pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0013552**
Facility Type	**Industrial**	APS ID	**689272**
Major / Minor	**Minor**	Authorization ID	**1319158**

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

Applicant and Facility Information

Applicant Name	**Buzzi Unicem USA Mid Atlantic Inc.**	Facility Name	**Hercules Cement Stockertown Plant Quarry**
Applicant Address	501 Hercules Drive	Facility Address	501 Hercules Drive
	Stockertown, PA 18083-7009		Stockertown, PA 18083-7009
Applicant Contact	Keith Williams	Facility Contact	Keith Williams
Applicant Phone		Facility Phone	(484) 239-0710
Client ID	8268	Site ID	508399
SIC Code	3241	Municipality	Stockertown Borough
SIC Description	Manufacturing - Cement, Hydraulic	County	Northampton
Date Application Received	July 2, 2020	EPA Waived?	Yes
Date Application Accepted	July 2, 2020	If No, Reason	

Purpose of Application: Renewal of an existing NPDES Permit to discharge IW and stormwater

Summary of Review

The applicant is requesting the renewal of their NPDES permit to discharge up to 5.0 MGD of Non-contact cooling water and stormwater into Shoeneck Creek (WWF) and Bushkill Creek (HQ-CWF) located in State Water Plan watershed 1-F. As per the Department's current existing use list, the receiving streams do not have an existing use classification that is more protective than their designated use. The discharge is not expected to affect public water supplies.

Outfall 001 – 489,600 sq.ft. Bushkill Creek; HQ -CWF.MF; 3 to 5 MGD Quarry dewatering for NCCW.
Outfall 002 – 10,324,800 sq.ft. Bushkill Creek; HQ -CWF.MF; Plant stormwater
Outfall 003 – 534,400 sq.ft. Bushkill Creek; HQ -CWF.MF; Shipping stormwater
Outfall 005 – 324,950 sq.ft. Bushkill Creek; HQ -CWF.MF; CKD Pile stormwater (does not Discharge until 7" rainfall)
Outfall 006 – 566,280 sq.ft. Schoeneck Creek; WWF.MF; Quarry CKD Pile stormwater, 50% sulfuric acid drip station to control pH (1.0 GPM) for permitted closed cement kiln dust (CKD) pile

The adjacent quarry dewatering operation discharges over 50 MGD into Bushkill Creek under the Non-coal Surface Mining Permit No. 74735M2C (June 19, 1974), which accounts for the majority of the Bushkill Creek flow. A portion of the dewatering flow is diverted into the site "Facility Basin" to be used for cooling water purposes. In addition, the plant non-contact cooling water from multiple locations is discharged back into this Basin. Outfall 001 is the overflow from the Basin into Bushkill Creek. For Outfall 001 a TSS variance was granted based on Background Data Proof of higher ambient TSS & Mining Permit No. 74735M2C's Outfall 007C which comingles with Outfall 001's cooling pond. TSS Effluent limits will be continued at 10 mg/l and 20 mg/L Daily Max.

The continuing Technology-based limits for Outfall 001 were obtained from 40CFR Part 411 – Cement Manufacturing Point Source Category, Subpart A – Nonleaching Subcategory.

Approve	Deny	Signatures	Date
X		Bernard J. Feist Bernard Feist, P.E. / Environmental Engineer	October 5, 2020
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	10-6-20

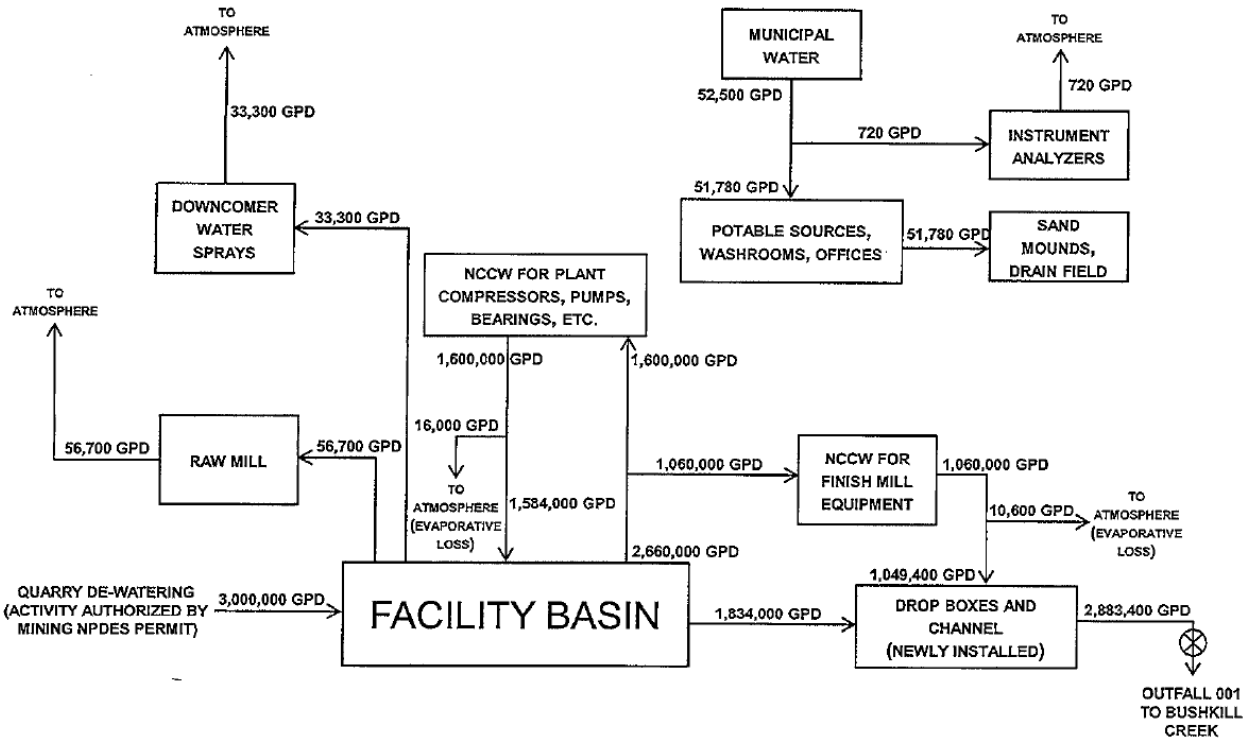
Summary of Review

Variance is continued from the previous Permit due to no changes-

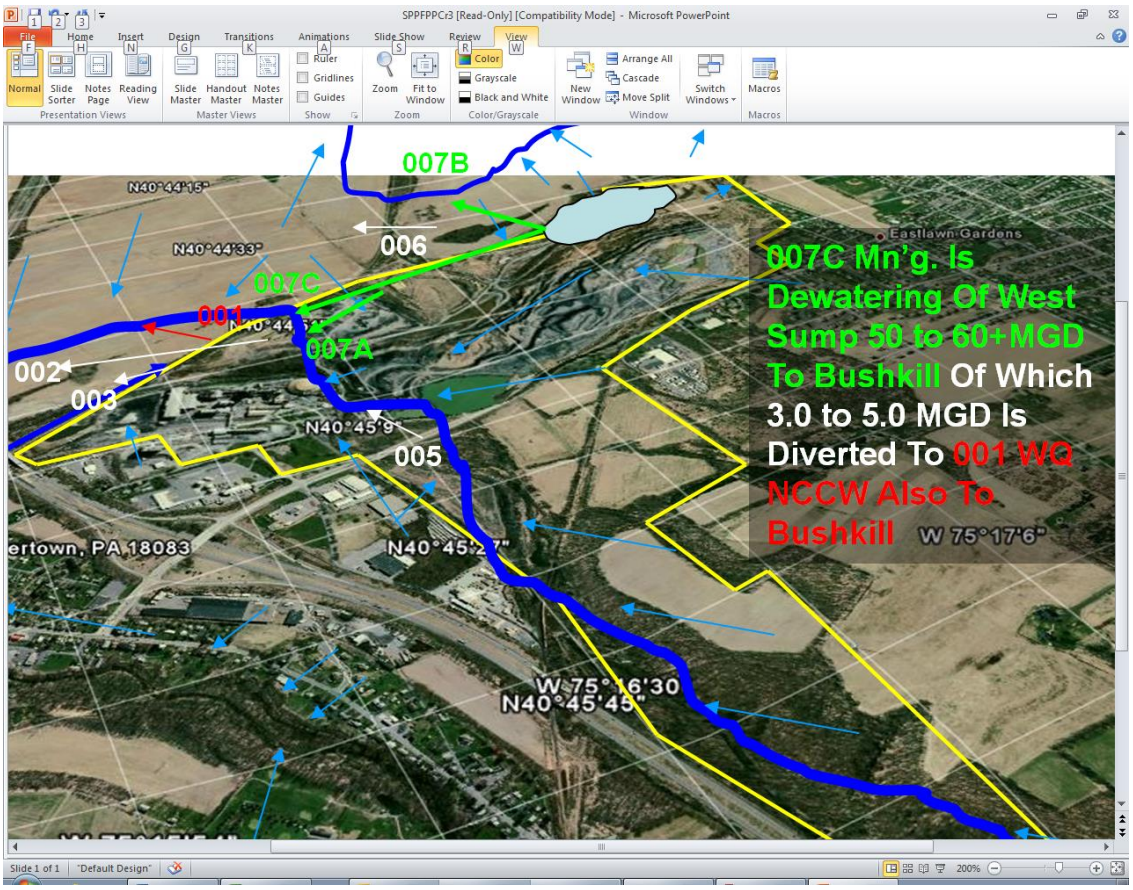
The ELG total suspended solids limit does not apply to Outfall 001 as the discharge is made up of non-contact cooling water; therefore, the TSS limit imposed by the DEP Mining Permit is required at Outfall 001. For temperature, the 3°C rise limit is calculated with the source of the water feeding the facility basin. 97% of the time, it will be pumped quarry water, which will warrant measuring the temperature of the Bushkill Creek at the pumped quarry water discharge point into the creek. If the upstream Bushkill Creek Diversion Dam is being used to feed the facility basin, then the temperature at the Diversion Dam will be measured. The general oil/grease requirement found in Chapter 95 under Section 95.2 – Quality Standards and Oil-bearing wastewaters will continue.

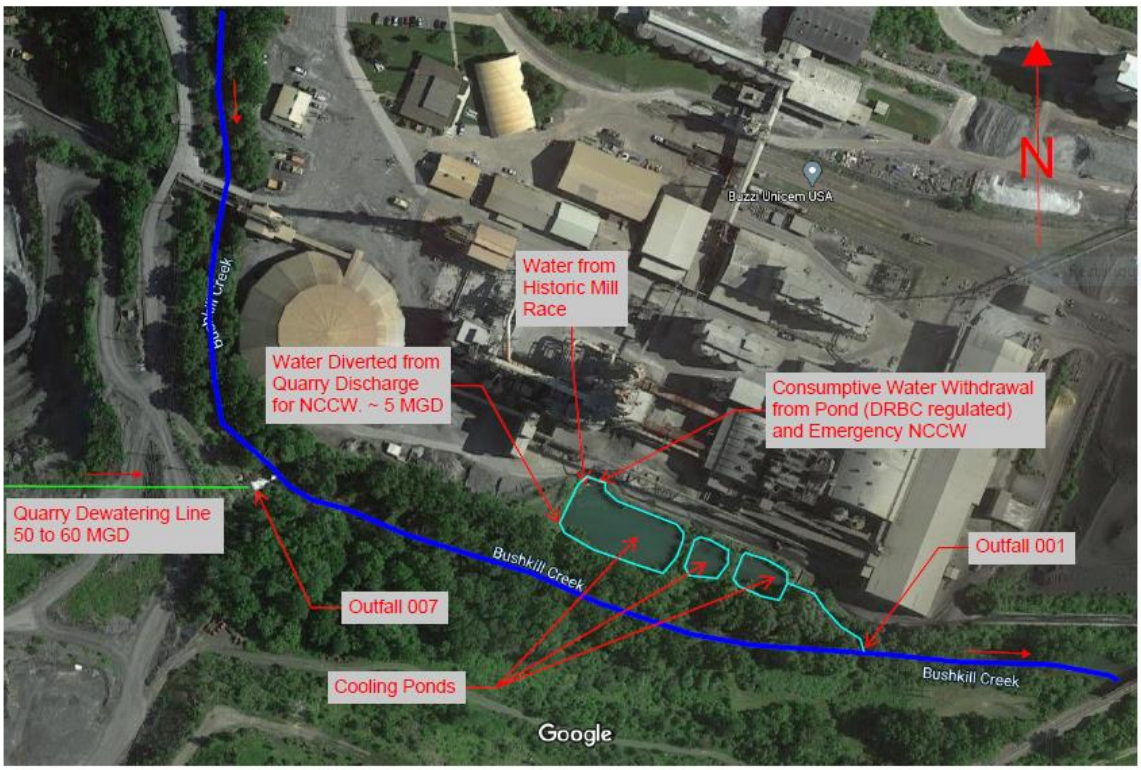
Due to the 316b clarification letter, the 316b requirements will be removed from the Permit as they do not apply.

200805 - Letter to DEP_09022020.pdf



Summary of Review

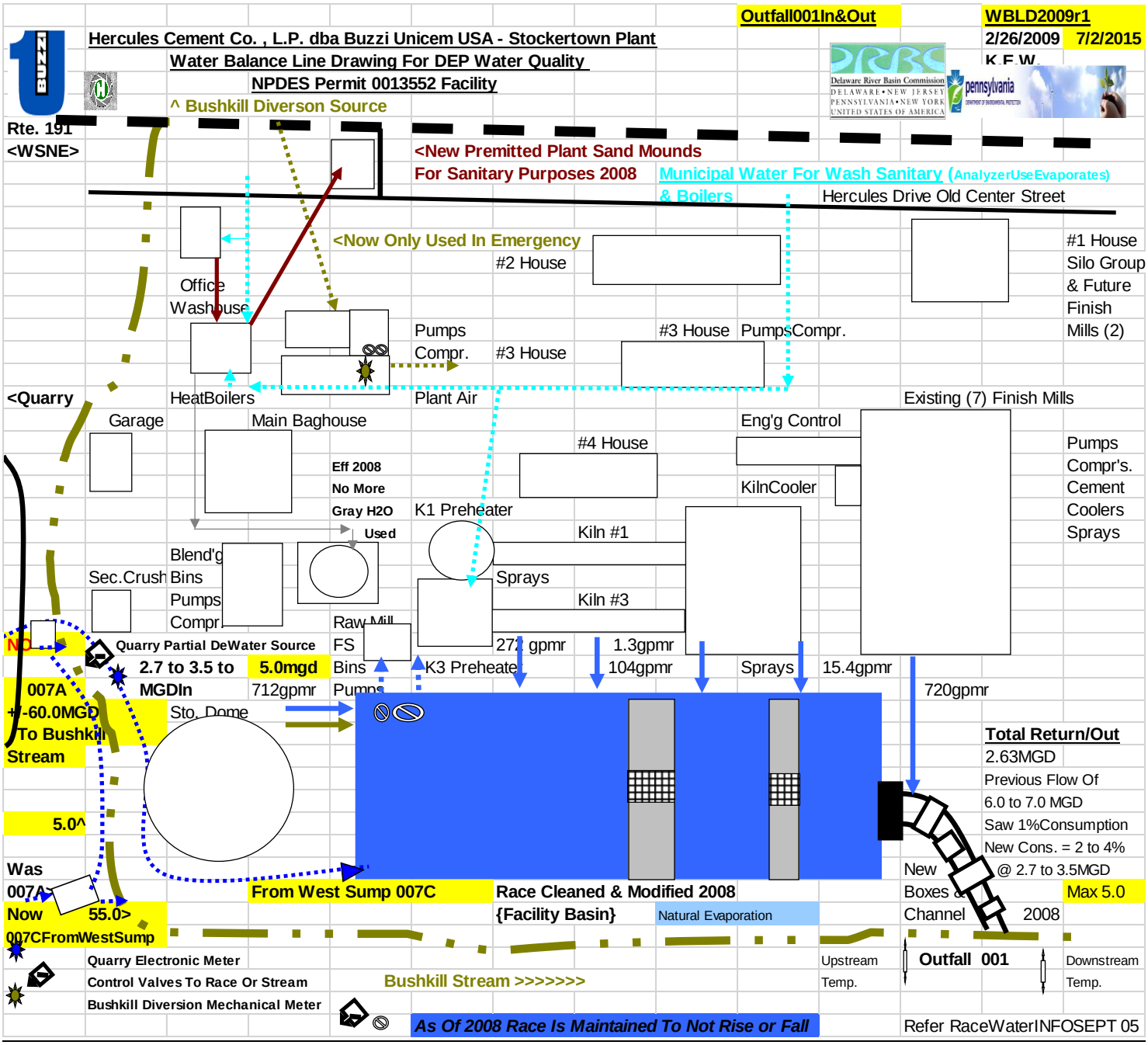




Summary of Review

WQM Permit # 4871201 was issued August 9, 1974 authorizing the NCCW discharge in conjunction with Quarry Dewatering.

The Division of Mine Drainage advised that Quarry Dewatering Permit No. 7473SM2 was issued by the Bureau of Surface Mine Reclamation on June 19, 1974. Therefore, at the suggestion of the Industrial Waste Division and Bureau of Surface Mines Permit No. 4871201 will be issued for the discharge of the kiln cooling water only.



Summary of Review

Some of the existing Permit's Part C conditions that will be continued are:

1. The change in temperature for Outfall 001 shall be measured as the difference between the effluent temperature at Outfall 001 minus the stream temperature of Bushkill Creek at the pumped quarry water discharge point into the creek. If the Bushkill Creek Diversion Dam is being utilized, then the change in temperature shall be measured as the difference between the effluent temperature at Outfall 001 minus the stream temperature at the Bushkill Creek Diversion Dam.

2. The temperature monitoring location directly upstream of Outfall 001 shall remain approximately 50 yards upstream of Outfall 001. The temperature monitoring location directly downstream of Outfall 001 shall remain approximately 75 yards downstream of Outfall.

3. The discharge may not cause a change in surface water temperature of more than 2 degrees F during any one hour period.

The NMS query "Inspections & Inspectors – Inspections – Inspection History by Permit" was run. A Compliance Evaluation was done on 01/14/2020 with Viol(s) Noted & Immediately Corrected.

The NMS query "Violations – eFACTS – Open Violations for Client by Permit Number" was run. There are currently no open violations

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	5
Latitude	40.748984	Longitude	-75.270474
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		
Receiving Waters	Bushkill Creek (HQ-CWF)	Stream Code	57060
NHD HUC	2040105	RMI	9.0
Drainag48e Area	30.9 sq.mi	Yield (cfs/mi^2)	n/a (pumped quarry water)**
Q_{7-10} Flow (cfs)	**2.32**	Q_{7-10} Basis	StreamStats
Watershed No.	1-F	Chapter 93 Class.	HQ-CWF
Existing Use	na	Existing Use Qualifier	
Assessment Status	Impaired		
Cause(s) of Impairment	PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	**pending**	Name	

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

Nearest Downstream Public Water Supply Intake	Keystone Water Company		
PWS Waters	Delaware River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Hercules 2010 Polution Report.pdf

**Unchanged 04/12/2010 pollution report- Variance established

Changes Since Last Permit Issuance: 316b is NA

Other Comments: Yearly Monitor and Report will continue for Hercules Facilities TRI pollutants of concern to aid the development of the pending TMDL data collection at outfall 001. Thallium will be added monthly due to Human Health concerns.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	40º 44' 55.35"	Longitude	-75º 16' 7.09"
Wastewater Description:	Stormwater		
Receiving Waters	Bushkill Creek (HQ-CWF)	Stream Code	

Outfall No.	003	Design Flow (MGD)	0
Latitude	40º 45' 4.93"	Longitude	-75º 16' 26.18"
Wastewater Description:	Stormwater		
Receiving Waters	Bushkill Creek (HQ-CWF)	Stream Code	

Outfall No.	005	Design Flow (MGD)	0
Latitude	40º 45' 15.85"	Longitude	-75º 16' 30.10"
Wastewater Description:	Stormwater		
Receiving Waters	Bushkill Creek (HQ-CWF)	Stream Code	

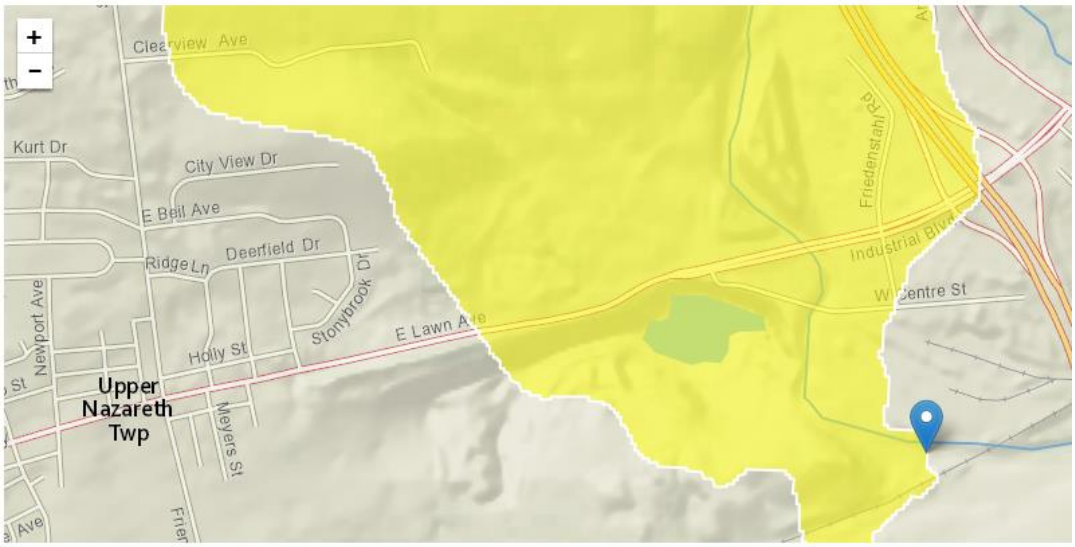
Outfall No.	006	Design Flow (MGD)	0
Latitude	40º 44' 44.13"	Longitude	-75º 16' 47.95"
Wastewater Description:	Stormwater		
Receiving Waters	Shoeneck Creek (WWF)	Stream Code	

Other Comments: Outfalls 002, 003, 005 and 006 are for stormwater only outfalls. The technology-based limits, obtained from 40 CFR Part 411, Subpart C – Materials Storage Piles Runoff Subcategory will be continued. Outfall 002 and 003 also have an oil and grease limit due to the maintenance activity in the drainage areas of these outfalls. The Outfall 005 monitoring frequency will remain Daily when discharging since only an extreme storm event will activate a discharge.

Toxic Modelling

Outfall 001 RMI 9.0 @ 347 ft elevation

Clicked Point (Latitude, Longitude): 40.74888, -75.27010
Time: 2020-09-03 11:02:54 -0



Low-Flow Statistics Parameters[Low Flow Region 2]

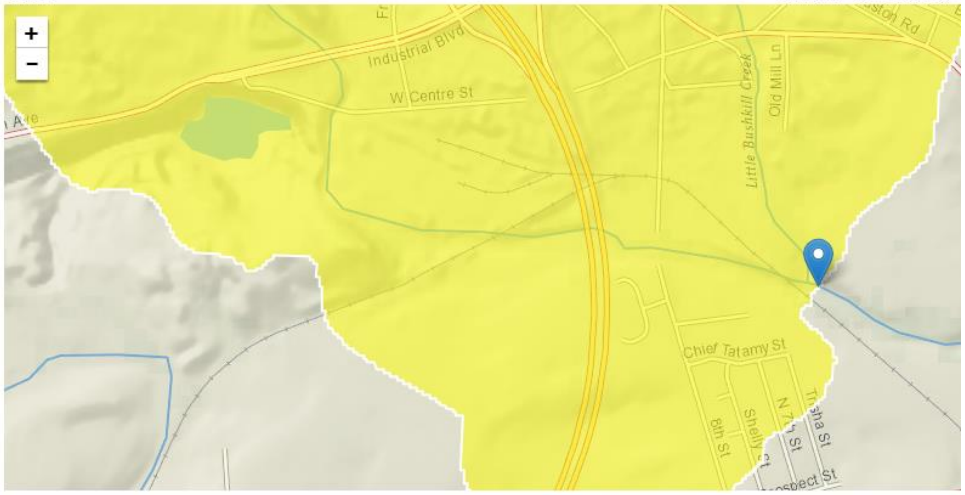
Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	30.9	square miles

7 Day 10 Year Low Flow	2.32	ft^3/s

$Q_{7\text{-}10}$ LowFlowYield (cfs/mi^2)= 2.32 / 30.9 = .08

Next Trib RMI 8.3 Little Bushkill Creek Elevation 331 ft

Clicked Point (Latitude, Longitude): 40.74763, -75.25671
Time: 2020-09-03 11:39:57

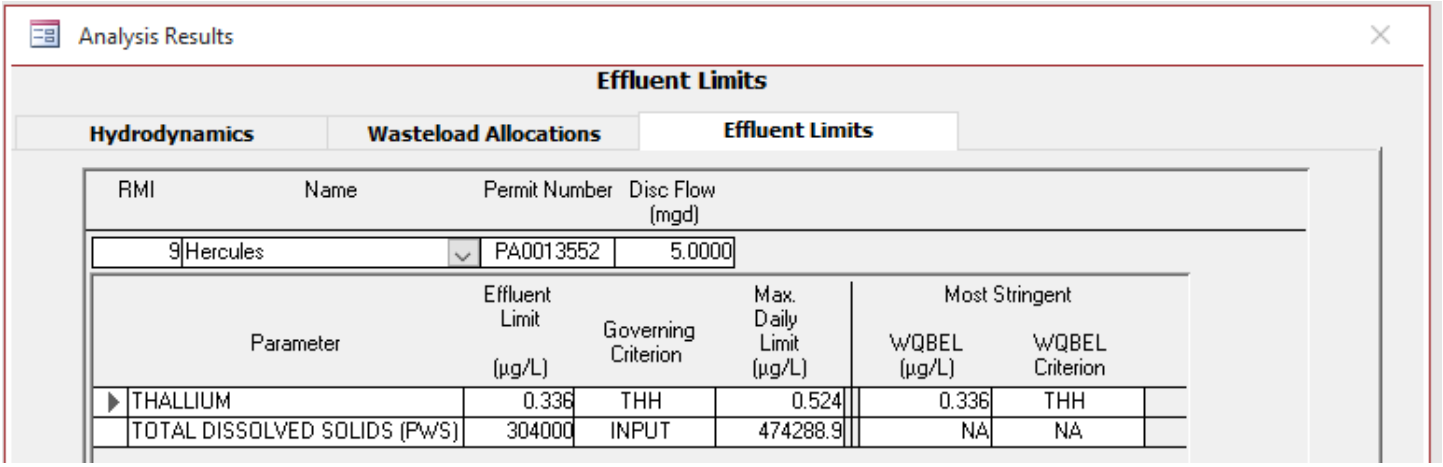


Low-Flow Statistics Parameters[Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	48.8	square miles

	Mass Limits		Concentration Limits						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Chloride (PWS)	Report	Report	Report	Report	Report	mg/L	N/A	N/A	Discharge Conc > 10% WQBEL (no RP)
Sulfate (PWS)	Report	Report	Report	Report	Report	mg/L	N/A	N/A	Discharge Conc > 10% WQBEL (no RP)
Total Thallium	0.013	0.021	0.32	0.49	0.79	µg/L	0.32	THH	Discharge Conc ≥ 50% WQBEL (RP)

TMS PA0013552.pdf



Several discussions were held with the Applicant concerning this Human Health Standard and both parties agreed that more data is required to research and solve this problem. An agreeable solution with the applicant and Permits Chief is to establish M&R in this permit cycle for influent and effluent Thallium monitoring.

This is the letter with the applicant's response. It very well may be naturally occurring due to the nature of the cooling water being used.

200918 - Letter to DEP.pdf

Compliance History

DMR Data for Outfall 001 (from June 1, 2019 to May 31, 2020)

Parameter	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19
Flow (MGD) Average Monthly	4.4592	4.453	3.805	3.997	2.96	2.067	2.464	4.373	5.012	5.056	4.282	3.683
Flow (MGD) Daily Maximum	5.920	4.564	4.193	4.113	4.297	2.510	2.643	4.970	5.069	5.153	4.361	4.188
pH (S.U.) Minimum	8.15	8.02	8.03	8.04	7.93	7.95	8.02	7.95	8.05	7.994	7.97	7.95
pH (S.U.) Maximum	8.45	8.11	8.32	8.09	8.05	8.35	8.22	8.08	8.12	8.04	8.02	7.99
Delta T deg C (ºC) Daily Maximum	2.96	2.14	2.12	2.74	2.22	2.133	2.89	2.93	2.99	2.99	2.99	2.97
TSS (mg/L) Average Monthly	1.875	1.93	1.70	1.93	1.4	1.375	4.0	1.125	0.01	0.90	6.25	2.635

TSS (mg/L) Daily Maximum	4.0	5.0	3.0	4.0	3.0	2.0	11.0	3.0	0.01	2.0	9.0	4.0
Oil and Grease (mg/L) Average Monthly	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Oil and Grease (mg/L) Instantaneous Maximum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ammonia (mg/L) Daily Maximum						0.01						
Total Chromium (mg/L) Daily Maximum						0.01						
Total Lead (mg/L) Daily Maximum						0.01						
Total Manganese (mg/L) Daily Maximum						0.0074						
Total Nickel (mg/L) Daily Maximum						0.01						
Dioxin (mg/L) Daily Maximum						0.01						

DMR Data for Outfall 002 (from June 1, 2019 to May 31, 2020)

Parameter	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19
Flow (MGD) Average Monthly	0.0025	0.0028	0.0025	0.0028				0.0025	0.0016	0.0030	0.0025	0.0025
pH (S.U.) Minimum	9.0	7.99	8.22	8.40				7.85	7.80	7.80	8.0	7.70
pH (S.U.) Maximum	9.0	7.99	8.22	8.40				7.85	7.80	7.80	8.00	7.70
TSS (mg/L) Daily Maximum	5	50	16	5.0				0.01	15	4.0	2.0	0.01
Oil and Grease (mg/L) Average Monthly	0.01	0.01	0.01	0.01				0.01	0.01	0.01	0.01	0.01
Oil and Grease (mg/L) Instantaneous Maximum	0.01	0.01	0.01	0.01				0.01	0.01	0.01	0.01	0.01

DMR Data for Outfall 003 (from June 1, 2019 to May 31, 2020)

Parameter	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19
Flow (MGD) Average Monthly											0.0025	0.0020
pH (S.U.) Minimum											7.8	7.66
pH (S.U.) Maximum											7.8	7.66
TSS (mg/L) Daily Maximum											22	28.0
Oil and Grease (mg/L) Average Monthly											0.01	0.01
Oil and Grease (mg/L) Instantaneous Maximum											0.01	0.01

DMR Data for Outfall 006 (from June 1, 2019 to May 31, 2020)

Parameter	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19
Flow (MGD) Average Monthly	0.0028	0.0131	0.0025	0.0038			0.0025	0.0100	0.0016	0.0012	0.0025	0.0025
pH (S.U.) Minimum	9.91	7.86	7.78	7.85			9.27	7.75	7.24	7.50	7.66	7.84
pH (S.U.) Maximum	10.6	7.86	7.78	7.85			9.43	7.75	7.24	7.50	7.66	7.84
TSS (mg/L) Daily Maximum	7	6	4.0	7.0			13	2.0	3	13	4.0	2