pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0083526**
Facility Type	**Industrial**	APS ID	**277896**
Major / Minor	**Minor**	Authorization ID	**1300319**

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

Applicant and Facility Information

Applicant Name	**RH Sheppard Co. Inc.**	Facility Name	**RH Sheppard Foundry Bendix Hanover**
Applicant Address	101 Philadelphia Street Hanover, PA 17331-2038	Facility Address	101 Philadelphia Street Hanover, PA 17331-2038
Applicant Contact	William Johnson	Facility Contact	William Johnson
Applicant Phone	(717) 797-5368	Facility Phone	(717) 797-5368
Client ID	2099	Site ID	271464
SIC Code	3321	Municipality	Hanover Borough
SIC Description	Manufacturing - Gray And Ductile Iron Foundries	County	York
Date Application Received	October 1, 2019	EPA Waived?	Yes
Date Application Accepted	March 10, 2020	If No, Reason	
Purpose of Application	This is an application for NPDES renewal.		

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	June 9, 2021
x		Daniel W. Martin, P.E. / Environmental Engineer Manager *Maria D. Bebenek for Daniel W. Martin*	June 15, 2021
x		Maria D. Bebenek, P.E. / Environmental Program Manager *Maria D. Bebenek*	June 15, 2021

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the RH Sheppard Company, Inc. located at 101 Philadelphia Street, Hanover, PA 17331 in York County, municipality of Hanover Township. The existing permit became effective on March 1, 2015 and expired on February 29, 2020. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on December 20, 2019.

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

The subject facility is a 0.209 MGD treatment facility. The applicant did not indicate on the application if proposed upgrades to the treatment facility in the next five years are anticipated. The NPDES application has been processed as an Industrial Wastewater Facility due to the type of wastewater and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to York County Planning Commission and the Borough of Hanover Township and the notice was received by the parties on December 10, 2019 and December 11, 2019. 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 UNT of Oil Creek. The sequence of receiving streams that the UNT of Oil Creek discharges into are the Oil Creek, the Codorus Creek, and the Susquehanna River 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 warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The UNT of Oil Creek discharges into Oil Creek which is a Category 4a stream listed in the 2020 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an impaired stream for aquatic life due to siltation from urban runoff/storm sewers. For recreational uses, the receiving stream is impaired for pathogens due to an unknown source. The receiving waters is subject to the Oil Creek Total Maximum Daily Load (TMDL) plan to improve water quality in the subject facility's watershed. The cause for the TMDL is siltation, TSS, and turbidity.

The existing permit and proposed permit differ as follows:

- **There are no changes to the monitoring frequency or effluent limits.**

Biosolids/Sludge use and disposal description and location(s): The facility discharges non-contact cooling water on emergency basis only. The facility is not suspected of disposing biosolids/sludge.

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:	RH Sheppard Company, Inc.
NPDES Permit #	PA0083526
Physical Address:	101 Philadelphia Street Hanover, PA 17331
Mailing Address:	101 Philadelphia Street Hanover, PA 17331
Contact:	William Johnson Site SHE Lead William.johnson@wabco-auto.com
Consultant:	Katie Childs Sr. Compliance Manager August Mack Environmental kchilds@augustmack.com

1.2 Permit History

Description of Facility

R.H. Sheppard Co., Inc. is a Bendix CVS company and a member of Knorr-Bremse. Sheppard is a manufacturer of power steering and diesel engine pump technologies for the commercial vehicle industry. Sheppard develops new steering system products, including miter and T-boxes, miter columns, steering columns, and other linkages. In addition, the company also manufactures fuel injection pumps for diesel engines and produces custom, high-precision iron castings for use in the fluid power industry. Sheppard's headquarters campus in Hanover, PA conducts engineering, testing, manufacturing, remanufacturing, distribution, a pattern shop, and foundries. Sheppard's Hanover foundries produce ductile, austempered ductile, plus gray- and compacted-graphite iron for customers, and its own steering product needs.

The facility operates under the following SIC codes:

- 3714 which is motor vehicle parts and accessories.
- 3321 which is gray and ductile iron foundries

The primary SIC is 3714. The previous renewal was processed as a minor industrial waste facility without ELG. The facility has two outfalls which discharge non-contact cooling waters for emergency purposes. Two other outfalls are for stormwater.

Sources of Water

The influent source of water for the facility is municipal water.

Permit submittal included the following information.

- NPDES Application
- Effluent sampling data for Pollutant Group 1
- Flow Diagrams

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 101 Philadelphia Street, Hanover, PA 17331. 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

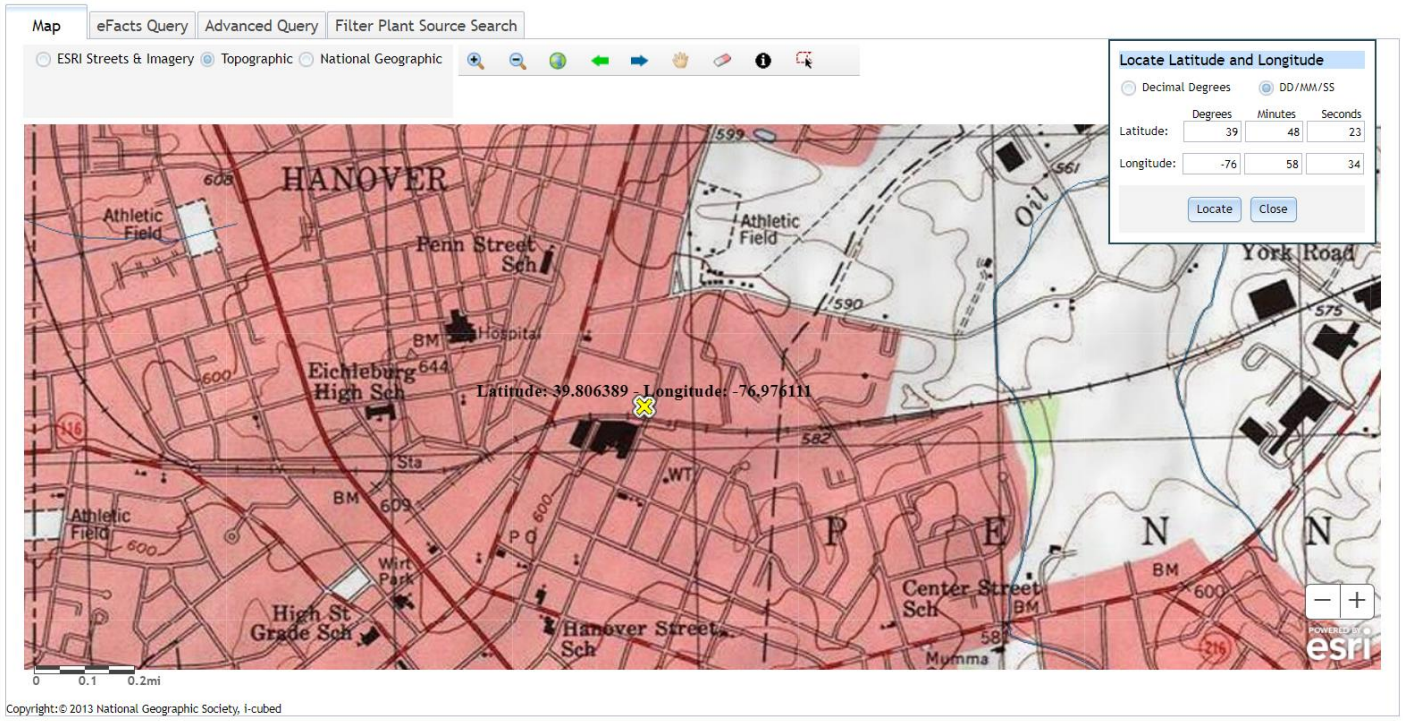
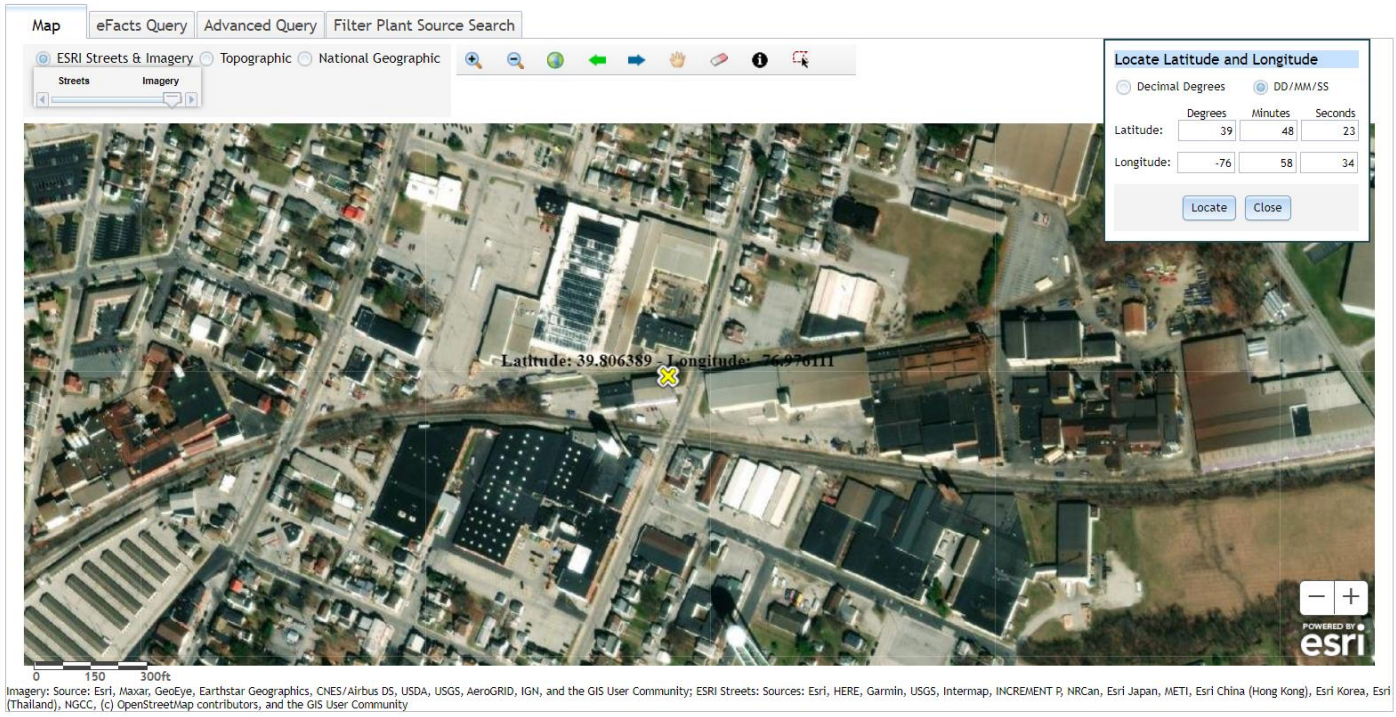


Figure 2: Aerial Photograph of the subject facility



2.1.2 Sources of Wastewater/Stormwater

The facility has the following stormwater outfalls.

- Outfall 005 receives stormwater from paved areas. This is located at latitude 39º 48' 23.00" and longitude -76º 58' 34.00".
- Outfall 006 receives stormwater from paved areas. This is located at latitude 39º 48' 25.00" and longitude -76º 58' 16.00".

The site plan depicts the stormwater runoff areas and outfall locations..

2.2 Description of Wastewater Treatment Process

The subject facility is a 0.209 MGD design flow facility.

For the facility's stormwater discharge, the facility is being evaluated for pH, TSS, Oil and Grease, total arsenic, total cadmium, total chromium, total copper, total iron, and total lead.

- Outfall 005 receives stormwater from steel storage areas and naptha storage. Potential pollutants are dissolved iron and oil and grease.
- Outfall 006 receives stormwater from sand/slag hoppers, casting storage, and oil waste hoppers. Potential pollutants are dissolved iron, oil and grease, and TSS (Fact Sheet dated January 2015).

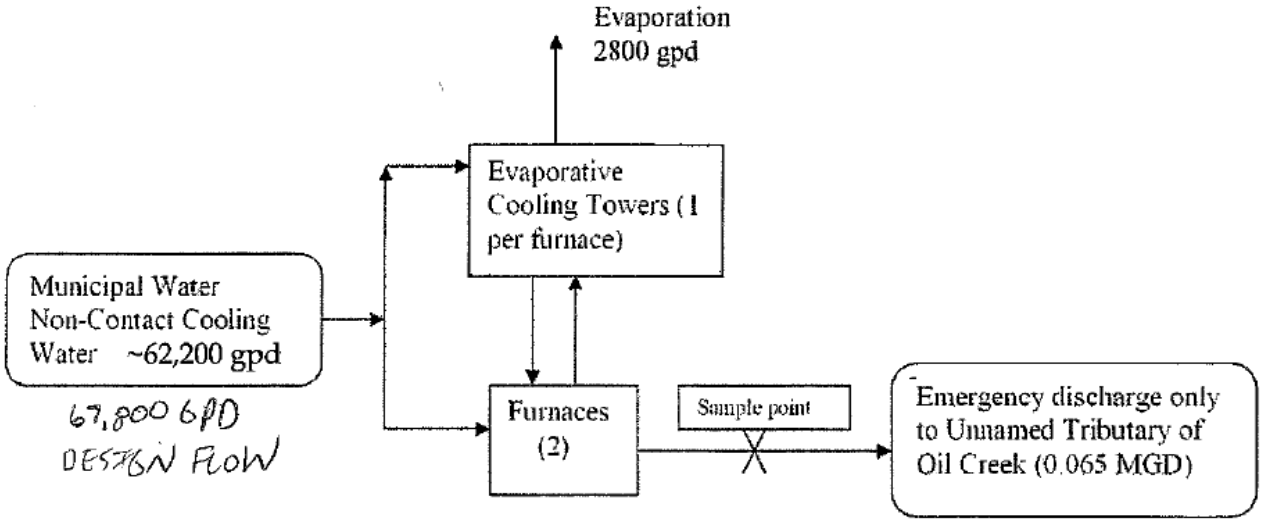
For the facility's non-process cooling water discharge, the facility is being evaluated for flow, pH, temperature, and total copper.

- Outfall 007 receives non-process cooling water from the old foundry furnaces. Discharges are only in emergency situations.
- Outfall 008 receives non-process cooling water from the new foundry furnaces. Discharges are only in emergency situations (Fact Sheet dated January 2015).

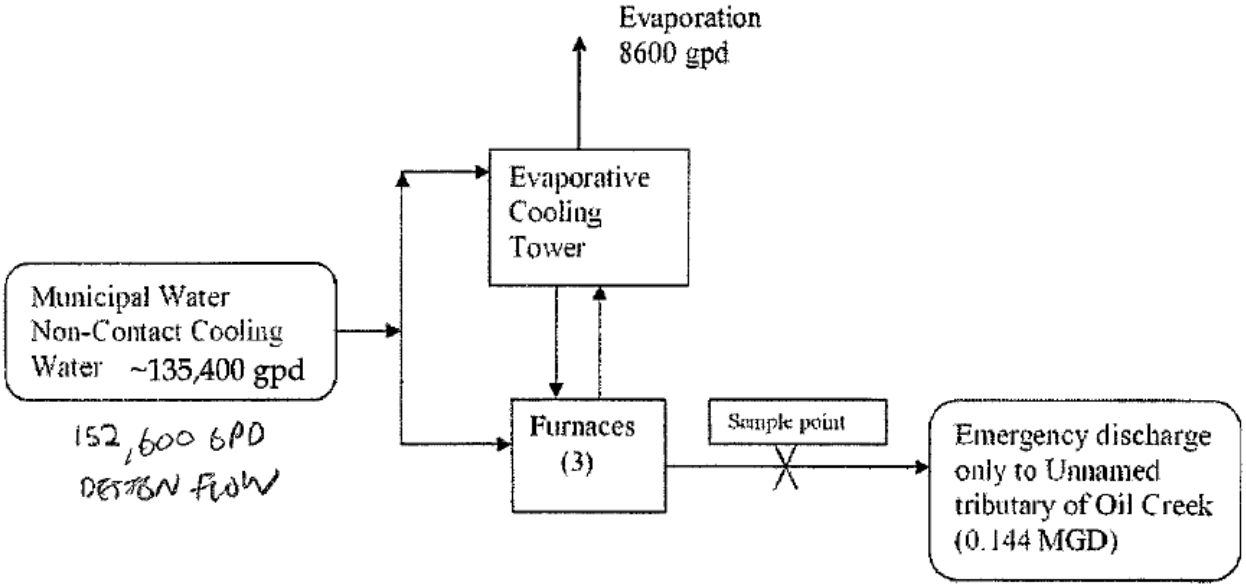
The existing permits limits for the facility is summarized in Section 2.4.

The following flow diagrams depict the facility's treatment process for Outfalls 007 and 008.

NPDES Outfall 007
New Foundry
Water Flow Sources Schematic



NPDES Outfall 008
Old Foundry
Water Flow Sources Schematic



2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	005	**Design Flow (MGD)**	0
Latitude	39º 48' 23.00"	**Longitude**	-76º 58' 34.00"
Wastewater Description:	Stormwater		

Outfall No.	006	**Design Flow (MGD)**	0
Latitude	39º 48' 25.00"	**Longitude**	-76º 58' 16.00"
Wastewater Description:	Stormwater		

Outfall No.	007	**Design Flow (MGD)**	.144
Latitude	39º 48' 21.00"	**Longitude**	-76º 58' 42.00"
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Outfall No.	008	**Design Flow (MGD)**	.065
Latitude	39º 48' 22.00"	**Longitude**	-76º 58' 20.00"
Wastewater Description:	Noncontact Cooling Water (NCCW)		

2.3.1 Operational Considerations- Chemical Additives

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

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

- No chemicals were reported in the NPDES application.

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** 005, **Latitude** 39° 48' 23", **Longitude** 76° 58' 34", **River Mile Index** 0.57, **Stream Code** NA (to 08213)

Receiving Waters: Unnamed Tributary to Oil Creek

Type of Effluent: Stormwater

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.

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		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Chromium	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab

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

at discharge from facility.

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

I. B. **For Outfall** 006 , **Latitude** 39° 48' 25" , **Longitude** 76° 58' 16" , **River Mile Index** 0.57 , **Stream Code** NA (to 08213)

Receiving Waters: Unnamed Tributary to Oil Creek

Type of Effluent: Stormwater

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.

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		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Chromium	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab

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

at discharge from facility.

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

I. C. **For Outfall** 007 , **Latitude** 39° 48' 21" , **Longitude** 76° 58' 42" , **River Mile Index** 0.57 , **Stream Code** NA (to 08213)

Receiving Waters: Unnamed Tributary to Oil Creek

Type of Effluent: Non-contact cooling water from the old foundry furnaces in emergency situations only.

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.

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	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	Daily when Discharging	Grab
Temperature (°F)	XXX	XXX	XXX	XXX	See Part A.I.C.3.	XXX	Continuous	I-S
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	Weekly when Discharging	Grab

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

at discharge from facility.

3. In the event of an emergency discharge of noncontact cooling water from Outfall 007, the permittee shall comply with the following average daily thermal discharge limitations:

Period	Maximum Allowable Daily Average Discharge Temperature (°F)
January 1-31	41
February 1-29	41
March 1-31	49
April 1-15	55
April 16-30	61
May 1-15	66
May 16-31	75
June 1-15	82
June 16-30	86
July 1-31	88
August 1-15	88
August 16-31	88
September 1-15	85
September 16-30	79
October 1-15	73
October 16-31	67
November 1-15	59
November 16-30	51
December 1-31	42

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

I. D. **For Outfall** 008, **Latitude** 39° 48' 22", **Longitude** 76° 58' 20", **River Mile Index** 0.57, **Stream Code** NA (to 08213)

Receiving Waters: Unnamed Tributary to Oil Creek

Type of Effluent: Non-contact cooling water from the new foundry furnaces in emergency situations only.

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.

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]	Required
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	Daily when Discharging	Grab
Temperature (°F)	XXX	XXX	XXX	XXX	See Part A.I.D.3.	XXX	Continuous	I-S
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	Weekly when Discharging	Grab

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

at discharge from facility.

3. In the event of an emergency discharge of noncontact cooling water from Outfall 008, the permittee shall comply with the following average daily thermal discharge limitations:

Period	Maximum Allowable Daily Average Discharge Temperature (°F)
January 1-31	41
February 1-29	41
March 1-31	49
April 1-15	55
April 16-30	61
May 1-15	66
May 16-31	75
June 1-15	82
June 16-30	86
July 1-31	88
August 1-15	88
August 16-31	88
September 1-15	85
September 16-30	79
October 1-15	73
October 16-31	67
November 1-15	59
November 16-30	51
December 1-31	42

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

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

The DEP inspector noted the following during the inspection.

08/18/2015:

- There was considerable amount of black foundry sand on the ground in the vicinity of stormwater Outfall 006 with potential runoff concerns. The facility was advised to improve housekeeping measures to keep foundry sand from discharging with stormwater resulting in a non-stormwater discharge. There were signs of black sand present near a stormwater catch basin that lead to Oil Creek.

11/04/2016:

- The facility has two permitted non-contact cooling water outfalls (007 and 008) for emergency discharge only. They also have two stormwater outfalls (005 and 006). The emergency outfalls have been re-piped to discharge to the sanitary sewer. The outfalls are permitted in the event Hanover WWTP would ever cease to discharge for some reason.

06/14/2019:

- Stormwater is sampled at the catch basin located by the metal recycling area, just north of the railroad tracks. Some unidentified pipes were noted entering the stormwater catch basins throughout the property. The facility stated that they believe that some of the stormwater is piped underneath the building.
- On the south side of the facility, the facility is a Naptha recovery building. The facility stated that there is still some Naptha on the property.
- The stormwater collection system contained sediment and debris. The facility stated that there was not a cleaning protocol in place for removal of the debris in the stormwater catch basins.
- The facility was advised to address the following: a) adopt and maintain a stormwater collection system sediment and debris removal program; (b) Confirm that NCCW from outfalls 007 and 008 discharge to the sanitary sewer collection system; (c) Provide an updated map of the stormwater collection piping system from the facility; (d) Keep DMRs, annual reports, lab results, and other paperwork onsite (hard copy or electronic); and (e) Maintain general good housekeeping practices.

3.2 Summary of DMR Data

The facility utilizes Outfalls 007 and 008 in emergency situations only. The facility must submit DMR reporting for these outfalls. The No Discharge box should be marked on the DMRs if there is no discharge.

The off-site laboratory used for the analysis of the parameters were (a) Laboratory, Analytical, and Biological Services, Inc. located at 125 Enterprise Dive, New Oxford, PA 17350 and (b) Pace Analytical Services, LLC located at 1638 Roseytown Road, Suites 2 to 4, Greensburg, PA 15601.

DMR Data for Outfall 005 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
pH (S.U.) Maximum				6.01						6.95		
TSS (mg/L) Daily Maximum				6.0						12.0		
Oil and Grease (mg/L) Daily Maximum				< 4.8						< 4.8		
Total Arsenic (mg/L) Daily Maximum				< 0.005						< 0.005		
Total Cadmium (mg/L) Daily Maximum				< 0.003						< 0.003		
Total Chromium (mg/L) Daily Maximum				< 0.005						< 0.005		
Total Copper (mg/L) Daily Maximum				< 0.005						< 0.005		
Total Iron (mg/L) Daily Maximum				0.194						0.598		
Total Lead (mg/L) Daily Maximum				< 0.005						< 0.005		

DMR Data for Outfall 006 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
pH (S.U.) Maximum				7.38						6.63		
TSS (mg/L) Daily Maximum				10.0						109		
Oil and Grease (mg/L) Daily Maximum				< 4.8						< 4.8		
Total Arsenic (mg/L) Daily Maximum				< 0.005						< 0.005		
Total Cadmium (mg/L) Daily Maximum				< 0.003						< 0.003		
Total Chromium (mg/L) Daily Maximum				< 0.005						< 0.005		
Total Copper (mg/L) Daily Maximum				< 0.005						0.016		
Total Iron (mg/L) Daily Maximum				0.460						4.41		
Total Lead (mg/L) Daily Maximum				< 0.005						0.005		

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

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

From the DMR data beginning in March 1, 2015 to May 14, 2021, there were no observed effluent non-compliances.

3.3.2 Non-Compliance- Enforcement Actions

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

Beginning in March 1, 2015 to May 14, 2021, the facility had the following enforcement actions.

Summary of Enforcement Actions
Beginning March 1, 2015 and Ending May 14, 2021

ENF ID	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	VIOLATIONS	# OF VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
394247	Notice of Violation	05/07/2021	05/04/2021	92A.62	1	Comply/Closed	05/10/2021
379148	Notice of Violation	09/26/2019	09/26/2019	92A.75(A)	1	Comply/Closed	10/01/2019

3.4 Summary of Biosolids/Sludge Disposal

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

The facility discharges non-contact cooling water on emergency basis only. The facility is not suspected of disposing biosolids/sludge.

3.5 Open Violations

No open violations existed as of June 2021.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be UNT of Oil Creek. The sequence of receiving streams that the UNT of Oil Creek discharges into are the Oil Creek, the Codorus Creek, and the Susquehanna River eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is the Wrightsville Borough Municipal Authority (PWS ID #7670097) located approximately 43 miles downstream of the subject facility on the Susquehanna 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 4a waterbody. This stream is an impaired stream for aquatic life due to siltation from urban runoff/storm sewers. For recreational uses, the receiving stream is impaired for pathogens due to an unknown source. The designated use has been classified as protected waters for warm water fishes (WWF) 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 low flow yield and the Q710 for the subject facility was estimated using StreamStats.

The low flow yield is 0.208 $ft^3/s/mi^2$ and the Q710 is 0.0208 ft^3/s.

4.6.1 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	0
Latitude	39º 48' 27.38"	Longitude	-76º 57' 45.16"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		

Receiving Waters	Oil Creek (WWF)	Stream Code	8213
NHD Com ID	57474987	RMI	0.84
Drainage Area	0.1	Yield (cfs/mi^2)	0.208
Q_{7-10} Flow (cfs)	0.0208	Q_{7-10} Basis	StreamStats
Elevation (ft)	610	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 Class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life		
Cause(s) of Impairment	NUTRIENTS, SILTATION		
Source(s) of Impairment	AGRICULTURE, AGRICULTURE, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Oil Creek

Background/Ambient Data		Data Source
pH (SU)	Not appl	
Temperature (°F)	Not appl	
Hardness (mg/L)	Not appl	
Other:		

Nearest Downstream Public Water Supply Intake	Wrightsville Boro Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	43

4.6.2 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	39º 48' 27.38"	Longitude	-76º 57' 45.16"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		

Receiving Waters	Oil Creek (WWF)	Stream Code	8213
NHD Com ID	57474987	RMI	0.84
Drainage Area	0.1	Yield (cfs/mi^2)	0.208
Q_{7-10} Flow (cfs)	0.0208	Q_{7-10} Basis	StreamStats
Elevation (ft)	610	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 Class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life		
Cause(s) of Impairment	NUTRIENTS, SILTATION, SILTATION		
Source(s) of Impairment	AGRICULTURE, AGRICULTURE, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Oil Creek

Background/Ambient Data		Data Source
pH (SU)	Not appl	
Temperature (°F)	Not appl	
Hardness (mg/L)	Not appl	
Other:		

Nearest Downstream Public Water Supply Intake	Wrightsville Boro Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	43

4.6.3 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	007	Design Flow (MGD)	.144
Latitude	39º 48' 26.62"	Longitude	-76º 57' 45.00"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Receiving Waters	Oil Creek (WWF, MF)	Stream Code	8213
NHD Com ID	57474987	RMI	0.84
Drainage Area	0.1	Yield (cfs/mi^2)	0.208
Q_{7-10} Flow (cfs)	0.0208	Q_{7-10} Basis	StreamStats
Elevation (ft)	610	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 Class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life; recreational uses		
Cause(s) of Impairment	NUTRIENTS, SILTATION, SILTATION		
Source(s) of Impairment	AGRICULTURE, AGRICULTURE, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Oil Creek

Background/Ambient Data		Data Source
pH (SU)	Not appl	
Temperature (°F)	Not appl	
Hardness (mg/L)	Not appl	
Other:		

Nearest Downstream Public Water Supply Intake	Wrightsville Boro Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	43

4.6.4 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	008	Design Flow (MGD)	.065
Latitude	39º 48' 27.38"	Longitude	-76º 57' 45.16"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Receiving Waters	Oil Creek (WWF, MF)	Stream Code	8213
NHD Com ID	57474987	RMI	0.84
Drainage Area	0.1	Yield (cfs/mi^2)	0.208
Q_{7-10} Flow (cfs)	0.0208	Q_{7-10} Basis	StreamStats
Elevation (ft)	610	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 Class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life; recreational uses		
Cause(s) of Impairment	NUTRIENTS, SILTATION, SILTATION		
Source(s) of Impairment	AGRICULTURE, AGRICULTURE, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Oil Creek

Background/Ambient Data		Data Source
pH (SU)	Not appl	
Temperature (°F)	Not appl	
Hardness (mg/L)	Not appl	
Other:		

Nearest Downstream Public Water Supply Intake	Wrightsville Boro Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	43

5.0: Overview of Presiding Water Quality Standards

5.1 General

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

5.2.1 Technology-Based Limitations

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

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. Chapter 93 itemizes the temperature limits necessary to protect designated and existing uses. The temperature limits are summarized in the table.

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

Chapter 93: Water Quality Standards

Symbol: Critical Use Period	$TEMP_2$ WWF Temperature (F)
Jan 1-31	40
Feb 1-29	40
Mar 1-31	46
Apr 1-15	52
Apr 16-30	58
May 1-15	64
May 16-31	72
Jun 1-15	80
Jun 16-30	84
Jul 1-31	87
Aug 1-15	87
Aug 16-31	87
Sep 1-15	84
Sep 16-30	78
Oct 1-15	72
Oct 16-31	66
Nov 1-15	58
Nov 16-30	50
Dec 1-31	42

5.3 Water Quality-Based Limitations

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

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations:(1) the Thermal Discharge Limit Calculation Spreadsheet to estimate allowable discharge temperature and (2) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants.

5.3.1 Water Quality Modeling

Water quality modeling was conducted for thermal impacts consistent with the Implementation Guidance for Temperature Criteria (Document # 391-2000-017). The output can be found in Attachment B.

5.3.2 Toxics Modeling

The facility is not subject to Toxics Modeling.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

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

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

5.4.1.1 Local TMDL

The subject facility discharges into UNT of Oil Creek which subsequently discharges into Oil Creek which is a local TMDL (Oil Creek Watershed TMDL).

The impaired segment of Oil Creek is located in York County just east of Hanover. The watershed covers approximately 4 square miles. The TMDL was developed to address impairments caused by siltation. Oil Creek appeared on Pennsylvania's 303(d) list in 1996 when 1.2 miles of the tributary were listed impaired by an unknown cause emanating from urban runoff. The study noted stream bank erosion to be a significant problem. Agriculture land use activities were also identified as a source of impairment with siltation and nutrients causing the impairments.

The subject facility discharges non-contact cooling water only in emergency situations. The facility is not suspected of contributing to the TMDL impairment.

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. Monitoring for facilities with other discharges will generally conform to the following minimum sampling frequencies, with the permit writer having final discretion: Phase 3 WIP Wastewater Supplement Revised, December 17, 2019.

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

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

Since this facility discharges non-contact cooling water only in emergency situations, discharges are infrequent. This 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. 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 tables are categorized by (a) Conventional Pollutants and Disinfection and (b) Toxics.

6.1.1 Conventional Pollutants and Disinfection

For stormwater outfall

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection RH Sheppard Company Inc.; PA0083526; Outfalls 005 and 006			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
pH (S.U.)	Antibacksliding	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	Due to antibacksliding, this parameter shall continue to the proposed permit.
TSS	PAG03, Appendix J	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	This parameter shall be monitored consistent with PAG03- Appendix J
Oil and Grease	PAG03, Appendix J	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	This parameter shall be monitored consistent with PAG03- Appendix J
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on best professional judgement (BPJ)			
3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			

For non-process cooling water

Thermal limits are generally the same as the current permit. The thermal temperature arrived in the current permit was 42 C. The result from the modeling for the proposed permit was 43 C. To maintain consistency, the 42 C temperature for December shall remain. Its likely the difference in temperature was do to rounding.

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection

RH Sheppard Company Inc.; PA0083526; Outfalls 007 and 008

Parameter	Permit Limitation Required by[1]:	Recommendation	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily when discharging as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by Chapter 95.2(1).
Temperature	Themal Discharge Limit Spreadsheet	Monitoring:	The monitoring frequency shall be continuous
		Effluent Limit:	Effluent temperature limits vary by critical use period. Refer to the draft NPDES permit for maximum daily temperatures.
		Rationale:	The monitoring frequency has been assigned based upon best professional judgement and the effluent limits assigned by the Thermal Discharge Limit Spreadsheet

Notes:

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

2 Monitoring frequency based on flow rate of 0.209 MGD.

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

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

5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017

6.1.2 Toxics

6.1.2.1 Summary of Toxics Monitoring/Limits

For stormwater outfall

Summary of Proposed NPDES Parameter Details for Toxics

RH Sheppard Company Inc.; PA0083526; Outfalls 005 and 006

Parameter	Permit Limitation Required by[1]:	Recommendation	
Total Arsenic	Antibacksliding	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	Due to antibacksliding, this parameter shall continue to the proposed permit.
Total Cadmium	Antibacksliding	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	Due to antibacksliding, this parameter shall continue to the proposed permit.
Total Chromium	Antibacksliding	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	Due to antibacksliding, this parameter shall continue to the proposed permit.
Total Copper	PAG03, Appendix B	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	This parameter shall be monitored consistent with PAG03- Appendix B
Total Iron	PAG03, Appendix B	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	This parameter shall be monitored consistent with PAG03- Appendix B
Total Lead	PAG03, Appendix B	Monitoring:	The monitoring frequency shall be 2x/year as a grab sample (Table 6-4).
		Effluent Limit:	No effluent limit.
		Rationale:	This parameter shall be monitored consistent with PAG03- Appendix B

Notes:

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

2 Monitoring frequency based on best professional judgement (BPJ)

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

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

5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017

For non-process cooling water

Summary of Proposed NPDES Parameter Details for Toxics			
RH Sheppard Company Inc.; PA0083526; Outfalls 007 and 008			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
Total Copper	Anti-backsliding	Monitoring:	Weekly when discharging
		Effluent Limit:	No effluent limit
		Rationale:	The monitor frequency has been assigned basd upon best professional judgement. Due to insufficent data to make a determination to eliminate this parameter, the facility shall continue to monitor for total copper.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.209 MGD.			
3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			

6.2 Summary of Changes From Existing Permit to Proposed Permit

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

- **There are no changes in the monitoring frequency or effluent limits.**

6.3.1 Summary of Proposed NPDES Effluent Limits

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

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

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

I. A. For Outfall 005 , **Latitude** 39° 48' 23.00" , **Longitude** 76° 58' 34.00" , **River Mile Index** 0.84 , **Stream Code** NA (to 8213)

Receiving Waters: Oil Creek (WWF)

Type of Effluent: Stormwater

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	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Arsenic, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Cadmium, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Chromium, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Copper, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Lead, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab

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

at Outfall 005

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

I. B. For Outfall 006 , **Latitude** 39° 48' 25.00" , **Longitude** 76° 58' 16.00" , **River Mile Index** 0.84 , **Stream Code** NA (to 8213)

Receiving Waters: Oil Creek (WWF)

Type of Effluent: Stormwater

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	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Arsenic, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Cadmium, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Chromium, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Copper, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Lead, Total	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab

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

at Outfall 006

Permit No. PA0083526

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

I. C. For Outfall 007 , **Latitude** 39° 48' 21.00" , **Longitude** 76° 58' 42.00" , **River Mile Index** 0.84 , **Stream Code** NA (to 8213)

Receiving Waters: Oil Creek (WWF, MF)

Type of Effluent: Noncontact Cooling Water (NCCW) in emergency situations only.

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	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab
Temperature (deg F) (°F) Jan 1 - Feb 28	XXX	XXX	XXX	XXX	41 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Mar 1 - 31	XXX	XXX	XXX	XXX	49 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Apr 1 - 15	XXX	XXX	XXX	XXX	55 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Apr 16 - 30	XXX	XXX	XXX	XXX	61 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) May 1 - 15	XXX	XXX	XXX	XXX	66 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) May 16 - 31	XXX	XXX	XXX	XXX	75 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Jun 1 - 15	XXX	XXX	XXX	XXX	82 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Jun 16 - 30	XXX	XXX	XXX	XXX	86 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Jul 1 - Aug 31	XXX	XXX	XXX	XXX	88 Daily Max	XXX	Continuous	I-S

Outfall 007 , Continued (from 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		
Temperature (deg F) (°F) Sep 1 - 15	XXX	XXX	XXX	XXX	85 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Sep 16 - 30	XXX	XXX	XXX	XXX	79 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Oct 1 - 15	XXX	XXX	XXX	XXX	73 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Oct 16 - 31	XXX	XXX	XXX	XXX	67 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Nov 1 - 15	XXX	XXX	XXX	XXX	59 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Nov 16 - 30	XXX	XXX	XXX	XXX	51 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Dec 1 - 31	XXX	XXX	XXX	XXX	42 Daily Max	XXX	Continuous	I-S
Copper, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	Weekly when Discharging	Grab

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

at Outfall 007

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

I. D. For Outfall 008 , **Latitude** 39° 48' 22.00" , **Longitude** 76° 58' 20.00" , **River Mile Index** 0.84 , **Stream Code** NA (to 8213)

Receiving Waters: Oil Creek (WWF, MF)

Type of Effluent: Noncontact Cooling Water (NCCW) in emergency situations only.

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	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab
Temperature (deg F) (°F) Jan 1 - Feb 28	XXX	XXX	XXX	XXX	41 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Mar 1 - 31	XXX	XXX	XXX	XXX	49 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Apr 1 - 15	XXX	XXX	XXX	XXX	55 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Apr 16 - 30	XXX	XXX	XXX	XXX	61 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) May 1 - 15	XXX	XXX	XXX	XXX	66 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) May 16 - 31	XXX	XXX	XXX	XXX	75 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Jun 1 - 15	XXX	XXX	XXX	XXX	82 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Jun 16 - 30	XXX	XXX	XXX	XXX	86 Daily Max	XXX	Continuous	I-S

Outfall 008 , Continued (from 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		
Temperature (deg F) (°F) Jul 1 - Aug 31	XXX	XXX	XXX	XXX	88 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Sep 1 - 15	XXX	XXX	XXX	XXX	85 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Sep 16 - 30	XXX	XXX	XXX	XXX	79 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Oct 1 - 15	XXX	XXX	XXX	XXX	73 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Oct 16 - 31	XXX	XXX	XXX	XXX	67 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Nov 1 - 15	XXX	XXX	XXX	XXX	59 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Nov 16 - 30	XXX	XXX	XXX	XXX	51 Daily Max	XXX	Continuous	I-S
Temperature (deg F) (°F) Dec 1 - 31	XXX	XXX	XXX	XXX	42 Daily Max	XXX	Continuous	I-S
Copper, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	Weekly when Discharging	Grab

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

at Outfall 008

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- Temperature 2 degree Hourly Change
- Cooling Tower Maintenance Chemicals
- Industrial Stormwater Requirements

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

Attachment A

Stream Stats

StreamStats Report

Region ID: PA
Workspace ID: PA20210515100137309000
Clicked Point (Latitude, Longitude): 39.80620, -76.97579
Time: 2021-05-15 06:01:53 -0400

RH Sheppard Foundry PA0083526 Modeling Point #1 May 2021

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.1	square miles
BSLOPD	Mean basin slope measured in degrees	0.8443	degrees
ROCKDEP	Depth to rock	5	feet
URBAN	Percentage of basin with urban development	100	percent

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.1	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	0.8443	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5	feet	4.13	5.21
URBAN	Percent Urban	100	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.011	ft^3/s
30 Day 2 Year Low Flow	0.0208	ft^3/s
7 Day 10 Year Low Flow	0.00338	ft^3/s
30 Day 10 Year Low Flow	0.00673	ft^3/s
90 Day 10 Year Low Flow	0.0227	ft^3/s

Low-Flow Statistics Citations

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

Application Version: 4.5.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Attachment B

Thermal Modeling Results

Flow Data for Thermal Discharge Analysis

Facility: RH Sheppard Foundry
Permit Number: PA0083526
Stream Name: UNT Oil Creek
Analyst/Engineer: DEP
Stream Q7-10 (cfs): 0.0208

	Facility Flows				Stream Flows			
	Intake (Stream) (MGD)	Intake (External) (MGD)	Consumptive Loss (MGD)	Discharge Flow (MGD)	PMF	Upstream Stream Flow (cfs)	Adjusted Stream Flow (cfs)	Downstream Stream Flow (cfs)
Jan 1-31	0	0.2204	0.0114	0.209	1.00	0.06	0.06	0.39
Feb 1-29	0	0.2204	0.0114	0.209	1.00	0.07	0.07	0.40
Mar 1-31	0	0.2204	0.0114	0.209	1.00	0.14	0.14	0.46
Apr 1-15	0	0.2204	0.0114	0.209	1.00	0.19	0.19	0.51
Apr 16-30	0	0.2204	0.0114	0.209	1.00	0.19	0.19	0.51
May 1-15	0	0.2204	0.0114	0.209	1.00	0.11	0.11	0.43
May 16-31	0	0.2204	0.0114	0.209	1.00	0.11	0.11	0.43
Jun 1-15	0	0.2204	0.0114	0.209	1.00	0.06	0.06	0.38
Jun 16-30	0	0.2204	0.0114	0.209	1.00	0.06	0.06	0.38
Jul 1-31	0	0.2204	0.0114	0.209	1.00	0.03	0.03	0.35
Aug 1-15	0	0.2204	0.0114	0.209	1.00	0.03	0.03	0.35
Aug 16-31	0	0.2204	0.0114	0.209	1.00	0.03	0.03	0.35
Sep 1-15	0	0.2204	0.0114	0.209	1.00	0.02	0.02	0.35
Sep 16-30	0	0.2204	0.0114	0.209	1.00	0.02	0.02	0.35
Oct 1-15	0	0.2204	0.0114	0.209	1.00	0.03	0.03	0.35
Oct 16-31	0	0.2204	0.0114	0.209	1.00	0.03	0.03	0.35
Nov 1-15	0	0.2204	0.0114	0.209	1.00	0.04	0.04	0.36
Nov 16-30	0	0.2204	0.0114	0.209	1.00	0.04	0.04	0.36
Dec 1-31	0	0.2204	0.0114	0.209	1.00	0.06	0.06	0.39

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.
Version 2.0 -- 07/01/2005 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017
NOTE: The user can only edit fields that are blue.
NOTE: MGD x 1.547 = cfs.

Thermal Discharge Recommended Permit Limits

Warm Water Fishes (WWF) Stream

Facility: **RH Sheppard Foundry**
Permit Number: PA0083526
Stream: UNT Oil Creek

	WWF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	**WWF** Daily WLA[2] (Million BTUs/day)	**WWF** Daily WLA[3] (°F)	at Discharge Flow (MGD)	**PMF**
Jan 1-31	35	0	40	N/A – Case 2	41.0	0.209	1.00
Feb 1-29	35	0	40	N/A – Case 2	41.1	0.209	1.00
Mar 1-31	40	0	46	N/A – Case 2	48.5	0.209	1.00
Apr 1-15	47	0	52	N/A – Case 2	54.9	0.209	1.00
Apr 16-30	53	0	58	N/A – Case 2	60.9	0.209	1.00
May 1-15	58	0	64	N/A – Case 2	66.0	0.209	1.00
May 16-31	62	0	72	N/A – Case 2	75.3	0.209	1.00
Jun 1-15	67	0	80	N/A – Case 2	82.5	0.209	1.00
Jun 16-30	71	0	84	N/A – Case 2	86.5	0.209	1.00
Jul 1-31	75	0	87	N/A – Case 2	88.0	0.209	1.00
Aug 1-15	74	0	87	N/A – Case 2	88.2	0.209	1.00
Aug 16-31	74	0	87	N/A – Case 2	88.2	0.209	1.00
Sep 1-15	71	0	84	N/A – Case 2	84.9	0.209	1.00
Sep 16-30	65	0	78	N/A – Case 2	78.9	0.209	1.00
Oct 1-15	60	0	72	N/A – Case 2	73.0	0.209	1.00
Oct 16-31	54	0	66	N/A – Case 2	67.0	0.209	1.00
Nov 1-15	48	0	58	N/A – Case 2	59.2	0.209	1.00
Nov 16-30	42	0	50	N/A – Case 2	50.9	0.209	1.00
Dec 1-31	37	0	42	N/A – Case 2	43.0	0.209	1.00

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, 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.

Attachment C
POFU

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
June 13, 2002

SUBJECT: Point of First Use Determination
R. H. Sheppard Company, Inc.
Hanover Borough, York County
NPDES Permit No. PA0083526

TO: Sean Furjanic
Engineer
Water Management Program

FROM: Mark S. Embeck MSE
Water Pollution Biologist
Water Management Program

At your request, I visited the UNT Oil Creek to which the R.H. Sheppard Company, Inc. discharges. The headwaters of the UNT are coincident with two storm water drains from the borough of Hanover. The central question is whether the UNT was a flowing stream and possessed a viable aquatic community prior to receiving storm water and industrial discharges.

I collected a number of kick screen samples near the confluence of the two storm water drainages. I found crayfish and aquatic snails. Both drainages had flow. Sampling efforts were cut short by a significant precipitation (rain/hail) event. Velocity and discharge increased dramatically in the UNT during the event. The harsh flow regime, along with the fact that the storm water appeared less than pristine, most likely explains why there were so few organisms collected.

The UNT does not appear on the 1:24,000 scale USGS Hanover Quadrangle. This is not surprising. The eminent hydrologist Luna Leopold discusses this very topic in his book, *A View of River*, as follows:

> The minimum size of channel shown on a map, whether by printed blue line or by insertion on the basis of contour lines, depends on the map scale. The 1:24,000 scale, or 2,000 feet to the inch, is available for most areas of the nation. On such a scale, the smallest tributary discernable on the basis of 10-foot contours has a drainage area of about 0.7 square mile and a length of about 1,500 feet.
>
> Our everyday experience suggests that definite channels smaller than that are common. Therefore, if actual channels are mapped on the ground, a far larger number will be found than those discerned on a published map....

On the 1:20,000 scale aerial photographs used for the York County Soil Survey, the UNT as well as other small tributaries not shown on the USGS Quadrangle are mapped. In addition, the Soil Survey shows the upper portion of the UNT, like many other neighboring small tributaries, to be located in Guthrie silt loam. Guthrie silt loam is a poorly drained soil with a seasonally high water table very near the surface, which "often lasts well into the growing season".

Based on the information above as well as my experience in sampling well over one hundred stream points in the Codorus Creek Watershed, it is my conclusion that the point of first use for protection of aquatic life is at the beginning of the UNT.

References:

Leopold, L.B. 1994. *A View of the River*. Harvard University Press, Cambridge, MA. 298 pp.

USDA Soil Conservation Service. 1963. *Soil Survey of York County, Pennsylvania*. U. S. Government Printing Office. 157 pp.

Cc: Stream File
T

Stream Code: None
Stream File: 2.16.1

POINT OF FIRST USE DETERMINATION

Stream: UNT Oil Creek Date: June 5, 2002 Time: 1000

Discharger: R.H. Sheppard Company, Inc. Existing ☒ Proposed ☐

Municipality: Hanover Borough County: York Collector: M.S. Embeck

Site Location: Confluence of storm water channels off Factory Street in Borough of Hanover.

PHYSICAL DATA

Estimated Stream Width: 1 m Estimated Stream Depth: Riffle 5 - 7.5 cm Pool 15 cm

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sample Reach	Substrate Type	Characteristic	% Composition in Sample Reach
Bedrock		-	Detritus	Sticks, wood, coarse plant materials (CPOM)	
Boulder	>256 mm (10")	5	Muck-Mud	Black, very fine organic (FPOM)	
Cobble	64-256 mm (2.5-10")	15	Marl	Grey, shell fragment	
Gravel	2-64 mm (0.1-2.5")	45			
Sand	0.06-2 mm (gritty)	15			
Silt	0.004-0.06 mm	10			
Clay	<0.004 mm (slick)	10			

Temperature: 21.75 °C DO: 5.20 mg/l pH: 7.62 SU Cond: 809 µS

Water Samples: Yes ☐ No ☒ Collector Number:

BIOLOGICAL DATA

Collection Gear: Kick Screen ☒ D-Frame Net ☐ Other ☐

Taxa Collected

1. Cambaridae (Rare)	5	9.
2. Physidae (Rare)	6.	10.
3.	7.	11.
4.	8.	12.

CONCLUSIONS

Based on the presence of aquatic life and information detailed in the attached memorandum, the point of first use for protection of aquatic life is at the beginning of the UNT.