pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0040860**
Facility Type	**Industrial**	APS ID	**22493**
Major / Minor	**Minor**	Authorization ID	**1045570**

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

Applicant and Facility Information

Applicant Name	**Delaware County Solid Waste Authority**	Facility Name	**Rolling Hills Landfill**
Applicant Address	1521 N Providence Road	Facility Address	583 Longview Road
	Media, PA 19063-1039		Boyertown, PA 19512-7955
Applicant Contact	Joseph Vasturia	Facility Contact	David Moser
Applicant Phone	(610) 892-9620	Facility Phone	(610) 451-4004
Client ID	51134	Site ID	462599
SIC Code	4953	Municipality	Earl Township
SIC Description	Trans. & Utilities - Refuse Systems	County	Berks
Date Application Received	October 1, 2014	EPA Waived?	Yes
Date Application Accepted	October 16, 2014	If No, Reason	
Purpose of Application	NPDES Renewal.		

Summary of Review

Delaware County Solid Waste Authority (DCSWA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on March 17, 2010 and became effective on April 1, 2010. The permit expired on March 31, 2015 but the terms and conditions of the permit have been extended since that time.

Based on the review, 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.

Approve	Deny	Signatures	Date
		Jinsu Kim / Environmental Engineering Specialist	January 22, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	March 26, 2020
		Maria D. Bebenek, P.E. / Program Manager	April 9, 2020

Site Description

General Description
DCSWA owns and operates a municipal solid waste landfill known as Rolling Hills Landfill (RHL) located at 583 Longview Road, Boyertown, PA 19512 in Earl Township, Berks County. Under a standard industrial classification code 4953, RHL receives non-hazardous municipal and commercial refuse, residual and special handling wastes, municipal and industrial sludge along with incinerator ash. The site consists of landfill areas, maintenance shop, scale house, leachate storage tanks (4), leachate loading station, stormwater basins, office building, parking lots and wastewater treatment systems.

Permits
RHL is currently operated under Air Quality Permit no. 06-05081 from DEP Air Quality Program and Solid Waste Disposal and Processing Permit no. 100345 from DEP Waste Management Program. Under DEP's Municipal Waste Landfills regulation found in 25 Pa Code §273.272, leachate must be collected and handled by 1) direct discharge into a permitted publicly-owned treatment works, 2) onsite treatment and discharge into a receiving stream under a permit issued by DEP under the Clean Streams Law, or 3) spray irrigation following treatment if option no. 1) and 2) are not available. DCSWA operates an onsite wastewater treatment plant under WQM permit nos. 0696201 (issued in Feb 1997), 0608201 (issued in Mar 2010), and 0612201 (issued on Sept 2013) issued by DEP Clean Water Program. This NPDES permit covers the discharge of treated industrial wastewater as well as stormwater runoff from this facility.

Treatment Facility Summary

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Biological (Industrial Waste)	Activated Sludge	Ultraviolet	0.12
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.144	400	Not Overloaded	Digestion	Landfill

Leachate collected at the base of the landfill is sent to an onsite wastewater treatment plant (Leachate Treatment Plant (LTP)) prior to a stream discharge. The LTP also receives sanitary wastewater. The LTP consists of a grit chamber, an equalization tank, flash mix tank (flocculation), primary clarifiers (2), '330' tank (used as an equalization tank to blend distilled water with primary clarifier effluent), sequencing batch reactors (SBRs), secondary clarifiers (2), post equalization tanks (2), UV disinfection and Outfall 001 to Manatawny Creek. DCSWA also constructed a distillation system as required by the COA executed in 2013 to effectively treat leachate as part of the LTP. According to the email dated November 14, 2019 from a current on-site environmental representative (November 14, 2019 email), this distillation system is failed and DCSWA is planning on removing this system.

It is noteworthy that this LTP is currently not in used. A letter dated January 6, 2017 from DCSWA confirmed that the LTP is no longer being utilized and has been decommissioned by the DCSWA. The November 14, 2019 email also confirmed that the LTP is shut down. Any leachate generated from this landfill is currently being hauled off site for treatment and disposal (Borough of Pottstown WWTP or Delaware County Regional Water Authority Western Regional Treatment Plant).

DCSWA currently utilizes an onsite constructed wetland treatment system (CWTS) to treat groundwater with a high concentration of naturally occurring iron generated from three (3) landfill underdrains. The CWTS is considered by the DCSWA a natural filter/polishing system to treat certain pollutants such as iron, manganese, total suspended solids and organic compounds by increasing pH, alkalinity and aeration. The CWTS consists of a diversion well, wetland cells (3) connected in series, settling basins (2), and outfall structure. The discharge from this system is to Furnace Run via Outfall 006. A recent DMR data shows the discharge currently occurs at this outfall.

In addition to these outfalls mentioned above, DCSWA utilizes seven (7) outfalls (i.e., Outfall 002, 003, 004, 005, 008, 009, and 010) receiving stormwater runoff from the entire site.

Effluent from Outfall 001 is discharged into Manatawny Creek at RM 12.24. Effluent from Outfall 006 is discharged into Furnace Run at RMI 2.12. Stormwater from Outfalls 002 through 005 and 008 through 010 is discharged into Furnace Run, Unnamed Tributary to Furnace Run and Unnamed Tributary to Oysterville Creek at various locations throughout the site.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.12
Latitude	40º 20' 21"	Longitude	-75º 44' 35"
Quad Name	Boyertown	Quad Code	1640
Wastewater Description:	Treated Industrial Waste		
Receiving Waters	Manatawny Creek (CWF)	Stream Code	01655
NHD Com ID	25965372	RMI	12.24
Drainage Area	56.9 sq.mi.	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	11.8	Q_{7-10} Basis	USGS Gage no. 01471875
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	45.7	Distance from Outfall (mi)	21

Drainage Area / Streamflow
There is an active gage station (no. 01471875) operated by USGS located approximately 200 feet upstream of the point of discharge continuously measures the streamflow. It is reasonable to use the data recorded at this gage station given the distance to the point of discharge. According to USGS, the drainage area is 56.9 sq.mi with streamflows of 10.9 cfs (Q1-10), 11.8 cfs (Q7-10) and 14.1 cfs (Q30-10).

Manatawny Creek
Under 25 Pa Code §93.9f, Manatawny Creek is designated cold water fishes and supports migratory fishes. Manatawny Creek is a tributary of Schuylkill River which is designated warm water fishes and support migratory fishes. No special protection water is therefore impacted by this discharge. DEP's latest integrated water quality report indicates that the discharge from Outfall 001 is located in a stream segment listed as attaining use(s). No Class A Wild Trout is impacted by this discharge.

Public Water Supply Intake
The fact sheet prepared during the last permit renewal indicates that the nearest downstream public water supply intake is owned by the PA American Water Company located on the Schuylkill River approximately 21 miles from the discharge. Given the distance, the discharge is not expected to impact the water supply.

Discharge, Receiving Waters and Water Supply Information (continued)

Outfall No.	006	Design Flow (MGD)	0.087
Latitude	40º 21' 26"	Longitude	-75º 43' 00"
Quad Name	Boyertown	Quad Code	1640
Wastewater Description:	Treated Industrial Waste		
Receiving Waters	Furnace Run (CWF)	Stream Code	01678
NHD Com ID	25965002	RMI	2.12
Drainage Area	1.89 sq.mi.	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.636	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	45.7	Distance from Outfall (mi)	24

Drainage Area / Streamflow
A drainage area upstream of Outfall 006 is estimated to be 1.89 sq.mi., using USGS StreamStats available at https://streamstats.usgs.gov/ss/. USGS StreamStats produced a Q7-10 flow of 0.636 cfs at Outfall 006.

Furnace Run
Under 25 Pa Code §93.9f, Furnace Run is designated cold water fishes and supports migratory fishes. Furnace Run is a tributary of Manatawny Creek. No special protection water is therefore impacted by this discharge. DEP's latest integrated water quality report indicates that the discharge from Outfall 001 is located in a stream segment listed as attaining use(s). No Class A Wild Trout is impacted by this discharge.

Public Water Supply Intake
Based on the distance from Outfall 001, the near downstream public water supply intake owned by PA American Water Company is located approximately 24 miles from the discharge. Given the distance, the discharge is not expected to impact the water supply.

Discharge, Receiving Waters and Water Supply Information (continued)			
Outfall No.	002	Receiving Waters	Furnace Run
Latitude	40º 21' 27"	Longitude	-75º 43' 15"
Outfall No.	003	Receiving Waters	Furnace Run
Latitude	40º 21' 25"	Longitude	-75º 43' 31"
Outfall No.	004	Receiving Waters	Furnace Run
Latitude	40º 21' 26"	Longitude	-75º 43' 32"
Outfall No.	005	Receiving Waters	UNT to Furnace Run
Latitude	40º 21' 32"	Longitude	-75º 42' 46"
Outfall No.	008	Receiving Waters	Furnace Run
Latitude	40º 21' 26"	Longitude	-75º 43' 42"
Outfall No.	009	Receiving Waters	UNT to Oysterville Creek
Latitude	40º 21' 01"	Longitude	-75º 42' 56"
Outfall No.	010	Receiving Waters	Furnace Run
Latitude	40º 21' 35"	Longitude	-75º 43' 51"
Wastewater Description:	Stormwater Runoff		

Stormwater runoff is collected in sediment basins and then discharged via Outfalls 002, 003, 004, 005, 009, and 010. For Outfall 008, a control measure reported in the application is leachate treatment plant drains. Outfalls 002 and 003 receive stormwater runoff from Basin 2, potentially collecting stormwater runoff from Leachate Storage Tank 2 and Leachate Loading Station areas (southwest of the site). Outfalls 004 and 008 receive stormwater runoff from Basin 3, potentially collecting stormwater runoff from Leachate Storage Tank 1 and Leachate Treatment Plant areas (southwest of the site). Outfall 005 receives stormwater runoff from Basin 6, potentially collecting stormwater runoff from the administrative office building, scale house, and certain parts of leachate disposal areas (south of the site). Outfall 9 receives stormwater runoff from Basin 8 and possibly Basin 5, potentially collecting stormwater runoff from the maintenance shop and certain parts of leachate disposal areas (north of the site). Outfall 010 receives stormwater runoff from Basin 7 and Leachate Storage Tanks 801 and 802 areas (southwest of the site).

Internal Monitoring Points (IMPs)
The current permit specifies additional monitoring points for influent to the LTP (MP 101) from Outfall 006 (CWTS) to measure flow and instream measurement (MP 011) in Maxatawny Creek to measure streamflow and instream Total Dissolved Solids levels.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMR data is presented on the next page.
Summary of Inspections:	11/29/2016: Kevin Buss, DEP Water Quality Specialist, conducted a routine inspection and noted that the treatment plant is offline and all leachate is being trucked out. No violations were noted at the time of inspection.
Other Comments:	DEP's database revealed that there is no open violation associated with this facility or discharge. All records pertaining to this facility's compliance history is available at SCRO for file review.

Effluent Data

DMR Data for Outfall 001
Not Available (No Discharge)

DMR Data for Outfall 006 (from September 1, 2018 to August 31, 2019)

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
Flow (MGD) Average Monthly	0.05	0.0506	0.05	0.0505	0.05	0.0509	0.047	0.051	0.053	0.05	0.047	0.05
Flow (MGD) Daily Maximum	0.051	0.0525	0.052	0.0515	0.052	0.055	0.052	0.055	0.06	0.05	0.05	0.06
pH (S.U.) Minimum	5.9	6.86	6.65	6.55	6.53	6.86	6.62	6.86	6.44	6.67	6.64	6.21
pH (S.U.) Maximum	7.44	7.44	7.61	7.47	6.91	7.68	7.68	7.4	7.16	7.08	7.74	7.45
DO (mg/L) Minimum	6.04	6.04	5.97	6.38	7.44	7.51	7.05	6.54	6.3	7.01	6.22	6.21
CBOD5 (lbs/day) Average Monthly	< 0.8	< 0.8	< 0.8	< 0.8	1	< 0.8	< 0.8	< 0.9	< 0.9	< 0.8	< 0.8	< 0.8
CBOD5 (lbs/day) Daily Maximum	< 0.9	< 0.9	< 0.9	< 0.8	< 0.9	< 0.8	< 0.9	< 0.9	< 0.9	< 0.8	< 0.8	< 1
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
CBOD5 (mg/L) Daily Maximum	2.1	< 2.0	< 2.0	< 2.0	2.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TSS (lbs/day) Average Monthly	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2	< 2.0	< 0.8	1	< 0.8	1
TSS (lbs/day) Daily Maximum	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	1	2	< 1.0	2
TSS (mg/L) Average Monthly	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	3.0	< 2.0	3.0
TSS (mg/L) Daily Maximum	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	3.0	4.0	3.0	4.0

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
Total Dissolved Solids (mg/L) Average Monthly	438.0	402.0	394.0	356.0	304.0	365.0	309.0	298.0	443.0	443.0	465.0	491.0
Ammonia (lbs/day) Average Monthly	< 0.05	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.08
Ammonia (lbs/day) Daily Maximum	< 0.07	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.05	< 0.05	< 0.04	< 0.04	0.1
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2
Ammonia (mg/L) Daily Maximum	< 0.16	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.35
Total Cadmium (lbs/day) Average Monthly	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0003	< 0.0004	< 0.002	< 0.002	< 0.002	< 0.002
Total Cadmium (lbs/day) Daily Maximum	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0005	< 0.002	< 0.002	< 0.002	< 0.002
Total Cadmium (mg/L) Average Monthly	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005
Total Cadmium (mg/L) Daily Maximum	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005
Total Iron (lbs/day) Average Monthly	< 0.5	0.3	0.3	0.426	0.2	< 0.1	0.2	0.2	0.2	0.3	0.2	0.2
Total Iron (lbs/day) Daily Maximum	< 0.5	0.3	0.3	0.379	0.2	< 0.1	0.2	0.2	0.3	0.2	0.3	0.2
Total Iron (mg/L) Average Monthly	1.17	0.723	0.697	0.2	0.358	< 0.343	0.45	0.444	0.55	0.6	0.54	0.55

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
Total Iron (mg/L) Daily Maximum	1.18	0.74	736	0.2	0.385	< 0.343	0.452	0.448	0.62	0.62	0.69	0.56
Total Mercury (lbs/day) Average Monthly	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00009	< 0.00008	< 0.00007	< 0.00009	< 0.00009	< 0.00008	< 0.00008	< 0.00008
Total Mercury (lbs/day) Daily Maximum	< 0.00009	< 0.00008	< 0.00009	< 0.00009	< 0.00009	< 0.00008	< 0.00008	< 0.00009	< 0.00009	< 0.00008	< 0.00008	< 0.00008
Total Mercury (mg/L) Average Monthly	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002	< 0.0002	< 0.0002
Total Mercury (mg/L) Daily Maximum	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002

Stormwater Sample Results

	June 2019							December 2018						
Parameter	**Outfall 002**	**Outfall 003**	**Outfall 004**	**Outfall 005**	**Outfall 008**	**Outfall 009**	**Outfall 010**	**Outfall 002**	**Outfall 003**	**Outfall 004**	**Outfall 005**	**Outfall 008**	**Outfall 009**	**Outfall 010**
pH (S.U.) Daily Maximum	7.55	7.86	9.17	6.72	7.45	7.29	7.93	6.5	6.72		7.47	7.47	7.35	7.11
CBOD5 (mg/L) Daily Maximum	< 2.0	< 2.0	5.8	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2		< 2	< 2	< 2	< 2
COD (mg/L) Daily Maximum	12	5.88	30.6	15.2	< 7.17	5.88	16.8	28	< 25		< 25	< 25	< 25	38
TSS (mg/L) Daily Maximum	14	< 4.0	< 4.0	7.2	< 4.0	35	12.4	44	2		4	5	8	4
TDS (mg/L) Daily Maximum	239	511	244	180	331	140	379	378	543		227	170	226	1101
Oil and Grease (mg/L) Daily Maximum	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5		< 6	< 5	< 5.0	< 5
Total Nitrogen (mg/L) Daily Maximum	2.85	< 0.645	1.49	0.683	6.13	0.814	0.626	< 5.84	< 3.04		< 2.78	< 2.77	< 2.76	< 7.49
Ammonia (mg/L) Daily Maximum	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10	< 0.10

	June 2019							December 2018						
Parameter	**Outfall 002**	**Outfall 003**	**Outfall 004**	**Outfall 005**	**Outfall 008**	**Outfall 009**	**Outfall 010**	**Outfall 002**	**Outfall 003**	**Outfall 004**	**Outfall 005**	**Outfall 008**	**Outfall 009**	**Outfall 010**
Total Arsenic (mg/L) Daily Maximum	< 0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.001	< 0.001		< 0.001	< 0.001	< 0.001	0.003
Total Cadmium (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010		< 0.0010	< 0.0010	< 0.0010	< 0.0010
Hexavalent Chromium (mg/L) Daily Maximum	0.00014	0.00017	< 0.10	< 0.0001	< 0.001	< 0.10	< 0.001	< 0.00025	0.00025		< 0.00025	< 0.00025	< 0.00025	< 0.00025
Total Iron (mg/L) Daily Maximum	0.569	< 0.050	< 0.303	0.891	< 0.050	2.54	0.625	< 2.13	0.13		0.53	< 0.66	< 0.34	0.44
Total Zinc (mg/L) Daily Maximum	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	0.011	0.006		0.018	0.042	0.009	0.009
Phenol (mg/L) Daily Maximum	< 5.0	< 5.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.010		< 0.01	< 0.010	< 0.010	< 0.010
Aniline (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010	< 0.010
a-Terpineol (mg/L) Daily Maximum	< 0.0094	< 0.0094	< 0.010	< 0.0094	< 0.0091	< 0.0098	< 0.0097	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010	< 0.010
Benzoic Acid (mg/L) Daily Maximum	0.00108	0.0011	< 0.001	0.00114	< 0.001	1.10	0.00107	< 0.05	< 0.050		< 0.050	< 0.050	< 0.050	< 0.050
Naphthalene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010	< 0.010
p-Cresol (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.010	< 0.01		< 0.010	< 0.010	< 0.010	< 0.010
Pyridine (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010	< 0.010

Development of Effluent Limitations and Monitoring Requirements

A table below summarizes the effluent limits and monitoring requirements specified in the existing permit:

Outfall 001

	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
Parameter	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Color (Pt-Co Units)	XXX	XXX	XXX	XXX	100	100	1/week	24-Hr Composite
CBOD5	25	50	XXX	25.0	50.0	50	1/week	24-Hr Composite
TSS	30	60	XXX	30.0	60.0	75	1/week	24-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	Report	30000.0	75000	See Permit	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	XXX	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/week	Grab
Ammonia as N	4.9	10	XXX	4.9	10.0	10	1/week	24-Hr Composite
Total Arsenic	0.54	1.1	XXX	0.54	1.10	1.10	1/week	24-Hr Composite
Hexavalent Chromium	0.043	0.086	XXX	0.043	0.086	0.086	1/week	24-Hr Composite
Total Zinc	0.11	0.20	XXX	0.11	0.20	0.2	1/week	24-Hr Composite
Phenol	0.015	0.026	XXX	0.015	0.026	0.026	1/week	24-Hr Composite
Aniline	0.015	0.024	XXX	0.015	0.024	0.024	1/week	24-Hr Composite
a-Terpineol	0.016	0.033	XXX	0.016	0.033	0.033	1/week	24-Hr Composite
Benzoic Acid	0.071	0.12	XXX	0.071	0.12	0.12	1/week	24-Hr Composite

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		
Naphthalene	0.022	0.059	XXX	0.022	0.059	0.059	1/week	24-Hr Composite
p-Cresol	0.014	0.025	XXX	0.014	0.025	0.025	1/week	24-Hr Composite
Pyridine	0.025	0.072	XXX	0.025	0.072	0.072	1/week	24-Hr Composite

Outfall 006

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	18	36	XXX	25.0	50.0	63	1/week	24-Hr Composite
TSS	22	44	XXX	30.0	45	60	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	2,000	XXX	5,000	1/week	24-Hr Composite
Ammonia as N (5/1-10/31)	4.0	8.0	XXX	6.0	12	15	1/week	24-Hr Composite
Ammonia as N (11/1-4/30)	12	24	XXX	18	36	40	1/week	24-Hr Composite
Total Iron	Report	Report	XXX	Report	Report	XXX	2/month	24-Hr Composite
Total Cadmium	0.009	0.018	XXX	0.013	0.026	0.033	2/month	24-Hr Composite
Total Mercury	0.0002	0.0004	XXX	0.0003	0.0006	0.0007	2/month	24-Hr Composite

MP 101 (from Outfall 006 and discharges internally to the LTP; samples to be taken before entering the LTP, after the existing secondary clarifier)

	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
Parameter	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured

MP 011

	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
Parameter	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Maxatawny Creek – Flow (Spangville Gage)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
Total Dissolved Solids	XX	XXX	XXX	Report	XXX	Report	1/week	Grab

Stormwater Outfalls 002, 003, 004, 005, 008, 009 and 010
Grab samples to be taken semi-annually and analyzed for CBOD5, COD, Total Suspended Solids, Total Dissolved Solids, Total Nitrogen, Total Iron, Oil/Grease, pH, Total Cadmium, Total Arsenic, NH3-N, a-Terpinol, Aniline, Benzoic Acid, Naphthalene, p-Cresol, Phenol, Pyridine, Chromium VI, Total Zinc.

Development of Effluent Limitations and Monitoring Requirements

Outfall No. 001 **Design Flow (MGD)** 0.12
Latitude 40º 20' 21.00" **Longitude** -75º 44' 35.00"
Wastewater Description: Treated Industrial Waste

Technology-Based Limitations

Given the type of industrial activities performed at the site, the facility is subject to federal effluent limitations and guidelines (ELGs) found in 40 CFR Part 445 Subpart B – ELGs for RCRA Subtitle D Non-Hazardous Waste Landfill. The effluent limitations are listed under this ELG (40 CFR §445.21) as follows:

Regulated parameter	Concentrations (mg/L)	
	Maximum Daily	Maximum Monthly Avg.
BOD	140	37
TSS	88	27
Ammonia (as N)	10	4.9
α-Terpineol	0.033	0.016
Benzoic acid	0.12	0.071
p-Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH (SU)	6.0 – 9.0	6.0-9.0

Previously, DEP developed the permit requirements based on ELGs found in 40 CFR Part 445 Subpart A that are applicable to RCRA Subtitle C Hazardous Waste Landfill in which this ELG includes numerical effluent limitations for all of the pollutants listed above at same concentration values, as well as additional numerical effluent limitations for Aniline, Naphthalene, Pyridine, Arsenic, and Hexavalent Chromium. It is unclear as to why this ELG was previously considered when RHL is in fact a non-hazardous municipal waste landfill according to the application package as well as an email dated November 20, 2019 from an on-site environmental representative. DEP has determined that the existing effluent limits for these pollutants (i.e., Aniline, Naphthalene, Pyridine, Arsenic, and Hexavalent Chromium) are not applicable to this facility and therefore will be removed from the permit in accordance with 40 CFR §122.44(l)(i)(B).

In addition to the ELGs, the facility is subject to state regulations found in 25 Pa Code §§§92a 47, 92a.48 and 95.2 and water quality regulations (WQR) established by the Delaware River Basin Commission (DRBC) under 18 CFR §410.1(c). These regulations are listed below:

Parameter	Effluent Standards, mg/L	Basis
pH (SU)	6.0 (minimum) – 9.0 (maximum)	95.2(1) & DRBC WQR
CBOD5	25 mg/L (Monthly Avg.)	92.47(a)(1)
TSS	30 (Monthly Avg.) & 45 mg/L (Weekly Avg.)	92a.47(a)(1) & DRBC WQR
Fecal Coliform	200/100 mL (Geo-Mean)	DRBC WQR
Color	100 platinum cobalt	DRBC WQR
Ammonia (as N)	20 mg/L (Monthly Avg)	DRBC WQR
Total Residual Chlorine	0.5 mg/L (Monthly Avg)	92a.48(b)(2)

Although the facility has previously modified its disinfection method from chlorination to UV system, sodium hypochlorite would still be used as a chemical additive if the LTP is operational. This information is confirmed with the on-site representative and is specified in the application package. Under 25 Pa Code §92a.48(b), facilities or activities using chlorination are subject to the BAT average monthly effluent standard of 0.5 mg/L. This standard will be specified in the permit as an effluent limit.

The more stringent of these standards will be written in the permit unless more stringent requirements are needed based on the BPJ analysis and water quality analysis.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen
WQM 7.0 is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides details on the technical methods implemented in WQM 7.0. The model output indicates that the existing TBELs for CBOD5 and NH3-N as well as the existing minimum effluent limit for DO are still appropriate. No changes are therefore recommended.

Total Residual Chlorine
As mentioned previously, since sodium hypochlorite is used as a chemical additive (when the LTP is in used), DEP's TRC_CALC worksheet is utilized to determine if the BAT effluent limit is still sufficient. The worksheet does not recommend any more stringent effluent limit and also recommends an instantaneous maximum effluent limit of 1.6 mg/L. As a result, the permit will contain a monthly average effluent limit of 0.5 mg/L and instantaneous maximum effluent limit of 1.6 mg/L.

Toxics
As no discharge has occurred for the past 3 years, no toxics effluent data are available to review. DEP therefore performed a limited water quality analysis using PENTOXSD model based on the pollutants of concern identified by the above-referenced federal ELGs. A water quality analysis cannot be performed for α-Terpineol and Benzoic acid as there is no state and federal water quality criteria available. PENTOXSD model is then utilized for p-Cresol, Phenol, and Zinc and the model output indicates that existing effluent limits for these pollutants are still appropriate. No change is therefore recommended.

Best Professional Judgement (BPJ) Limitations

Dissolved Oxygen
A minimum DO effluent limit of 5.0 mg/L is included in the existing permit and is derived from 25 Pa Code §93.9 for cold water fishes. This requirement will continue to be included in the permit to ensure the protection of water quality.

Total Dissolved Solids
The current permit contains TDS effluent limits of 30,000 mg/L (daily maximum) and 75,000 mg/L (instantaneous maximum) along with the following Part C conditions:

A. At MP 001
The following Total Dissolved Solids (TDS) effluent tables represent flows and effluent TDS concentrations that must be met in order for the discharge not to increase the background TDS concentration in the Maxatawny Creek by more than 133 percent at Q_{7-10} discharge.

TDS EFFLUENT TABLE AT MP 001

*SPANGSVILLE & MP 001 FLOWS W/RELATED TDS LIMITS ****			
FLOW AT SPANGSVILLE (MGD)	*FLOW FROM MP 001 (MGD)*	*TDS AT 001 (MG/L)*	*ESTIMATED DAILY STORAGE REQUIRED (MG)*
49 or greater	*up to 0.12*	*30,000*	*0*
45 or greater	*up to 0.11*	*30,000*	*0.01*
41 or greater	*up to 0.10*	*30,000*	*0.02*
37 or greater	*up to 0.09*	*30,000*	*0.03*
33 or greater	*up to 0.12*	*20,289*	*0*
33 or greater	*up to 0.11*	*22,107*	*0.01*
33 or greater	*up to 0.10*	*24,000*	*0.02*
33 or greater	*up to 0.09*	*26,667*	*0.03*
33 or greater	*up to 0.08*	*30,000*	*0.04*
29 or greater	*up to 0.07*	*30,000*	*0.05*
25 or greater	*up to 0.06*	*30,000*	*0.06*
21 or greater	*up to 0.05*	*30,000*	*0.07*
17 or greater	*up to 0.04*	*30,000*	*0.08*
13 or greater	*up to 0.03*	*30,000*	*0.09*
8.34 (Q_{7-10}) or greater	*up to 0.02*	*30,000*	*0.10*

*SPANGSVILLE & MP 001 FLOWS W/RELATED ALLOWABLE LTP TDS LIMITS ****			
FLOW AT SPANGSVILLE (CFS)	*FLOW FROM MP 001 (MGD)*	*TDS AT MP 001 (MG/L)*	*ESTIMATED DAILY STORAGE REQUIRED (MG)*
76 or greater	*up to 0.12*	*30,000*	*0*
70 or greater	*up to 0.11*	*30,000*	*0.01*
64 or greater	*up to 0.10*	*30,000*	*0.02*
58 or greater	*up to 0.09*	*30,000*	*0.03*
51 or greater	*up to 0.12*	*20,289*	*0*
51 or greater	*up to 0.11*	*22,107*	*0.01*
51 or greater	*up to 0.10*	*24,000*	*0.02*
51 or greater	*up to 0.09*	*26,667*	*0.03*
51 or greater	*up to 0.08*	*30,000*	*0.04*
45 or greater	*up to 0.07*	*30,000*	*0.05*
38 or greater	*up to 0.06*	*30,000*	*0.06*
32 or greater	*up to 0.05*	*30,000*	*0.07*
26 or greater	*up to 0.04*	*30,000*	*0.08*
19 or greater	*up to 0.03*	*30,000*	*0.09*
12.90 (Q_{7-10}) or greater	*up to 0.02*	*30,000*	*0.10*

**** When flow at the USGS Spangsville gage (#01471875) is 49 mgd (76 cfs) or greater, an MP 001 discharge of up to 0.12 mgd with a TDS concentration of 30,000 mg/l is permitted. Weekly monitoring is required under said conditions. When flow at Spangsville is less than 49 mgd (76 cfs), both the MP 001 discharge flow and TDS concentrations shall be recorded/measured daily and shall be in accordance with the TDS EFFLUENT TABLEs.*

The TDS EFFLUENT TABLEs were derived from EQUATION 1 (MGD) and EQUATION 2 (CFS) below and summarized in the respective TABLE for easy reference. The docket holder shall follow the appropriate equation when determining what flow may be discharged from the LTP when flows in Manatawny Creek are below 49 mgd (76 cfs). When flows in the Manatawny Creek are above 49 mgd (76 cfs), the docket holder is allowed to discharge up to 0.12 mgd from Outfall 001.

EQUATION 1 (MGD) $Q_{LTP} = 0.00245 \times Q_{Manatawny}$
Q_{LTP} is the allowable discharge flow from the LTP in mgd
$Q_{Manatawny}$ is the instream flow of Manatawny Creek at Spangsville in mgd
EQUATION 2 (CFS): $Q_{LTP} = 0.00158 \times Q_{Manatawny}$
Q_{LTP} is the allowable discharge flow from the LTP in mgd.
$Q_{Manatawny}$ is the instream flow of Manatawny Creek at Spangsville in cfs.

B. Maxatawny Creek
A weekly grab sample for TDS will be taken in the Maxatawny Creek, MP 011, approximately 4,000 feet downstream of Outfall 001, at Latitude 40.3302 and Longitude -75.7371. Flow is from the Spangsville Gage (#0471875).

This is a variance established by DRBC to the basin-wide TDS effluent limit at different discharge rates corresponding with the stream Q7-10 flows. DRBC previously determined that the discharge is required not to increase the background TDS concentration in Manatawny Creek by more than 133% at Q7-10. Docket no. D-1989-018- CP-7 issued by DRBC for this facility addresses the detailed basis of this requirement. It is required under 25 Pa Code §§92a.12(b) and 92a.36(2) to develop permit requirements derived from regulations or standards established by any affected interstate or international agencies if such regulations or standards are more stringent than DEP's effluent standards. Because the LTP has been decommissioned and therefore, the discharge has not occurred from Outfall 001 since 2016, no data has been reported in the DMR at this time. Accordingly, this Part C Condition as well as TDS effluent limits will remain the same to be consistent with effluent requirements established by DRBC in case the permittee will recommission the LTP in the future. This also will result in a continuation of monitoring and reporting of downstream Total Dissolved Solids and streamflow as Internal Monitoring Point 011.

Development of Effluent Limitations and Monitoring Requirements (continued)

Outfall No.	006	**Design Flow (MGD)**	.087
Latitude	40º 21' 24.00"	**Longitude**	-75º 43' 15.00"

Wastewater Description: Treated Industrial Waste

Technology-Based Limitations

Groundwater from landfill underdrains is treated by a constructed wetland treatment system prior to discharges into Furnace Run. Given the nature of discharge, there is no federal ELG applicable for this type of discharge. The state regulation found in 25 Pa Code §92a.48 is still applicable as this is an effluent resulting from industrial activities. Also, minimum requirements established in DRBC's water quality regulations will also be applied. These regulations require the facility to meet pH of 6.0 SU (minimum)/9.0 SU (maximum), CBOD5 of 25 mg/L (monthly average), TSS of 30 mg/L (monthly average)/ 45 mg/L (weekly average), and NH3-N of 20 mg/L (monthly average).

No chemical product is associated with this wastewater.

The more stringent of these standards will be written in the permit unless more stringent requirements are needed based on the BPJ analysis and water quality analysis.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen
WQM 7.0 has been utilized to determine if existing effluent limits for CBOD5, NH3-N and Dissolved Oxygen are still appropriate. The model output indicates that existing effluent limits are still sufficient to protect water quality in the receiving stream. No change is therefore recommended.

Toxics
Effluent sample results reported in the application show that most of analyzed pollutants were non-detected in effluent and those that were detected were present in effluent at levels below the criteria, except for Total Manganese (see table below).

Detected Pollutants	Results (maximum), mg/L	Most Stringent Criteria, mg/L
Total Copper	0.008	0.012*
Total Nickel	0.004	0.069*
Total Zinc	0.009	0.159*
Total Aluminum	0.050	0.750
Total Barium	0.070	2.400
Total Boron	0.100	1.600
Total Iron	1.050	1.500
Total Manganese	1.010	1.000

*Analysis Hardness of 140 mg/L was used based on the average effluent hardness of 332 mg/L and default instream hardness of 100 mg/L.

PENTOXSD has been utilized for Total Manganese. The model output shows the most stringent WQBEL would be 5.725 mg/L. Based on the logic available in DEP's technical guidance no. 361-0100-003 and DEP's SOP no. BCW-PMT-037, a routine monitoring of Total Manganese is recommended.

PENTOXSD has been utilized to determine if existing effluent limits for Total Cadmium and Total Mercury are still appropriate. PENTOXSD shows that more stringent effluent limits are required for both pollutants. As shown below, past DMR data showed the facility has been discharging non-detected levels of these pollutants.

	eDMR Outfall 006 Effluent Data (37 Datasets; Sept 2016 thru Sept 2019)	
Pollutants	**No. of Non-Detect**	**If detected, Maximum Concentration**
Total Cadmium	37	N/A
Total Mercury	36	0.0005 mg/L

The existing effluent limits for both Total Cadmium and Total Mercury were first introduced in the NPDES permit during the last permit renewal when the application reported detectable levels of Total Cadmium and Total Mercury. Since then, these pollutants have been rarely (almost never) detected in the effluent. A question was raised by DEP as to whether the source, groundwater from landfill underdrains, contains detectable levels of these pollutants. Consequently, DCSWA has agreed to collect ten (10) influent composite samples of the constructed wetland treatment system. These samples were analyzed using DEP's current target Quantitation Limits (QLs). The results are shown below:

	Total Cadmium			Total Mercury		
Sample Date	Influent Results (mg/L)	Target QL (mg/L)	Most Stringent WQC (mg/L)	Influent Results (mg/L)	Target QL (mg/L)	Most Stringent WQC (mg/L)
12/07/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/10/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/12/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/14/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/17/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/19/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/21/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/24/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/26/2019	<0.00008	0.0002	0.00027	<0.0002	0.0002	0.00005
12/28/2019	<0.0002	0.0002	0.00027	<0.0002	0.0002	0.00005

As shown above, influent contains no detectable levels of Total Cadmium and Total Mercury. It appears that Total Cadmium and Total Mercury are not pollutants of concern. Accordingly, it is recommended that existing WQBELs for Total Cadmium and Total Mercury be removed from the permit. This approach is supported by 40 CFR §122.44(l)(2)(i)(B)(1).

The current permit requires the monitoring for Total Iron on a semi-monthly basis. The DMR data over the past 3 years have been summarized below:

	Total Iron Effluent Concentrations (Sept 2016 – Dec 1, 2019; total 40 datasets), mg/L				
	AVERAGE	MEDIAN	MAXIMUM	MINIMUM	Variance
Average Monthly	0.442	0.37	1.17	0.09	0.044309
Daily Maximum	0.487	0.43	1.18	0.1	0.051576

As shown above, the maximum of the daily maximum value reported in these DMRs was 1.18 mg/L or 1180 ug/L which is lower than the state most stringent water quality criteria of 1500 ug/L. The calculated variability value is in the opinion of DEP very low, meaning the discharge of Total Iron occurred consistently at the same level during this monitoring period. It is recommended that the existing monitoring requirement for Total Iron be removed from the permit as the past DMR during the last permit term showed that the discharge of Total Iron has no potential to exceed the water quality criteria. This approach is supported by 40 CFR §122.44(l)(2)(i)(B)(1).

DRBC requires the TDS effluent level to not exceed 2,000 mg/l on an average monthly. This requirement will remain unchanged in the permit.

Development of Effluent Limitations and Monitoring Requirements (continued)

Outfall No.	002	Receiving Waters	Furnace Run
Latitude	40º 21' 27"	Longitude	-75º 43' 15"
Outfall No.	003	Receiving Waters	Furnace Run
Latitude	40º 21' 25"	Longitude	-75º 43' 31"
Outfall No.	004	Receiving Waters	Furnace Run
Latitude	40º 21' 26"	Longitude	-75º 43' 32"
Outfall No.	005	Receiving Waters	UNT to Furnace Run
Latitude	40º 21' 32"	Longitude	-75º 42' 46"
Outfall No.	008	Receiving Waters	Furnace Run
Latitude	40º 21' 26"	Longitude	-75º 43' 42"
Outfall No.	009	Receiving Waters	UNT to Oysterville Creek
Latitude	40º 21' 01"	Longitude	-75º 42' 56"
Outfall No.	010	Receiving Waters	Furnace Run
Latitude	40º 21' 35"	Longitude	-75º 43' 51"
Wastewater Description:	Stormwater Runoff		

Under 40 CFR §122.26(a)(ii), the NPDES permit is required for stormwater runoff from this facility. The existing permit requires semi-annual samples of stormwater runoff discharged from above-mentioned outfalls and analyze these samples for pollutants listed for Outfall 001. As mentioned earlier, given the type of this landfill, permit requirements for Aniline, Naphthalene, Pyridine, Arsenic, and Hexavalent Chromium will be removed for Outfall 001. To be consistent with the previous permitting approach, the existing monitoring requirement for these pollutants (i.e., Aniline, Naphthalene, Pyridine, Arsenic, and Hexavalent Chromium) will also be removed from these stormwater outfalls in accordance with 40 CFR §122.44(l)(i)(B). In general, DEP develops individual NPDES stormwater permit in a way that the permit requirements would align with the requirements developed for DEP's NPDES PAG-03 General Permit for industrial stormwater. This facility would be covered under Appendix C if the general permit was applicable in which the existing permit already contains all of pollutants listed for Appendix C. No change is therefore recommended at this time.

During the permit renewal application review, BAI Group submitted a letter dated April 15, 2019 on behalf of the DCSWA indicating that there are some changes to the existing stormwater outfalls as a result of the landfill expansion. The following table was included in this letter:

Outfall	Total Area Drained (current)	Total Area Drain (after expansion)	Comments
002	27.5 ac	8.65 ac (after Phase2)	Basin 002 which discharges to Outfall 002 will decrease in size, as well as the contributing drainage area as construction of Phases 1 and 2 of the expansion occur.
003	45.9 ac (partially abandoned, see comment)	0 ac – to be removed	This outfall was partially abandoned with Basin 004 was removed for the construction of Pads 113 and 114. However, 300 feet of concrete pipe remains in the ground but has no inlet. Outfall continues to be sampled as required by the NPDES permit until the pipe is completely removed during the Southern Expansion construction.
004	56.3 ac	57.75 ac	Slight adjustment in drainage area following construction of Sothern Expansion
005	58.8 ac	63.11 ac	Slight adjustment in drainage area following construction of Southern Expansion
008	1.5 ac	1.5 ac	No changes proposed
009	31.6 ac	48.61 ac	This outfall now drains some of the area previously handled by Outfall 003
010	49.4 ac	51.88 ac	This outfall drains the majority of the area previously handled by Outfall 003

As described above, the area covered by Outfall 003 will be redirected to the areas covered by Outfalls 009 and 010. A DMR recently submitted on 1/16/2020 shows that the discharge of stormwater still occurs at Outfall 003. No change is recommended until Outfall 003 is completely removed.

In addition, standard stormwater conditions will be included in Part C of the permit.

Development of Effluent Limitations and Monitoring Requirements (continued)

Other Considerations

Chemical Additive
A number of chemical products specified in the application are utilized for the LTP. According to the application, these chemicals have been addressed in the previous WQM permit as well as the last NPDES permit renewal application. Based on the review, all of the chemicals identified in the application were specified in the previous renewal application at the same usage rate, except for Anionic Emulsion Polymer and Powdered Activated Carbon which are not considered chemical additives. There is no chemical additive being used for Outfall 006. At this time, no further review will be conducted. The permit will however include a standard chemical additive condition in Part C.

Delaware River Basin Commission (DRBC)
DRBC issued a modification of the existing docket no. D-1989-018- CP-7 on December 13, 2017. This docket will expire on December 13, 2022. Any new or more stringent requirements will be written in the permit in accordance with 25 Pa Code §92a.12(a). A copy of the draft permit will be sent to DRBC for review and comments.

Antidegradation Requirements
All proposed effluent limits and monitoring requirements mentioned in this fact sheet have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Class A Wild Trout Fishery
No Class A Wild Trout fishery is impacted by this discharge.

Anti-backsliding Requirements
Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as those specified in the existing permit. This approach is consistent with 40 CFR §122.44(l)(1).

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Color (Pt-Co Units)	XXX	XXX	XXX	XXX	100	100	1/week	24-Hr Composite
CBOD5	25	50	XXX	25.0	50.0	50	1/week	24-Hr Composite
TSS	30	60	XXX	30.0	60.0	75	1/week	24-Hr Composite
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Total Dissolved Solids	Report	XXX	XXX	Report	30000.0	75000	See Permit	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	XXX	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/week	Grab
NH3-N	4.9	10	XXX	4.9	10.0	10	1/week	24-Hr Composite
Total Zinc	0.11	0.20	XXX	0.11	0.20	0.2	1/week	24-Hr Composite
Phenol	0.015	0.026	XXX	0.015	0.026	0.026	1/week	24-Hr Composite
a-Terpineol	0.016	0.033	XXX	0.016	0.033	0.033	1/week	24-Hr Composite
Benzoic Acid	0.071	0.12	XXX	0.071	0.12	0.12	1/week	24-Hr Composite
p-Cresol	0.014	0.025	XXX	0.014	0.025	0.025	1/week	24-Hr Composite

Proposed Effluent Limitations and Monitoring Requirements (continued)

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

Outfall 006, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/week	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	2/week	Grab
CBOD5	18	36	XXX	25.0	50.0	50	1/week	24-Hr Composite
TSS	22	44	XXX	30.0	60.0	75	1/week	24-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	2,000	XXX	5,000	1/week	24-Hr Composite
NH3-N (5/1-10/31)	4.0	8.0	XXX	6.0	12	15	1/week	24-Hr Composite
NH3-N (11/1-4/30)	12	24	XXX	18	36	40	1/week	24-Hr Composite
Total Manganese	Report	Report	XXX	Report	Report	XXX	2/month	24-Hr Composite

Proposed Effluent Limitations and Monitoring Requirements (continued)

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.

Outfalls 002, 003, 004, 005, 008, 009, and 010, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
TDS	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
NH3-N	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
a-Terpinol	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
p-Cresol	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Phenol	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab
Benzoic Acid	XXX	XXX	XXX	XXX	Report	XXX	1/6 month	Grab

Proposed Effluent Limitations and Monitoring Requirements (continued)

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

Outfall 011, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Maxatawny Creek Flow (MGD) Spangville Gage	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
Total Dissolved Solids	XXX	XXX	XXX	Report	XXX	Report	1/week	Grab

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