pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0206041**
Facility Type	**Storm Water**	APS ID	**1061280**
Major / Minor	**Minor**	Authorization ID	**1392447**

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

Applicant and Facility Information

Applicant Name	**Washington Penn Plastics, Inc.**	Facility Name	**Washington Penn - Arden Division**
Applicant Address	450 Racetrack Road	Facility Address	2080 N Main Street
	Washington, PA 15301		Washington, PA 15301-9622
Applicant Contact	Scott Ward	Facility Contact	Scott Ward
Applicant Phone	(724) 206-4372	Facility Phone	(724) 206-4372
Client ID	92130	Site ID	460947
SIC Code	3087	Municipality	South Strabane Township
SIC Description	Manufacturing - Custom Compound Purchased Resins	County	Washington
Date Application Received	March 31, 2022	EPA Waived?	Yes
Date Application Accepted	April 18, 2022	If No, Reason	
Purpose of Application	Renewal of individual stormwater permit		

Summary of Review

Washington Penn Plastics, Inc. (WPP), on behalf of its Arden Division (Arden) submitted a renewal application on March 31, 2022, for its existing intermittent storm water discharge from their plastic resins plant (Standard Industrial Classification code 3087) in South Strabane Township, Washington County. The facility is used for bulk storage, compounding and marketing of thermoplastic resins and polyolefin materials such as polypropylene and polyethylene for customized applications in the automotive, packaging, consumer products, construction, and other industries. Raw materials including feedstock, dyes and other color additives used in compounding and manufacturing are brought in by either truck or rail. These raw materials like resin pellets (“nurdles”) are received in bulk, stored in various surface containers, storage tanks and siloes, then blended, heated, extruded, reformed, shaped, finished and distributed to customers via truck or rail.

WPP is part of the Audia group of companies with multiple locations in the greater Pittsburgh area and in other U.S. locations; as well as, Mexico, Slovakia, Japan and China. WPP’s headquarters is on Racetrack Road in Washington, Pa. WPP’s Arden facility is located at 2080 North Main Street, Washington, PA in an industrial area. The main building at the site was constructed in the 1960s. The storage silos, rail spur, and outbuildings were constructed as needed from the 1970s to 2010s. Process operations onsite are conducted inside of the buildings or under roof. Materials brought in for operations are stored at the facility in designated storage areas before processing.

Presently the only discharge from the facility is stormwater runoff; no process water discharges. Due to the intermittent detection of pollutants in WPP’s stormwater discharge above benchmark levels, the Department requires WPP to maintain its individual NPDES permit despite the lack of process water discharge. The permittee submitted a Stormwater Pollution Prevention and Control (SWPPC) Plan in 2013 that was accepted by the Department to comply with the facility permit requirements as part of a response to a Notice of Violation issued in 2013. The latest, updated version of this SWPPC Plan,

Approve	Deny	Signatures	Date
X		John L Duryea, Jr., P.E. / Environmental Engineer	January 31, 2025
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	February 3, 2025

Summary of Review

with updated stormwater Best Management Practices (BMPs) was received on March 31, 2023. The WPP, Arden property covers roughly 42.5 acres and is shown in Figure 1 below:

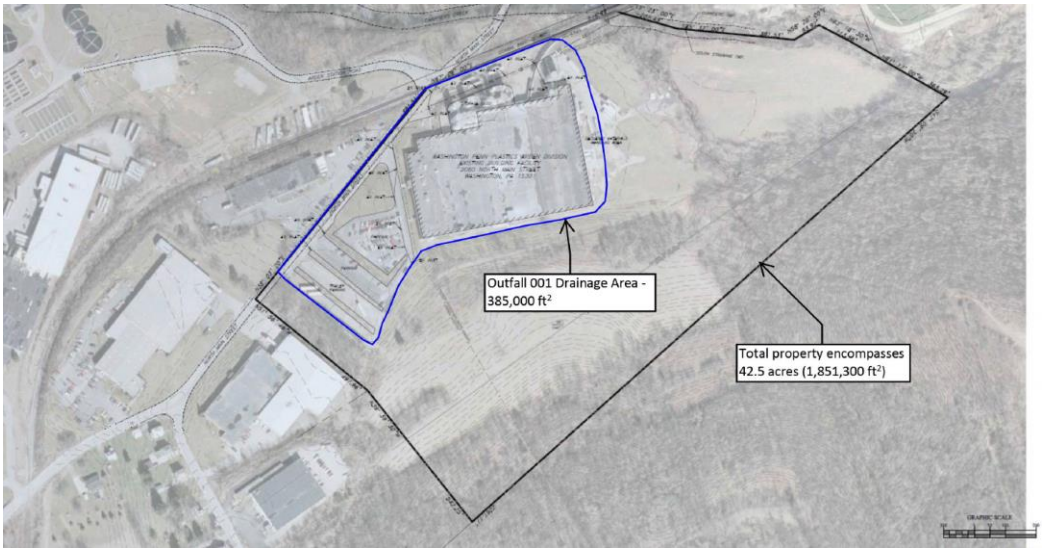

Figure 1: Annotated Satellite Image of the Washington Penn Plastics, Arden Division Site

The northeast boundary of this WPP facility is formed by a segment of Chartiers Creek (86052) which is designated in Chapter 93 as a warm water fishery (WWF). Available drainage models indicate that the majority of the stormwater runoff from this site naturally drains via sheet flow directly to Chartiers Creek. However, drainage in the industrialized area, outlined in blue in Figure 1, has been regraded to flow north in the direction of their North Main Street access road and rail line. Outfall 001 is located at the industrial area's northeast corner south of that same railroad line. An expanded view of this industrialized area is shown in Figure 2 below:

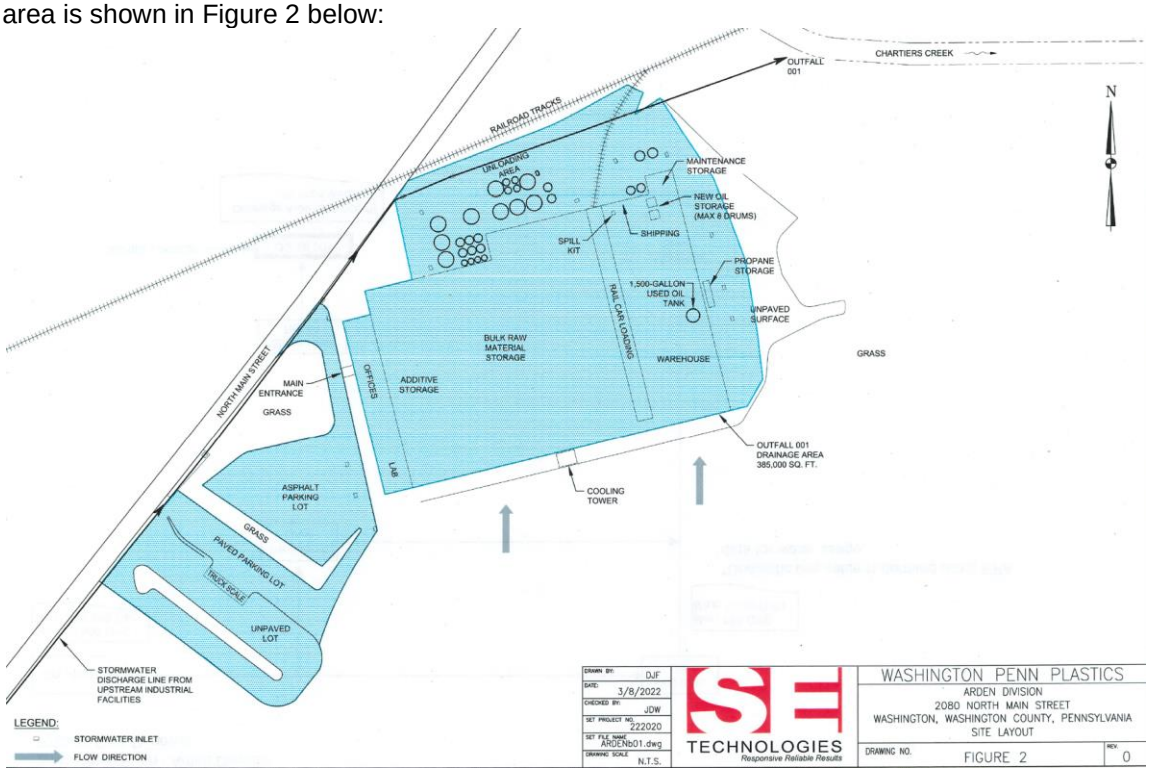

Figure 2: Drawing of Industrial Areas of the Washington Penn Plastics Site

Summary of Review

Figure 2 shows the location of the 192,950 square foot, flat roof main building onsite; as well as, outdoor siloes and tanks, asphalt and gravel parking and drive areas at sides of the factory building. Grassy vegetation and landscaping cover the remaining property.

The facility sanitary waste and process water is discharged to Washington - East Washington Joint Authority Sanitary Sewer System and is not connected to any storm sewers. Potential pollutant sources at the facility include outdoor parking areas, plastic and other material transfer areas, outdoor oil and propane storage tanks; as well as, whatever collects in the drainage lines of their large, flat-roof buildings. Truck and rail loading/off-loading areas are mainly interior to the buildings, but also in spaces in proximity to outdoor tanks and siloes, toward the north and east of the main building. These areas could derive residual materials (i.e., oil, grease, plastic resin “nurdles”) that may come in contact with precipitation. In addition, accidental spills or release of any materials in these outdoor areas have the potential to become entrained in precipitation runoff and then drain to the receiving stream.

Conclusion

There were open violations documented by Client Record from June 2022. As part of this review, an inquiry was made on the client’s submission of corrective action plans (CAPs). In reply WPP supplied submitted CAPs from 2019 and 2020. Subsequently, WPP and the Department entered into a Consent Order Agreement (COA), executed on October 3, 2024, which controls elimination of the release of plastics nurdles at this facility (and two other WPP facilities). Subsequently, the Department’s operations group supplied a Compliance Report showing that all open violations had been closed out.

Draft permit issuance is recommended.

Following sections included an explanation of how effluent limitations/monitoring were developed.

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)	0
Latitude	40º 12' 20"	Longitude	-80º 15' 28"
Quad Name	Washington West	Quad Code	1703
Wastewater Description:	Stormwater		
Receiving Waters	Chartiers Creek	Stream Code	36777
NHD Com ID	99694448	RMI	37.91
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)	990	Slope (ft/ft)	
Watershed No.	20-F	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Non-Attaining (impaired)		
Cause(s) of Impairment	Organic Enrichment/Low D.O.; Nutrients; Siltation; Metals; Suspended Solids		
Source(s) of Impairment	Combined Sewer Overflow; Agriculture; Urban Runoff/Storm Sewers; Abandoned Mine Drainage; Habitat Modification		
TMDL Status	Final	Name	PCB/Chlordane; Metals; pH; Suspended solids
Nearest Downstream Public Water Supply Intake	West View Water Authority, Berkley WTP		
PWS Waters	Ohio River	Flow at Intake (cfs)	2,365
PWS RMI	946.44	Distance from Outfall (mi)	39.44

Changes Since Last Permit Issuance: No significant changes in operations.

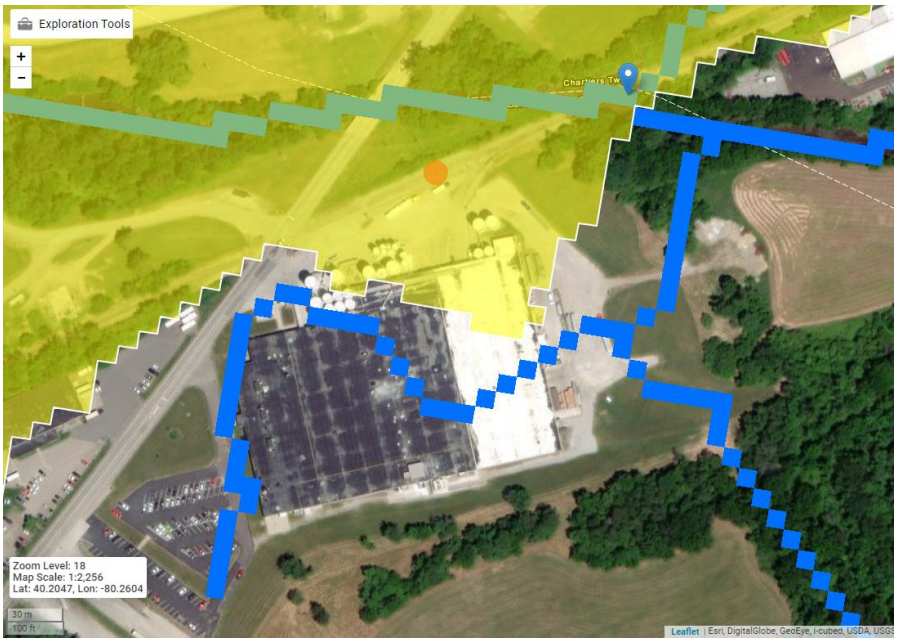

Figure 3: Satellite Image of WPP, Arden Overlaid on USGS StreamStats Model Showing Outfall 001 (red dot) and Natural Drainage of Chartiers Creek Watershed Before Regrading

Compliance History

Table 1: DMR Data for Outfall 001 (from February 1, 2022 to January 31, 2023)

Parameter	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22	FEB-22
Flow (MGD) Daily Maximum	0.035	0.1728	0.0864	0.288	0.0864	0.022	0.288	0.029	0.0864	0.054	0.173	0.043
pH (S.U.) Minimum	8.47	7.82	7.77	8.81	7.58	7.7	7.16	7.88	8.5	7.82	7.42	7.37
pH (S.U.) Daily Maximum	8.47	7.82	7.77	8.81	7.58	7.7	7.16	7.88	8.5	7.82	7.42	7.37
TSS (mg/L) Daily Maximum	29	54	12	**480**	< 5.0	16	**124**	33	91	28	**492**	96
Fecal Coliform (No./100 ml) Daily Maximum	E	GG	GG	576	GG	GG	GG	GG	GG	80	GG	5.0
Total Aluminum (mg/L) Daily Maximum	0.456	0.457	0.194	**7.48**	0.083	0.062	**2.27**	0.195	0.887	0.687	**2.26**	**1.48**
Total Iron (mg/L) Daily Maximum	0.718	0.762	0.459	**10.5**	0.124	0.104	3.08	0.363	1.51	0.547	3.39	2.21
Total Manganese (mg/L) Daily Maximum	0.176	0.141	0.245	3.0	0.056	0.050	0.641	0.101	0.285	0.091	0.689	0.569
Total Zinc (mg/L) Daily Maximum	0.040	0.040	0.024	0.25	0.064	0.045	0.078	0.05	0.061	0.034	0.195	0.110

Compliance History

Summary of DMRs:

The Department has received and retained electronic DMR records since early 2017. Over that period there have been periodic exceedances of the stormwater benchmark values, which, at times, were repeated in subsequent reports.

In WPP's previous NPDES permit, included in Part C.V.F.1, an excerpt of this cited condition requires, "In the event that stormwater discharge concentrations for a parameter exceeds the benchmark value(s) identified below at the same outfall for two or more consecutive monitoring periods, the permittee shall develop a corrective action plan (CAP) to reduce the concentrations of the parameters in stormwater discharges."

Parameter	Benchmark Value (mg/L)
pH	6.0-9.0
Total Suspended Solids	100
Total Aluminum	0.75
Total Iron	1.0

This cited criteria was exceeded, requiring submission of a CAP, in October - November 2017 (iron), February – April 2018 (aluminum), March – April 2018 (iron), September – November 2018 (iron and total suspended solids (TSS)), January – March 2019 (aluminum and iron), February – March 2019 (TSS), July 2019 – October 2019 (TSS), July 2019 – February 2020 (aluminum and iron), December 2019 – February 2020 (TSS), October – November 2020 (aluminum, iron and TSS), April – May 2021 (aluminum, iron and TSS), October – November 2021 (iron) and February – March 2022 (aluminum and iron).

However, for the past year, following capital improvements reported last summer, compliance appears to be improving. No CAP requirements have been triggered.

On April 5, 2023, an email inquiry was made to Audia personnel to determine if any CAPs had been created and supplied to the Department in accordance with this permit condition. In reply, Audia supplied CAPs for 2019 and early 2020. Audia has also supplied more comprehensive CAPs for other WPP sites in the area.

Summary of Inspections:

Since the last permit renewal effective October 1, 2017, there have been three onsite inspections by Clean Water operations, on June 24, 2019, June 6, 2022 and December 1, 2023. Of these, a Notice of Violation was noted on both earlier inspections. For the earliest inspection, the violations were focused on permit process issues including maintaining proper chain of custody forms and hold times for samples. However, this NOV also noted failures to provide proper records, to submit annual reports and to submit a corrective action plan. For the 2022 inspection, the NOV cited issues related to record retention, but also loss of control of materials resulting in a discharge of raw plastic materials to the receiving stream.

In principle, this site could be eligible for coverage under the Department's General Permit for Discharges of Stormwater Associated with Industrial Activity, but given the history above, it appears that continuing with coverage under an individual IW permit is recommended.

The Department's SWRO Operations supervisor reviewed the compliance status of this permit. On January 8, 2025, this supervisor supplied a report which confirmed that all outstanding violations and enforcement actions were resolved. Given this, the renewal can now be finalized and issued.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0
Latitude 40º 12' 20" **Longitude** -80º 15' 28"
Wastewater Description: Stormwater runoff from roof drains and industrial areas.

Storm Water Outfalls

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a storm water special condition is placed in the permit in Part C.

Stormwater effluent data reported in the application are compared to stream criteria, the U. S. Environmental Protection Agency (EPA)'s Multi-Sector General Permit (MSGP) "benchmark values", Federal Effluent Limitation Guidelines and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a SWPPP are required in the permit. Otherwise, the storm water outfalls are simply listed as discharge points. In either case, a special condition is added to the permit to include some of the key components of the Department's General Permit (PAG-03) for Discharges of Stormwater Associated with Industrial Activities.

To the extent that monitoring is necessary to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that monitoring of stormwater runoff be established if there is evidence that the stormwater may be contaminated with pollutants of interest to observe the impact of the facility's BMPs on storm water effluent quality.

In this case, WPP's Arden site's lone outfall has an established history of monitoring, excluding effluent limitations. Additionally, stormwater data was contained in the NPDES renewal application submittal, results shown in Table 2 below.

Table 2: Applicant Stormwater Sample Results for Outfall 001 and Benchmarks

Parameter	Sample Concentration (mg/L)	No Exposure Thresholds (mg/L)	2021 MSGP Benchmark Values (mg/L)
Oil and Grease	< 5.3	≤ 5.0	N/A
Biochemical Oxygen Demand (5-day)	< 2.0	≤ 10.0	≤ 30
Chemical Oxygen Demand	91.5	≤ 30.0	≤ 120
Total Suspended Solids	90	≤ 30.0	≤ 100
Total Nitrogen	1.791	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.695	≤ 1.0	≤ 2.0
pH (s.u.)	7.37 – 8.38	6.0 – 9.0	6.0 – 9.0

Footnote: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

In addition to the stormwater samples shown in Table 2 above, results were submitted for addition samples, shown in Table 3 below:

Table 3: Applicant Additional Stormwater Sample Results for Outfall 001 and MSGP Benchmarks

Parameter	Avg Sample Concentration (mg/L)	Max. Sample Concentration (mg/L)	2021 MSGP or DEP Benchmark Values (mg/L)
Total Aluminum	**1.25**	**5.85**	≤ 1.10
Total Iron	1.99	**8.44**	≤ 7.0
Total Manganese	0.294	0.828	N/A
Total Zinc	0.118	**0.253**	≤ 0.120
Fecal Coliform (No./100 mL)	> **6081**	> **12100**	2000 Geo Mean

Although the reported results in Table 2 generally would not meet the Department's No Exposure benchmarks, these are consistent with EPA's most recent MSGP and Department benchmarks. However, the supplemental results in Table 3 are notably above the benchmarks for metals: aluminum, iron and zinc. The results are also high in fecal coliform. In principle, a mechanism for this facility to be discharging these pollutants is not obvious. However, the eDMR results from the most recent year of samples indicates an improving trend with regard to the effective implementation of BMPs toward achieving compliance with the permit benchmarks.

In the most recent inspection on December 1, 2023, intended as a follow-up to the June 2022 inspection, there were no new violations noted. However, some degradation of the municipal stormwater pipeline for Outfall 001 was noted as the pipeline approached Chartiers Creek. An inquiry was made of the permittee for an update on this condition. On January 17, 2025, a WPP representative replied, "…the pipe in outfall 001 that was eroded has been repaired."

No mathematical modeling was performed for toxic pollutants at Outfall 001 since storm water is only discharged intermittently and generally not at times when the receiving stream is flowing at the Q_{7-10} design flow conditions required for modeling. Since no specific Water Quality Based Effluent Limitations will be developed, the stormwater discharged at this outfall are required to be uncontaminated. Typically, the facility's SIC code is used to indicate which parameters of concern will be monitored based on the guidance for the NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (PAG-03). WPP's Arden site's renewal application submittal indicated their SIC code is 3087 for "Custom Compounding of Purchased Plastics Resins" and is listed as corresponding with Appendix S of the General Permit. The associated monitoring requirements and benchmarks for this Appendix are shown below in Table 4:

Table 4: Monitoring Requirements under General Permit (PAG-03) Appendix S

Pollutant	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) (*)	1 / 6 months	Calculation	XXX
Total Phosphorus (mg/L)	1 / 6 months	Grab	XXX
pH (S.U.)	1 / 6 months	Grab	9.0
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Total Zinc (mg/L)	1 / 6 months	Grab	XXX

* Footnote: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2 +NO_3-N are measured in the same sample.

Total Maximum Daily Load (TMDL)

Section 303(d) of the Clean Water Act and EPA's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a).

Wastewater discharges from WPP's Arden facility are located within the Chartiers Creek Watershed (stream code 36777) for which the Department has developed two separate TMDLs. Originally listed on the 1996 Pennsylvania Section 303(d) as impaired waters, Chartiers Creek was included in a Department TMDL, finalized on April 9, 2001, covering Chlordane, Polychlorinated Biphenyls (PCBs), pesticides and organics. Since there is no evidence that this facility discharges these pollutants, no effluent monitoring or limitations will be established for these.

However, a second TMDL was established by both the Department and EPA, Region III which was finalized in April 2003. This TMDL establishes load allocations for the discharge of abandoned mine drainage (AMD) associated metals, including aluminum, iron and manganese. The focus on these pollutants is because the source, primarily from earlier coal mines previously located on other stream segments than that receiving discharges from the WPP, Arden site today. Because the source of this stream's impairment is from closed and abandoned mines, the allocations were mostly assigned in this TMDL to specific, impaired stream segments; as well as, a few waste load allocations (WLA) to individual point sources such as is more typically assigned to NPDES permits. The next downstream segment (63869) which has a confluence with Chartiers Creek downstream from WPP's Arden site is listed in the TMDL as having a load allocation (LA) and is considered impaired.

However, no WLA was assigned to WPP's Arden site under their facility's permit, **PA0206041**. Also, no LA or associated reductions were required for the Chartiers Creek segment in the immediate area of the WPP Arden site.

Target concentrations published in the TMDL were based on established water quality criteria of 0.750 mg/L total recoverable aluminum, 1.5 mg/L total recoverable iron based on a 30-day average and 1.0 mg/L total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known WLA and LA as a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria plus margin of safety (i.e., 100 percent use of a stream's assimilative capacity).

All revised NPDES permits discharging into the Chartiers Creek Watershed must to be consistent with the TMDL Waste Load Allocation based on 40 CFR 122.44(d)(1)(vii)(B). However, this facility has no explicit WLA and the receiving stream segment has no load reduction requirements. Given these facts and the improvements in stormwater effluent compliance this year. No effluent limitations will be established in this permit term. If compliance issues return however, effluent limitations may be required in order to meet the requirements of the TMDL and to meet the TMDL criteria. Refer to Table 5 below, for a summary of the TMDL endpoints and possible future effluent concentration limitations.

Table 5: Summary of the TMDL Endpoint Effluent Concentrations

Parameter	Monthly Average ($^{mg}/_{L}$)	Daily Maximum ($^{mg}/_{L}$)
Aluminum	0.75	0.75
Iron	1.5	3.0
Manganese	1.0	2.0

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard or water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. The prior monitoring requirements and effluent limits are shown in Table 6 below:

TABLE 6: Prior NPDES Permit Effluent Limitations for Outfall 001

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/month	Estimated
pH (S.U.)	Report	-	Report	-	1/month	Grab
Total Suspended Solids (mg/L)	-	-	Report	-	1/month	Grab
Total Zinc (mg/L)	-	-	Report	-	1/month	Grab
Total Iron (mg/L)	-	-	Report	-	1/month	Grab
Total Aluminum (mg/L)	-	-	Report	-	1/month	Grab
Total Manganese (mg/L)	-	-	Report	-	1/month	Grab
Fecal Coliform	-	-	Report	-	1/quarter	Grab

Monitoring Requirements for Outfall 001

Since sampling had previously been established at this outfall to monitor the effectiveness of the site's BMPs, this same level of monitoring will be continued and at the same monthly frequency. Note that the General Permit has recently added nitrogen and phosphorus to the monitored pollutants, so these will be added here as well. Since there are no specific WLA requirements of the Chartiers Creek TMDLs for this facility nor permit or any LAs for this stream segment, no effluent limitations have been promulgated for the associated pollutants. In the case of Chlordane and PCBs, these are not considered to have a reasonable potential of being discharge from this facility, so no monitoring of these TMDL pollutants has been included.

The prior permit imposed an instantaneous maximum limit for oil and grease, but this will be imposed going forward as a daily maximum, consistent with current permitting practice. The resulting monitoring requirements are shown in Table 7 below:

Table 7: Permit Monitoring Requirements for Outfall 001

Parameter	Mass (pounds)		Concentration (mg/L)			Monitoring Requirements
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	Estimated; 1/month
Fecal Coliform (No./100mL)	—	—	—	Report	—	Grab sample; 1/quarter
Total Suspended Solids	—	—	—	Report	—	Grab sample; 1/month
Total Nitrogen	—	—	—	Report	—	Grab sample; 1/month
Total Phosphorus	—	—	—	Report	—	Grab sample; 1/month
Total Aluminum	—	—	—	Report	—	Grab sample; 1/month
Total Iron	—	—	—	Report	—	Grab sample; 1/month
Total Manganese	—	—	—	Report	—	Grab sample; 1/month
Total Zinc	—	—	—	Report	—	Grab sample; 1/month
pH (S.U.)	—	—	—	Report	—	Grab sample; 1/month

Footnote: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2 +NO_3-N are measured in the same sample.

In Table 7 above, since once per quarter or once per month monitoring has been imposed, averaging over a month will only typically occur when extra samples are taken. Therefore, no average reporting will be imposed, only daily maximum values. Note also that monitoring for fecal coliform has been continued at a quarterly frequency as set previously.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model
☐	Toxics Management Spreadsheet
☐	TRC Model Spreadsheet
☐	Temperature Model Spreadsheet
☒	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.
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