pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0010375**
Facility Type	**Industrial**	APS ID	**1066668**
Major / Minor	**Minor**	Authorization ID	**1401762**

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

Applicant and Facility Information

Applicant Name	**Lehigh White Cement Co. LLC**	Facility Name	**Lehigh White Cement Co. York Facility**
Applicant Address	1601 FORUM PL STE 1110	Facility Address	200 Hokes Mill Road
	WEST PALM BEACH, FL 33401		York, PA 17404-5540
Applicant Contact	Alessandro Civera	Facility Contact	Benjamin Miller
Applicant Phone	(561) 812-7450	Facility Phone	(717) 843-0811
Client ID	339810	Site ID	271574
SIC Code	3241	Municipality	West Manchester Township
SIC Description	Manufacturing - Cement, Hydraulic	County	York
Date Application Received	July 1, 2022	EPA Waived?	Yes
Date Application Accepted	July 5, 2022	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)	May 1, 2023
x		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	May 19, 2023
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	May 19, 2023

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Lehigh White Cement Company located at 200 Hokes Mill Road, York, PA 17404 in York County, municipality of West Manchester. The existing permit became effective on January 1, 2018 and expired on December 31, 2022. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on January 1, 2022.

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 discharges non-contact cooling water and stormwater to retention pond. Discharges through Outfall 002 are only conducted in emergency situations. The applicant does not anticipate any proposed upgrades to the treatment facility in the next five years. 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 Commissioners and East Manchester Township and the notice was received by the parties on June 27, 2022.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Tributary 08085 To Codorus Creek. The sequence of receiving streams that the Tributary 08085 To Codorus Creek discharges into are Codorus Creek, and the Susquehanna River which eventually drains into the Chesapeake Bay. Since the facility discharges cooling water only in emergency situations, 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 Tributary 08085 To Codorus Creek is a Category 2, 4c, and 5 stream listed in the 2022 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream for fish consumption. The receiving stream is impaired for aquatic life due to habitat modification from habitat alterations and also due to urban runoff/storm sewers from flow regime modification. The stream is also impaired for recreational uses due to pathogens from an unknown source. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **No changes to monitoring frequency or effluent limits**

Sludge use and disposal description and location(s): Not applicable. The facility recycles non-contact cooling water and stormwater. Discharges occur in emergency situations.

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:	Lehigh White Cement Company
NPDES Permit #	PA0010375
Physical Address:	200 Hokes Mill Road York, PA 17404
Mailing Address:	200 Hokes Mill Road York, PA 17404
Contact:	Benjamin Miller Safety and Environmental Manager Ben.miller@lehighwhitecement.com
Consultant:	Ruth Baker Senior Engineer Montrose Environmental Solutions (610) 840-9146 rubaker@montrose-env.com

1.2 Permit History

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 200 Hokes Mill Road, York, PA 17404. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Lehigh owns and operates a cement manufacturing facility. The facility operates under the Standard Industrial Classification code of 3241. Raw materials including gypsum, limestone, clay, coke, sand and stone are received at the site. These materials are mixed and fed through a rotary kiln and the final cement products are packaged and loaded onto trucks or railcars for shipment. Lehigh utilizes a wet raw material process in which raw materials are ground, mixed with water to form slurry and blended prior to main cement manufacturing process. The site consists of storage areas for gypsum, limestone and sand, bulk storage area for gasoline, diesel fuel and kerosene, miscellaneous lubricant storage area, scrap dumpster, active cement storage silos, cement packaging and storage area, earthen stormwater retention basin, office, manufacturing building, and parking lots. (Abstracted from Fact Sheet dated for September 2017)

Figure 1: Topographical map of the subject facility

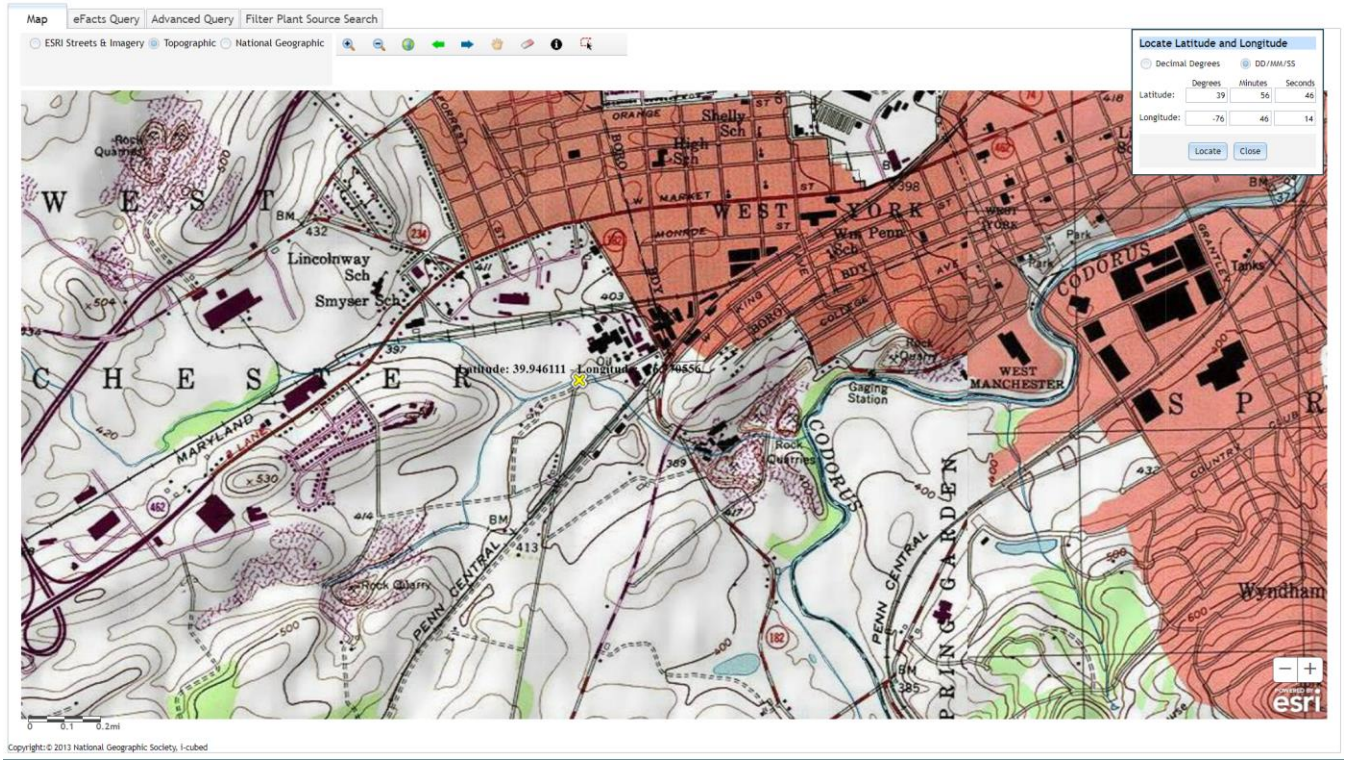
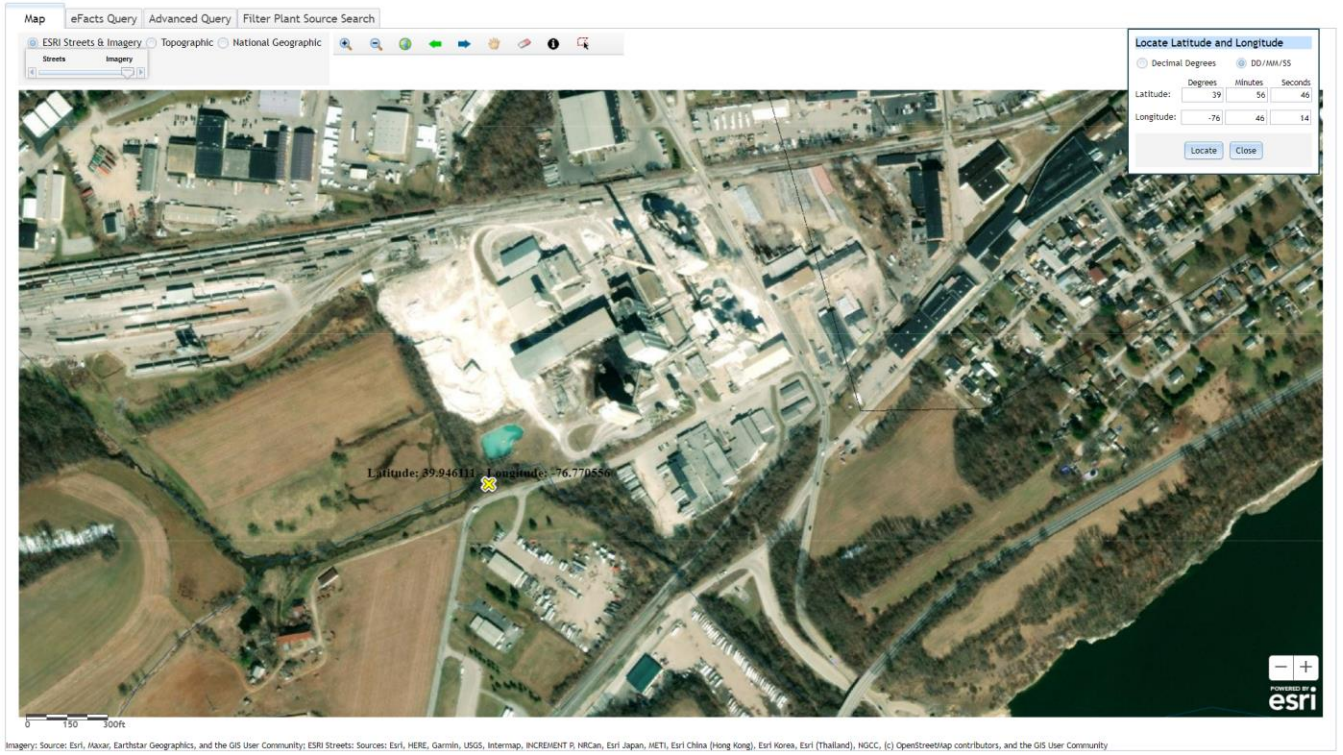


Figure 2: Aerial Photograph of the subject facility



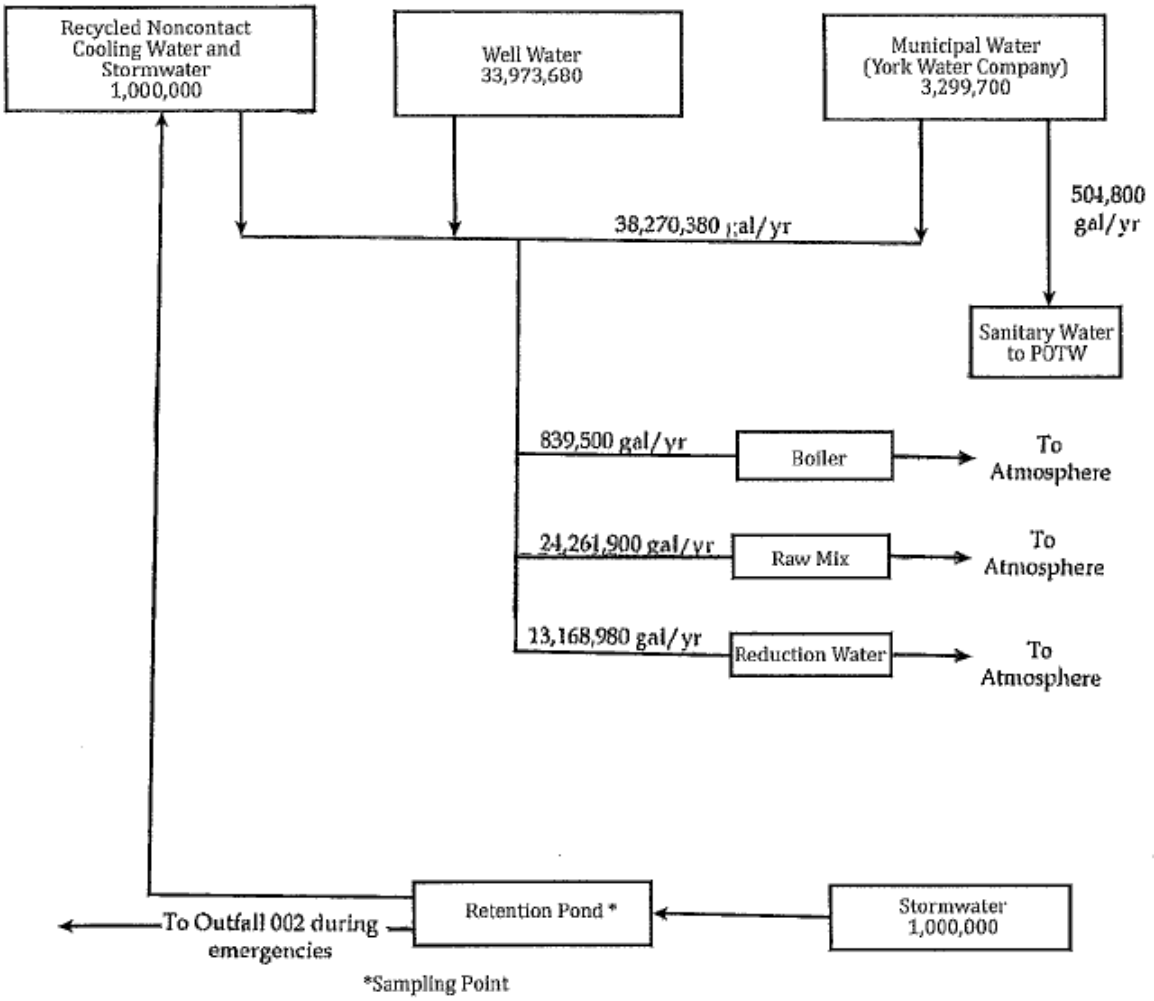
2.1.2 Sources of Wastewater/Stormwater

The facility receives well water, stormwater from a retention basin, and municipal water from York Water Company.

Lehigh uses water from the existing stormwater retention basin and two (2) deep-well pumps as water supply sources for its wet raw material process. Tom Powers, on-site environmental representative, indicated that NCCW generated during the manufacturing process is operated in a closed-loop system in which Lehigh also uses portion of this NCCW as water supply for the wet raw material process. Water from the wells is also supplied to the closed-loop system to maintain the water temperature in the NCCW closed loop system. Discharges of NCCW to the stormwater retention basin is very rare. Consequently, overflow from this basin into the unnamed tributary of Codorus Creek is most likely composed entirely of stormwater.

All sanitary wastewater is sent to a local municipal wastewater treatment facility and all process wastewater becomes evaporated and exits as water vapor from the plant kiln stack when raw materials are mixed with water and fed through a rotary. (Abstracted from Fact Sheet dated for September 2017)

A process flow diagram is depicted.



Schematic of Water Flow
Lehigh White Cement Company
200 Hokes Mill Road
York, PA 17404

2.2 Description of Wastewater Treatment Process

The subject facility discharges non-contact cooling water and stormwater to retention pond. Discharges through Outfall 002 are only conducted in emergency situations. The facility is being evaluated for flow, pH, TSS, oil and grease, aluminum, hexavalent chromium, iron, lead and phenolics. The existing permits limits for the facility is summarized in Section 2.4.

The facility claimed in the NPDES application that there were no discharges through Outfall 002 in the current NPDES term.

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	002	**Design Flow (MGD)**	.02
Latitude	39º 56' 46.67"	**Longitude**	-76º 46' 13.32"

Wastewater Description: Noncontact Cooling Water (NCCW), Stormwater

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/additives used at the 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 002 , **Latitude** 39° 56' 46.67" , **Longitude** 76° 46' 13.32" , **River Mile Index** 0.68 , **Stream Code** 08085

Receiving Waters: Unnamed Tributary of Codorus Creek

Type of Effluent: Noncontact Cooling Water (NCCW), Stormwater

1. The permittee is authorized to discharge during the period from **January 1, 2018** through **December 31, 2022**.
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		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Daily when Discharging (3)	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0	XXX	Daily when Discharging (3)	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	Daily when Discharging (3)	Grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab
Chromium, Hexavalent	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab
Lead, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab
Phenolics, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging (3)	Grab

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

at Outfall 002 (overflow from the stormwater retention basin)

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.

6/19/2019:

- The facility was cited for unauthorized and unpermitted discharge of limestone and silica polluting substances to the ground surface with potential to reach waters of the Commonwealth. This is a violation of Sections 401 and 402 of the Clean Streams Law.
- A pH sample was collected. The pH was 9.08. This exceeded the NPDES permit pH effluent quality.
- DEP recommended (a) repair sump pump in raw material storage area (b) install a device to meter discharge from the stormwater collection pond (c) analyze pH within the 15-minute holding time for discharges from the stormwater collection pond.

11/15/2019:

- This was a follow-up inspection from violation in the June 19, 2019 inspection. The sump pump near the raw limestone storage area was repaired and a secondary back-up sump pump is available.
- Filter socks were replaced along the Hokes Mill Road side. Regrading was completed along the fence to keep sediment from leaving the property onto the road.
- A flow meter was purchased for an overflow from the stormwater pond.

3.2 Summary of DMR Data

Since there was not discharge from Outfall 002, no DMR data exists.

The off-site laboratory used for the analysis of the parameters was ALS Environmental Laboratory located at 301 Fulling Mill Road, Middletown, PA 17057.

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 beginning on January 1, 2018 and ending on May 1, 2023 is as follows.

Since there was not discharge from Outfall 002, no DMR data exists. Non-Compliance is undeterminable.

3.3.2 Non-Compliance- Enforcement Actions

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

A notice of violation (NOV) was issued on August 1, 2019 for violations of Chapter 92a.44 and the Clean Streams Law 401. The enforcement action was closed on November 5, 2019.

3.4 Summary of Biosolids Disposal

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

Not applicable. The facility recycles non-contact cooling water and stormwater. Discharges occur in emergency situations.

3.5 Open Violations

No open violations existed as of April 2023.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Tributary 08085 To Codorus Creek. The sequence of receiving streams that the Tributary 08085 To Codorus Creek discharges into are Codorus Creek, 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 Wrightsville Boro MA (PWS ID # 7670097) located approximately 22 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 2022 Integrated List of All Waters (303d Listed Streams)

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

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

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

The receiving waters is listed in the 2022 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2, 4c, and 5 waterbody. This stream is an attaining stream for fish consumption. The receiving stream is impaired for aquatic life due to habitat modification from habitat alterations and also due to urban runoff/storm sewers from flow regime modification. The stream is also impaired for recreational uses due to pathogens from 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 0.068 $ft^3/s/mi^2$ and the Q710 is 0.297 ft^3/s.

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

Any industrial wastewater facilities are generally regulated by effluent standards found in 25 Pa. Code §§ 92a.48 and 95.2. These standards are as follows:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
ELGs			40 CFR §411	25 Pa. Code §92a.48(a)(1)
pH	6.0 – 9.0 (S.U.)	Minimum – Maximum	-	25 Pa. Code §95.2 (1)
Oil and Grease	15	Average Monthly	-	25 Pa. Code §95.2 (2)(ii)
	30	Daily Maximum		25 Pa. Code §95.2 (2)(ii)
Dissolved Iron	7.0	Maximum	-	25 Pa. Code §95.2 (4)

According to the EPA's 2011 Effluent Guidelines Plan – 2011 Annual Review Report Appendix A, facilities under the SIC Code 3241 are subject to the federal ELGs for cement manufacturing (i.e., 40 CFR §411.00). However, Subpart A (non-leaching) and Subpart B (leaching) of Effluent Limitation Guidelines (ELGs) are inapplicable since the facility does not discharge process wastewater. Subpart C of ELGs applies stormwater runoff from materials storage piles, **except for** "*any overflow from facilities designed, constructed and operated to treat to the applicable limitations the precipitation and runoff resulting from a 10-year, 24-hour precipitation event shall not be subject to the limitations of this section" (40 CFR §411.35(b)).* Overflow from the existing stormwater retention basin occurs very rarely; only during tropical storm or hurricane-related events. As a result, DEP determines to use Subpart C as a source for employing BPJ requirements at Outfall 002. (Abstracted from Fact Sheet dated for September 2017)

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	.02
Latitude	39º 56' 46.26"	Longitude	-76º 46' 13.19"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW), Stormwater		

Receiving Waters	Unnamed Tributary of Codorus Creek (WWF)	Stream Code	8085
NHD Com ID	57469065	RMI	0.73
Drainage Area	4.34	Yield (cfs/mi^2)	0.068
Q_{7-10} Flow (cfs)	0.297	Q_{7-10} Basis	StreamStats
Elevation (ft)	382	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		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, HABITAT ALTERATIONS		
Source(s) of Impairment	HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Not appl.	Name	

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

Nearest Downstream Public Water Supply Intake	Wrightsville Boro MA		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	22

5.3 Water Quality-Based Limitations

DEP's water quality models including WQM 7.0, Toxics Management Spreadsheet (TMS), and TRC CALC worksheet are mass-balance models simulating the mixing conditions between discharge and stream. Because the overflow is mostly composed of stormwater and occurs infrequently, it is difficult to quantify the actual discharge rates. In general, conducting water quality analysis for stormwater is problematic as the discharge rate is not continuous and the facility will likely have no discharge during low flow periods. Therefore, stormwater comes into contact with any industrial activities performed at the site can be regulated by implementing stormwater BMPs and by including monitoring requirements for site-specific pollutants of concern in the NPDES permit.

When no effluent guidelines and standards are available for stormwater discharges associated with industrial activity, the permit requirements must be established on a case-by-case basis using Best Professional Judgment (BPJ) per 25 Pa. Code § 92a.61(h), 40 CFR Part 125 Subpart A and 402(a)(1) of the federal Clean Water Act. In general, NPDES PAG-03 General Permit requirements are used as guidance to develop permit requirements for stormwater discharges in the permit. The latest NPDES PAG-03 General Permit reissued on September 24, 2016 contains Appendix N which is specifically developed for stormwater discharges associated with industrial activities from Glass, Clay, Cement, Concrete and Gypsum products. Accordingly, the requirements of Appendix N of the current NPDES PAG-03 General Permit will be included in the permit based on BPJ. These requirements are as follows:

Appendix N Parameters of Concern

Parameter	Benchmark Values
pH (S.U.)	9.0
Total Suspended Solids (TSS) (mg/L)	100
Total Aluminum (mg/L)	XXX
Total Iron (mg/L)	XXX

(Abstracted from Fact Sheet dated from September 2017)

5.3.1 Water Quality Modeling 7.0 / 5.3.2 Toxics Modeling

The retention pond receives unpredictable amounts of stormwater from precipitation. Thus, point source modeling was not conducted.

5.3.3 Whole Effluent Toxicity (WET)

The subject facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

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

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

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

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

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The facility discharges non-contact cooling water and stormwater on an emergency basis only. Since the facility does not generate a discharge with chemical additives containing nitrogen or phosphorus, 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

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection
Lehigh White Cement Co., PA0010375

Parameter	Permit Limitation Required by[1]:	Recommendation	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily when discharging as a grab sample
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with best professional judgement (BPJ) and the effluent limits assigned by Chapter 95.2(1).
TSS	PAG-03, Appendix N	Monitoring:	The monitoring frequency shall be daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirements
		Rationale:	Per PAG-03, Appendix N, a target benchmark value of 100 mg/l for effluent quality.
Oil and Grease	Chapter 95.2(2)(ii)	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	The average monthly limit should not exceed 15 mg/l
		Rationale:	Parameter subject to Chapter 95.2(2)(ii)

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 best professional judgement.

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

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

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

6.1.2 Toxics

According to DEP's SOP no. BPNPSM-PMT-032, effluent limits can generally apply if actual stormwater concentrations exceed 100 times the most stringent Chapter 93 criterion (or a lesser amount for large industrial areas that drain to small streams). A summary of the sample results from Pollutant Group 2 of the NPDES and comparison to Chapter 93 criteria is in the table.

Group 2 Pollutant Group parameters were sampled three times for the NPDEAS renewal. For the parameters currently already in the NPDES permit for monitoring, positive hits were observed for the sampling for aluminum, hexavalent chromium, iron, and lead. The facility reported no discharge. Since there were no samples collected during discharge, monitoring during discharge has been recommended to continue for the proposed permit for aluminum, hexavalent chromium, iron, lead, and phenolics.

Since there are very few discharges through the outfall, DEP has determined that the monitoring for toxics should not be over burdensome or costly. Thus, the monitoring during discharge shall continue.

Pollutant Group 2 Sample Results vs. Chapter 93 Criterion

PARAMETERS	Concentration		Chapter 93 Criterion	Is Concentration > 100x Chapter 93 Criterion? (Y/N)
		µg/L	ug/l	-----
Aluminum, Total (µg/L)		420	750	No
Antimony, Total (µg/L)		1.2	5.6	No
Arsenic, Total (µg/L)	<	1.5	10	No
Barium, Total (µg/L)		6.9	2400	No
Beryllium, Total (µg/L)	<	0.5	N/A	-----
Boron, Total (µg/L)	<	50	1600	No
Cadmium, Total (µg/L)	<	0.2	0.271	No
Chromium, Total (µg/L)		18	N/A	-----
Chromium, Hexavalent (µg/L)		19.2	10.4	No
Cobalt, Total (µg/L)	<	2.5	19	No
Copper, Total (µg/L)		3	9.3	No
Cyanide, Total (µg/L)	<	4	N/A	-----
Iron, Total (µg/L)		42	1500	No
Iron, Dissolved (µg/L)	<	60	300	No
Lead, Total (µg/L)		1.5	3.2	No
Manganese, Total (µg/L)		2.5	1000	No
Mercury, Total (µg/L)		0.0021	0.05	No
Nickel, Total (µg/L)	<	2.5	52.2	No
Phenols, Total (µg/L)	<	4	5	No
Selenium, Total (µg/L)	<	2	5	No
Silver, Total (µg/L)	<	0.5	3.8	No
Thallium, Total (µg/L)	<	0.5	0.24	No
Zinc, Total (µg/L)		2.8	119.8	No
Molybdenum (µg/L)		11	N/A	-----

Notes:

-Concentration is maximum concentration from Pollutant Group 2 of NPDES application

Summary of Proposed NPDES Parameter Details for Toxics			
Lehigh White Cement Co., PA0010375			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
Total Aluminum	PAG-03- Appendix N	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirement
		Rationale:	Parameter recommended by PAG-03- Appendix N
Hexavalent Chromium	Anti-backslding/Best professional judgement	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirement
		Rationale:	Pending favorable results, future renewals may reduce or eliminate monitoring.
Total Iron	PAG-03- Appendix N	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirement
		Rationale:	Parameter recommended by PAG-03- Appendix N
Total Lead	Anti-backslding/Best professional judgement	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirement
		Rationale:	Pending favorable results, future renewals may reduce or eliminate monitoring.
Total Phenolics	Anti-backslding/Best professional judgement	Monitoring:	The monitoring frequency shall be on a daily when discharging as a grab sample.
		Effluent Limit:	No effluent requirement
		Rationale:	Pending favorable results, future renewals may reduce or eliminate monitoring.
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 best professional judgement.			
3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021			

6.2 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.

- **No changes to monitoring 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 002 , **Latitude** 39° 56' 46.67" , **Longitude** 76° 46' 13.32" , **River Mile Index** 0.73 , **Stream Code** 8085

Receiving Waters: Unnamed Tributary of Codorus Creek (WWF)

Type of Effluent: Noncontact Cooling Water (NCCW), 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]	Required
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Daily when Discharging	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0	XXX	Daily when Discharging	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	Daily when Discharging	Grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Chromium, Hexavalent	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Lead, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Phenolics, Total	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab

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

at Outfall 002

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

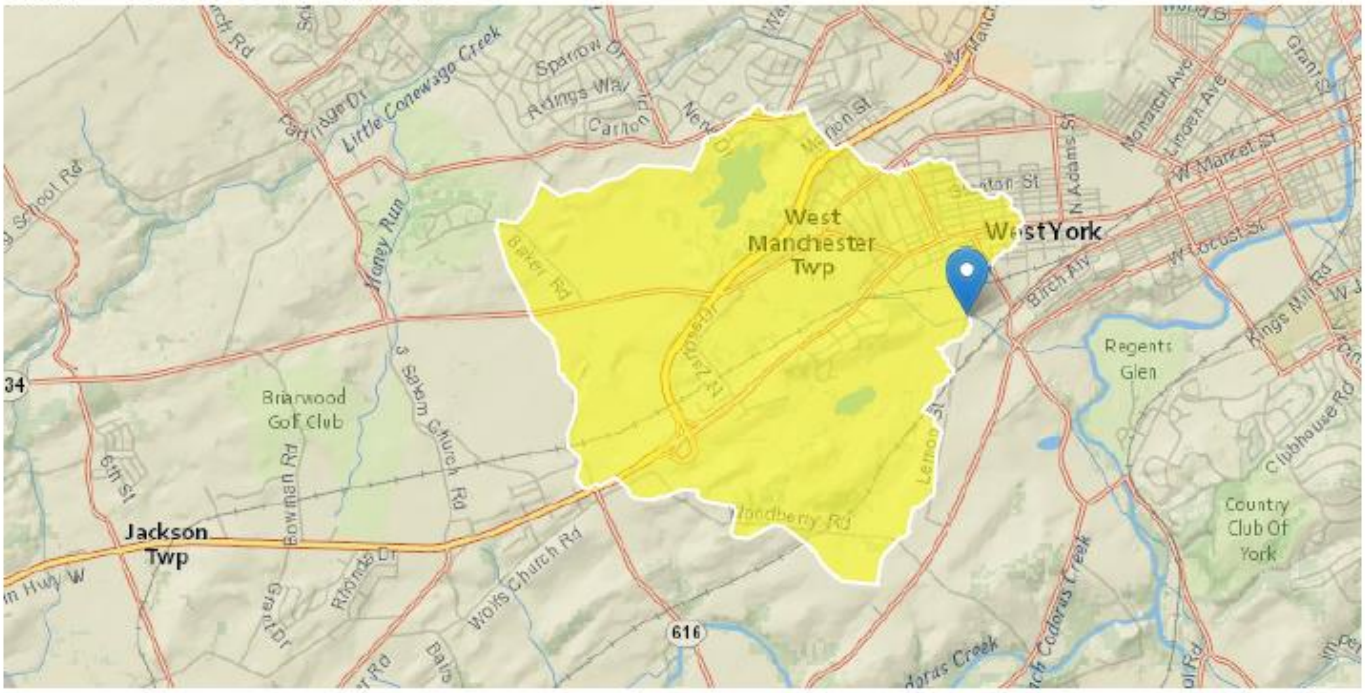
- A monthly report shall be generated from the existing automated control system which indicates the facility's stormwater retention basin levels and pumping activity to reduce the levels. The monthly reports shall be kept on-site for DEP records review purposes for a period of three years.

  The volume of the effluent discharged from Outfall 001 must be monitored per 40 CFR § 122.44(i)(1)(ii).

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 10/11/2013
☐	Other:

StreamStats Report

Region ID: PA
Workspace ID: PA20230330143628531000
Clicked Point (Latitude, Longitude): 39.94607, -76.77055
Time: 2023-03-30 10:36:50 -0400



Lehigh White Cement Company PA0010375 Modeling Point #1 March 2023

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	2.5291	degrees
DRNAREA	Area that drains to a point on a stream	4.34	square miles
ROCKDEP	Depth to rock	5	feet
URBAN	Percentage of basin with urban development	20.5306	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.34	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	2.5291	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5	feet	4.13	5.21
URBAN	Percent Urban	20.5306	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	0.715	ft^3/s
30 Day 2 Year Low Flow	1.03	ft^3/s
7 Day 10 Year Low Flow	0.297	ft^3/s
30 Day 10 Year Low Flow	0.44	ft^3/s
90 Day 10 Year Low Flow	0.876	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: 4.14.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1