with the Implementation Guidance for Temperature Criteria (Document # 391-2000-017). Since the facility withdraws water from other than the receiving waters and subsequently discharges to the receiving waters, thermal effluent limits shall be estimated using the Case 2 strategy defined by the guidance document.

The DEP utilizes a worksheet to estimate impacts of cooling water used in the process when discharged to the receiving waters.

The intake of water from the spring ranges from 2.73 MGD (1,900 gpm) to 3.88 MGD (2,700 gpm). Approximately 2.50 MGD (average) is processed through the paper making process and discharged to the borough wastewater treatment plant. A flow volume of 0.374 MGD is utilized for various equipment as non-contact cooling water.

Table A summarizes the thermal discharge recommended permit limits on a monthly basis. Default values for ambient stream temperature and the target maximum stream temperature were utilized to arrive at the TSF Daily Waste Load Allocation (WLA) for temperature on a monthly basis.

Table A- Thermal Worksheet

Thermal Discharge Recommended Permit Limits — Trout Stocking (TSF) Stream

Facility: **Team Ten LLC DBA American Eagle Paper Mills**
Permit Number: PA0008893
Stream: Bald Eagle Creek

	TSF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	TSF Daily WLA[2] (Million BTUs/day)	TSF Daily WLA[3] (°F)	at Discharge Flow (MGD)	PMF
Jan 1-31	34		40	N/A – Case 2	110.0	0.3744	1.00
Feb 1-29	35		40	N/A – Case 2	110.0	0.3744	1.00
Mar 1-31	39		46	N/A – Case 2	110.0	0.3744	1.00
Apr 1-15	46		52	N/A – Case 2	110.0	0.3744	1.00
Apr 16-30	52		58	N/A – Case 2	110.0	0.3744	1.00
May 1-15	56		64	N/A – Case 2	110.0	0.3744	1.00
May 16-31	60		68	N/A – Case 2	110.0	0.3744	1.00
Jun 1-15	65		70	N/A – Case 2	110.0	0.3744	1.00
Jun 16-30	69		72	N/A – Case 2	110.0	0.3744	1.00
Jul 1-31	73		74	N/A – Case 2	83.6	0.3744	1.00
Aug 1-15	72		80	N/A – Case 2	110.0	0.3744	1.00
Aug 16-31	70		87	N/A – Case 2	110.0	0.3744	1.00
Sep 1-15	68		84	N/A – Case 2	110.0	0.3744	1.00
Sep 16-30	62		78	N/A – Case 2	110.0	0.3744	1.00
Oct 1-15	57		72	N/A – Case 2	110.0	0.3744	1.00
Oct 16-31	53		66	N/A – Case 2	110.0	0.3744	1.00
Nov 1-15	47		58	N/A – Case 2	110.0	0.3744	1.00
Nov 16-30	41		50	N/A – Case 2	110.0	0.3744	1.00
Dec 1-31	36		42	N/A – Case 2	110.0	0.3744	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 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 Calc PA0008893.xls — 3/31/2021

Compliance with 316(a) Requirements (Existing TMDL Requirements)

Section 316(a) of the Clean Water Act (CWA) allows for a variance from applicable thermal limitations to surface water if the permittee can demonstrate that the balanced indigenous community of aquatic organisms is protected and maintained. To determine the need for a variance, a review of the subject facility's compliance or noncompliance with the local TMDL was completed.

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.

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. In 1998, a TMDL was promulgated for the Bald Eagle Creek Basin. The TMDL was put in place for proper margin of safety (MOS) for temperature. The only significant thermal discharge to Bald Eagle Creek is the American Eagle Paper Mills (formerly Westvaco Corporation). The TMDL established allowable pollutant loadings for Bald Eagle Creek from its headwaters to its confluence with the Little Juniata River in Blair County. The TMDL is enclosed as an attachment to this Fact Sheet.

DEP approved a 316(a) Thermal Variance for the facility on February 2, 1999. The study concluded that the discharge did not have an adverse effect on the fish community. DEP recommended that temperature be continuously monitored.

In September 2017, the facility reported that the coal fired boiler has been switched to natural gas. The facility also is utilizing a heat exchanger to reduce thermal impacts for the effluent prior to discharge into the receiving waters.

The reduction in actual flow rate from 10.1 MGD (previous flow rate) to the current flow rate of 0.3744 MGD shall eliminate the need for a thermal variance. With the 0.3744 MGD flow rate, the facility may discharge effluent up to the public health safety factor of 110 F (except for the month of July). In July, the maximum discharge temperature shall not exceed 83.6 F.

The facility and consultant projects that the discharge temperature from the facility be approximately 70 F. This is accomplished through a heat exchanger. This temperature should keep the WLA below the TMDL provided the discharge temperature will not exceed the 110 F for all months except for July (i.e. public heath safety temperature limit). July's temperature should not exceed 83.6 F. The table below compares the Actual Enthalpy (H) and the WLA TMDL. In all 12 months, the actual enthalpy will not exceed the waste load allocation. In turn, the subject facility will not need to submit a 316(a) variance.

Determination of Need for Variance for Thermal Pollution

CRITICAL USE: PERIOD	Actual Waste Flow (MGD)	Actual Daily WLA (F)	Design Ambient Temp (F)	Actual H (MBTU/day)	Waste Load Allocation (WLA) (MBTU/day)	Is Actual > WLA; Yes/No
January 1-31	0.3744	110.0	34	237.31	478	No
February 1-29	0.3744	110.0	35	234.19	420	No
March 1-31	0.3744	110.0	39	221.70	1341	No
April 1-15	0.3744	110.0	46	199.84	1214	No
April 16-30	0.3744	110.0	52	181.10	1214	No
May 1-15	0.3744	110.0	56	168.61	1072	No
May 16-31	0.3744	110.0	60	156.12	1072	No
June 1-15	0.3744	110.0	65	140.51	342	No
June 16-30	0.3744	110.0	69	128.02	205	No
July 1-31	0.3744	83.6	73	33.12	38	No
August 1-15	0.3744	110.0	72	118.65	172	No
August 16-30	0.3744	110.0	70	124.90	366	No
September 1-15	0.3744	110.0	68	131.14	284	No
September 16-30	0.3744	110.0	62	149.88	284	No
October 1-15	0.3744	110.0	57	165.49	323	No
October 16-31	0.3744	110.0	53	177.98	280	No
November 1-15	0.3744	110.0	47	196.72	355	No
November 16-30	0.3744	110.0	41	215.45	291	No
December 1-31	0.3744	110.0	36	231.06	391	No

Notes:

Actual Daily WLA: Temperature limitation for discharge as calculated by TSF Thermal Discharge Recommended Permit Limits worksheet

Actual H = Actual Waste Flow (MGD) * 8.34 * (Actual Waste Temp - Design Ambient Temp)

Waste Load Allocation: Values abstracted from Bald Eagle Creek TMDL

Compliance with Section 316 (b) requirements

Section 316(b) of the Clean Water Act requires the design and operation of intake structures to minimize adverse impacts on aquatic life. Cooling water intake structures affect aquatic life by pulling fish into the power plant's or factory's cooling system.

The regulations require that a facility is subject to 316(b) requirements if the subject facility is (a) a point source; (b) uses or proposes to use cooling water intake structures with a total design intake flow of 2 MGD or more to withdraw cooling water from waters of the United States; and (c) uses at least 25 percent of water withdrawn exclusively for cooling purposes, measured on an actual intake flow basis (for definition, see 40 CFR § 125.92).

U.S. Environmental Protection Agency (EPA) regulations at 40 CFR 125.90(b) require that, "Cooling water intake structures not subject to requirements under sections 125.94 through 125.99 or subparts I or N of this part must meet requirements under section 316(b) of the CWA established by the Director on a case-by-case, best professional judgment (BPJ) basis." The Department is to use BPJ to make Best Available Technology (BAT) determinations in NPDES permits for minimizing adverse environmental impacts from impingement and entrainment at facilities that have Cooling Water Intake Structures (CWISs) but are not subject to the 316(b) regulations at 40 CFR 125, Subpart J. Such facilities are not subject to the regulations because they 1) withdraw less than 2 MGD (design intake flow) and/or 2) use less than 25% of the water withdrawn for cooling.

Per the consultant, the subject facility withdraws approximately 2.73 MGD (1,900 gpm) from the One Hundred Springs impoundment. The facility estimates that approximately 2.50 MGD (1,730 gpm) is utilized for the paper making process with the wastewater being discharged to the borough wastewater treatment plant. Cooling water for various machinery accounts for 0.3744 MGD (260 GPM) and is discharged to Bald Eagle Creek. The volume of water used for cooling does not exceed 25% of the volume of water withdrawn from the spring.

The facility is believed to be consistent with BAT requirements since (a) the facility has made process changes by switching from coal fired boiler to natural gas; and (b) employment of a heat exchanger which has been designed to reduce the effluent temperature to approximately 70 F. Thermal modeling projects that the facility may discharge effluent not exceeding 110 F in all months except for July. In July, the facility may discharge effluent not exceeding 83.6 F.

Based on information obtained and observations of the CWIS during site visits, the intake is not expected to have an appreciable impact on aquatic life. The current technology at the Hundred Springs intake constitutes BPJ for BTA for reducing impingement and entrainment.

The facility shall maintain the current rotating drum on the intake with a fine mesh screen size of 2mm to avoid possible 316(b) impacts.

5.3.2 Toxics Modeling

This is not applicable to the subject facility.

5.3.3 Whole Effluent Toxicity (WET)

This is not applicable to the subject facility.

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 December 17, 2019.

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.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant discharger that includes 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.

Since the facility does not introduce addition of chemicals containing nitrogen or phosphorus, the facility is not subject to Sector C monitoring requirements.

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. The protected waters usage for this discharge is trout stocking fish (TSF) and migratory fish (MF). 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 facility has proposed effluent limitations that are as stringent as the existing 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.

6.1.1 Conventional Pollutants

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection Team Ten, LLC dba American Eagle Paper Mills, PA0008893			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-3).
		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).
Temp.	TBEL	Monitoring:	The monitoring frequency shall be on a 1x/wk basis (Table 6-4)
		Effluent Limit:	In order to protect public safety, temperature-based permit limits for discharges to waters of the Commonwealth may not exceed 110 F at any point accessible to the public. For a maximum flow rate of 0.3744 MGD design flow rate, the discharge temperature shall not exceed 110 F in all months except for July. Discharge temperature limits for July have been recommended to be 83.6 F.
		Rationale:	While Table 6-4 requires monitoring for temperature on an in-stream daily basis for the 0.3744 MGD flow rate, the frequency recommended is 1x/wk as the non-contact cooling water is discharged on an intermittent as needed basis.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, (h) temperature criteria			
2 Monitoring frequency based on flow rate of 0.3744 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 Implementaton Guidance for Temperature Criteria (Document # 391-2000-017)			

Summary of Proposed NPDES Parameter Details for Stormwater Team Ten, LLC dba American Eagle Paper Mills, PA0008893	
Parameter	**Recommendation**
pH	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
CBOD	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
COD	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
TSS	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
Oil and Grease	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
TKN	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
Total Phsphorus	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.
Dissolved Iron	The monitoring requirements shall be 2x/yr as a grab sample. No requirements for effluent limitation.

6.2 Summary of Changes From Existing Permit to Proposed Permit

Changes in Permit Monitoring or Effluent Quality		
Parameter	**Existing Permit**	**Draft Permit**
Temperature	The permit required continuous monitoring with no effluent temperature requirements.	The proposed permit will require measurement of the waste discharge flow rate and waste discharge temperature on a 1x/wk basis. Temperature limits will be 110 F in all months except July. July temperature limits have been recommended to be 83.6 F

6.3 Summary of Proposed NPDES Effluent Limits

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

I. A. For Outfall 001 , **Latitude** 40° 40' 51.00" , **Longitude** 78° 14' 6.00" , **River Mile Index** 0.93 , **Stream Code** 15835

Receiving Waters: Bald Eagle Creek (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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	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) Aug 1 - Jun 30	XXX	XXX	XXX	Report	XXX	110	1/day	Grab
Temperature (deg F) (°F) Jul 1 - 31	XXX	XXX	XXX	Report	XXX	83.6	1/day	Grab

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.

- Industrial Stormwater Requirements
- 316(b) Existing Facility Cooling Water Intakes

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☒	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis 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*
☐	Other:

Attachment A

Stream Stats/Gauge Data

StreamStats Report

Region ID: PA
Workspace ID: PA20210306114858560000
Clicked Point (Latitude, Longitude): 40.68088, -78.23465
Time: 2021-03-06 06:49:16 -0500

American Eagle / Team Ten PA0008893 Modeling Point #1 March 2021

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	45.1	square miles
PRECIP	Mean Annual Precipitation	39	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	1.69	miles per square mile

Parameter Code	Parameter Description	Value	Unit
ROCKDEP	Depth to rock	4.1	feet
CARBON	Percentage of area of carbonate rock	4.5	percent

Low-Flow Statistics Parameters[100 Percent (45 square miles) Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	45.1	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	1.69	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.1	feet	3.32	5.65
CARBON	Percent Carbonate	4.5	percent	0	99

Low-Flow Statistics Flow Report[100 Percent (45 square miles) Low Flow Region 2]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	4.17	ft^3/s	38	38
30 Day 2 Year Low Flow	5.76	ft^3/s	33	33
7 Day 10 Year Low Flow	1.88	ft^3/s	51	51
30 Day 10 Year Low Flow	2.64	ft^3/s	46	46
90 Day 10 Year Low Flow	4.35	ft^3/s	36	36

Low-Flow Statistics Citations

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

Application Version: 4.4.0

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

Attachment B
Stormwater benchmark values from PAG-03

Appendix C

1998 TMDL for Bald Eagle Creek

TMDL for BALD EAGLE CREEK

In point source TMDL development, the water quality model and modeling inputs implicitly provide for an acceptable margin of safety (MOS). The Q_{7-10} design flow used to allocate the point source load is the lowest stream flow that would occur for seven consecutive days in a ten year period. This gives an annual probability of occurrence of less than one percent. The point source water quality model goes on to use other extremely conservative variable factors, such as organic decay, atmospheric reaeration, flow dispersion and criteria duration rates and temperature. The Commonwealth's overly conservation approach is meant to ensure that the 99% level of protection stipulated in 25 PA Code § 93.5(b)(3) is achieved, and, in fact, provides an estimated protection level of 99.99%.

The MOS for the TMDL for Bald Eagle Creek is further supported by the fact that the parameter of concern is temperature, which is a non-conservation substance. Additional safety is provided as it decays over time in the aquatic environment to the natural background condition.

	Upstream Background Temp (F)	Downstrm Target Temp (F)	Upstream Discharge (cfs)	Effluent Discharge (mgd)	WLA Temp (F)	WLA (MBTU /day)	LA (MBTU /day)	TMDL (MBTU /day)
Jan 1-31	34	40	14.8	10.1	39.7	477.7	2707.2	3185.0
Feb 1-29	35	40	15.6	10.1	40.0	419.6	2937.5	3357.1
Mar 1-31	39	46	35.6	10.1	54.9	1340.7	7469.6	8810.3
Apr 1-15	46	52	37.6	10.1	60.4	1213.7	9305.2	10519.0
Apr 16-30	52	58	37.6	10.1	66.4	1213.7	10519.0	11732.7
May 1-15	56	64	24.9	10.1	68.7	1071.7	7501.9	8573.6
May 16-30	60	68	24.9	10.1	72.7	1071.7	8037.7	9109.4
June 1-15	65	70	12.7	10.1	69.1	341.6	4441.2	4782.8
June 16-30	69	72	12.7	10.1	71.4	205.0	4714.5	4919.5
July 1-31	73	74	7.1	10.1	73.5	38.2	2788.5	2826.7
Aug 1-15	72	80	4	10.1	74.0	172.2	1549.4	1721.6
Aug 16-31	70	87	4	10.1	74.4	365.8	1506.4	1872.2
Sep 1-15	68	84	3.3	10.1	71.4	284.1	1207.3	1491.3
Sep 1-30	62	78	3.3	10.1	65.4	284.1	1100.7	1384.8
Oct 1-15	57	72	4	10.1	60.8	322.8	1226.6	1549.4
Oct 16-31	53	66	4	10.1	56.3	279.8	1140.6	1420.3
Nov 1-15	47	58	6	10.1	51.2	355.1	1517.2	1872.2
Nov 16-30	41	50	6	10.1	44.5	290.5	1323.5	1614.0
Dec 1-31	36	42	12.1	10.1	40.6	390.6	2343.5	2734.1

INFORMATION SHEET
Proposed Total Maximum Daily Loads for Bald Eagle Creek

What is being proposed?
A TMDL plan to improve the quality of water in Bald Eagle Creek, a tributary to the Little Juniata River, in Tyrone Borough, Blair County.

Who is proposing the plan? To whom? Why?
The Pennsylvania Department of Environmental Protection is proposing to submit the plan to the US EPA for review and approval as required by the federal regulations.

In 1995, EPA was sued for not developing TMDLs when Pennsylvania did not do so. DEP has entered into an agreement with EPA to develop TMDLs for certain specified waters over the next several years. DEP developed this TMDL in compliance with the state/EPA agreement

What is a TMDL?
A Total Maximum Daily Load (TMDL) sets a ceiling on the pollutant loads that can enter a waterbody so that the water will meet water quality standards. The Clean Water Act requires states to list all waters that do not meet their water quality standards even after pollution controls required by law are in place. For these waters, the state must calculate how much of a substance can be put in the water without violating the standard, and then distribute that quantity to all the sources of the pollutant on that waterbody. A TMDL plan includes waste load allocations for point sources, load allocations for nonpoint sources and a margin of safety.

The Clean Water Act requires states to submit their TMDLs to EPA for approval. Also, if a state does not develop the TMDL, the Clean Water Act states that EPA must do so.

What is a water quality standard?
The Clean Water Act sets a national minimum goal that all waters be "fishable" and "swimmable." To support this goal, states must adopt water quality standards.

Water quality standards are state regulations which have two components. The first component is a designated use, such as "warm water fishes" or "recreation." States must assign a use, or several uses to each of their waters. The second component relates to the instream conditions necessary to protect the use(s). These conditions or "criteria" are physical, chemical or biological characteristics such as temperature and the minimum concentration of dissolved oxygen, and the maximum concentrations of toxic pollutants.

It is the combination of the "designated use" and the "criteria" to support the use that make up a water quality standard. If any criteria are being exceeded, then the use is not being met, and the water is said to be violating water quality standards.

What is the purpose of the plan?
Bald Eagle Creek has several designated uses including trout stocking fishery and one of the criteria necessary to protect that use is maintenance of instream temperatures at or below its water quality temperature criterion. The instream temperature of Bald Eagle Creek has been measured at levels exceeding the water quality criterion - a maximum amount necessary for aquatic life to survive and the plan is needed to restore its water quality.

The plan includes a calculation of how much of a total pollutant load can safely be put into Bald Eagle Creek without causing the temperature levels to exceed the water quality standard. The proposed TMDL plan, when implemented, is expected to achieve the temperature standard.

Why did we choose Bald Eagle Creek?
In its 1996, the Department listed Bald Eagle Creek under Section 303(d) of the Clean Water Act as not meeting or not expected to meet water quality standards for temperature. The listed stream segment is Bald Eagle Creek, DEP Stream Code 15835, showing 0.928 miles degraded.

What pollutants does this TMDL address?
The proposed plan provides calculations of stream's total capacity to absorb temperature and its allocation to point source discharges in Bald Eagle Creek.

Where do the pollutants come from?
The pollutants can come from point sources like wastewater treatment plants and cooling water discharges.

For Bald Eagle Creek, Westvaco Corporation is the dominant or primary source of the thermal loading.

How was the TMDL developed?
We used the temperature worksheet, a computer program that uses a series of mathematical formulas to calculate the allowable thermal discharge which will not exceed the temperature criterion.

How much pollution is too much?
The allowable amount of a pollutant in a stream varies depending on several conditions. TMDLs are set for point sources at low flow of the stream because this is the time when the stream is most sensitive to most pollutants.

The maximum amount of thermal loading that can safely be absorbed by Bald Eagle Creek, on a daily basis, under low flow conditions, without violating the water quality standards is as follows:

Period	BTU/day*
January	478
February	420
March	1341
April	1214
May	1072
June 1-15	342
June 16-30	205
July	38
August 1-15	172
August 16-31	366
September	284
October 1-15	323
October 16-31	280
November 1-15	355
November16-30	291
December	391

* British Thermal Units/day

How will these limits be met?
Westvaco must reduce the thermal loading it contributes in accordance with the proposed TMDL plan.

How can I get more information on the TMDL?
To request a copy of the full report, contact Roger Musselman at 717-541-7996 during business hours or by writing to him at Water Management Program, One Ararat Boulevard, Harrisburg, PA 17110.

How can I comment on the proposal?
You can provide written comments and/or attend the public meeting. The meeting is scheduled for March 3, 1998 at 7:00 p.m. at the Tyrone Borough Office, 100 Logan Street, Tyrone, PA. For more information on the meeting, you may contact Roger Musselman at the above telephone number. You also can submit written comments to the Department. The comments must be postmarked no later than March 7, 1998. If you plan to make a presentation at the public meeting, please notify DEP no later than 4:00 p.m. on February 27, 1998.

Appendix D

Correspondence

Earth Systems Engineering, LLC
286 Meredith Lane, Bellefonte, PA 16823 http://www.earthse.com 814-571-1690

September 8, 2017

Maria Bebeneck, P.E.
Environmental Program Manager-Clean Water Program
PADEP Southcentral Region
909 Elmerton Ave
Harrisburg, PA 17110-8200

SUBJECT: NPDES Permit PA0008893, American Eagle Paper Mills, Tyrone, PA, Blair County

Dear Ms. Bebeneck

Earth Systems Engineering (ESE) has prepared this letter on behalf of American Eagle Paper Mills (AE), located at 1600 Pennsylvania Avenue, Tyrone, Blair County, Pennsylvania. In July 2016, AE shut down their coal fired boiler. This shut down resulted in a reduction of non-contact cooling water at NPDES Outfall 001 from an average of 7.5 million gallons per day to an average of just over 46,000 gallons per day. Additionally, the temperature of the discharge has dropped to the mid to high 70 degrees Farenheit. American Eagle would like to discuss modifying the NPDES permit PA0008893 with PADEP to reflect this change in discharge volume. Specifically, AE would like to eliminate the requirement for continuous in-stream monitoring of pH and temperature upstream and downstream of Outfall 001. The in-stream monitoring equipment in use is expensive to operate and difficult to maintain. AE would propose to continue to monitor non-contact cooling water flow volume as well as weekly pH and temperature measurements.

Would PADEP be available to meet with representatives of American Eagle to discuss modifying the permit, or should AE propose the requested modification either in a letter or in a formal permit modification?

Please feel free to contact me by email or at 814-571-1690 if you have any questions or require additional information. Your consideration of this request is appreciated.

Thank you.

Sincerely,

J. Greg Myers, P.E., P.G.
Earth Systems Engineering, LLC

Hong, Nicholas

From: Greg Myers <jmyers@earthse.com>
Sent: Wednesday, July 11, 2018 8:07 AM
To: jcarlson@earthse.com
Cc: Hong, Nicholas
Subject: Re: American Eagle Paper Mills, Tyrone, Blair County NPDES Renewal Permit #PA0008893

The temperature of the discharge is 70 F

Greg Myers PE P.G.

Sent from my iPhone

On Jul 9, 2018, at 12:01 PM, <jcarlson@earthse.com> <jcarlson@earthse.com> wrote:

> Hi Nick,
>
> The facility may in the future discharge up to 160gpm to the stream once both heat exchangers are up and running. So for the moment the discharges are minimal but may be up to that rate in the near future.
>
> Do you have everything you need to keep moving forward on the review of the NPDES Renewal Application?
>
> Jeff
>
> ---
>
> **From:** Hong, Nicholas <nhong@pa.gov>
> **Sent:** Monday, July 2, 2018 1:16 PM
> **To:** jcarlson@earthse.com
> **Cc:** 'Greg Myers' <jmyers@earthse.com>
> **Subject:** RE: American Eagle Paper Mills, Tyrone, Blair County NPDES Renewal Permit #PA0008893
>
> Jeff:
>
> A thought just occurred to me.
>
> Is the facility still using non-contact cooling water?
>
> If not, it may be possible to terminate the NPDES permit but the stormwater permit may need to continue.

Nick Hong, PE | Environmental Engineering Specialist
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

1

Hong, Nicholas

From: John Boyle <jboyle@aepaper.com>
Sent: Friday, March 19, 2021 11:35 AM
To: Hong, Nicholas
Cc: Greg Myers
Subject: [External] RE: NPDES renewal questions

ATTENTION: *This email message is from an external sender. Do not open links or attachments from unknown sources. To report suspicious email, forward the message as an attachment to CWOPA_SPAM@pa.gov.*

Nick,

Sorry for the delay. It took some time to get answers on potential upcoming changes. Here is what I have from the engineers:

- The facility has switched from coal fired boiler to natural gas boiler. We have that the design flow rate will decrease from 10.1 MGD to 0.23 MGD. Please confirm the flow rate for discharge of non-contact cooling water. DEP's last communication on July 11, 2018 with Greg Myers suggested that the discharge flow rate may be up to 160 gpm (i.e 0.23 MGD). See attached correspondence.

Bullet one is correct and the flow rate is 160 gpm. The temperature is around 70F.

- Confirm that the heat exchangers at the facility are being used to cool the process water prior to discharge through the outfall. Also confirm what the design temperature is for the discharge from the heat exchanger.

Bullet two is confirmed. The heat exchangers are used to cool the water prior to discharge to the outfall resulting in the 70F discharge temperature.

- Confirm if the facility will have any additional upgrades to the wastewater treatment (i.e. non contact cooling water process)

Bullet three concerns additional upgrades and there is a potential for an additional seal water cooler. The estimate for that is an additional 100 gpm with a discharge temperature of 70F. This is in the late planning stages and looks likely to be approved for installation.

So the total, if or when the seal water cooler is added, would be 260gpm at 70F for discharge.

Please let me know if you have any questions.

Thanks,
John

American Eagle PAPER MILLS®

John M. Boyle
EHS Manager

a: 1600 Pennsylvania Ave.
Tyrone, PA 16686
p: 814.684.6176
c: 484.764.5559
e: jboyle@aepaper.com

1