pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Amendment, Major**
Facility Type	**Industrial**
Major / Minor	**Minor**

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

Application No.	**PA0081655 A-1**
APS ID	**710519**
Authorization ID	**1354564**

Applicant and Facility Information

Applicant Name	**Philadelphia Mixing Solutions Ltd**	Facility Name	**Philadelphia Mixing Solutions**
Applicant Address	1221 E Main Street Palmyra, PA 17078-9506	Facility Address	1221 East Main Street Palmyra, PA 17078
Applicant Contact	Mark Garrett	Facility Contact	Mark Garrett
Applicant Phone	(717) 832-8848	Facility Phone	(717) 832-8848
Client ID	278225	Site ID	245886
SIC Code	3569	Municipality	Palmyra Borough
SIC Description	Manufacturing - General Industrial Machinery, Nec	County	Lebanon
Date Application Received	May 14, 2021	EPA Waived?	Yes
Date Application Accepted	May 26, 2021	If No, Reason	

Purpose of Application: Permit amendment to add a storm water outfall

Summary of Review

1.0 General Discussion

This factsheet is developed for amendment of an existing NPDES permit for discharge of water from an aerator test facility. The facility discharges untreated water intermittently from an aeration test tank (50' x 60' x 34SWD) to Killinger Creek in North Londonderry Township, Lebanon County. Philadelphia Mixer shares a gravity outfall with the Palmyra Borough STP. Palmyra Borough STP was abandoned and the outfall is now used by Philadelphia Mixer, which pumps their wastewater to the outfall. Telemetry is used to control the Philadelphia Mixer effluent pump. Philadelphia Mixer's aeration tank is normally used one to two times per month. One to two days are required to empty each test run depending on the quantity in the tank. Prior to initiating the aerator testing procedure, the water supplied by PA American Water in the test tank is de-aerated by the addition of sodium sulfide and cobalt chloride. Cobalt chloride is a catalytic converter used to enable the sodium sulfide to function. Several aerator tests are performed with single filling of water before it must be replaced with fresh water. Discharge volume is calculated using depth markings on the test tanks. Sodium hydroxide or hydrochloric acid are used for pH control if needed. Two additional test tanks are available at the site one inground concrete tank and the other is above ground. Both tanks along with the facility's sanitary wastewater are discharged to the Palmyra sanitary sewer collection system. The existing NPDES permit was issued on June 15, 2018 with effective date of July 1, 2018 and expiration date of June 30, 2023.

The permittee submitted this permit amendment request to add a storm water outfall to the permit. Activities and materials within the drainage area are waste shed (3 sided enclosures) for nonhazardous and hazardous waste, scrap metal shed, metal parts storage, emergency generator, transformers, waste dumpsters, and refueling for the underground diesel storage tank and generator. The drainage area to the outfall is about 753,588 square feet. There is one retention pond on the northeastern side of the property to store runoff and allow time for infiltration. If this retention pond reaches capacity, it overflows south to a

Approve	Deny	Signatures	Date
X		*J. Pascal Kwedza* J. Pascal Kwedza, P.E. / Environmental Engineer	January 21, 2022
X		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	January 25, 2022
X		*Maria D. Bebenek* Maria D. Bebenek, P.E., Program Manager	January 25, 2022

Summary of Review

detention pond along the road for flow rate control into the storm drain. All stormwater drains, drainage ditches, and retention basins are cleaned out periodically. Comprehensive clean-ups of outdoor storage and operational areas are also conducted on a quarterly basis. The areas around trash dumpsters are swept after the dumpster is unloaded or once a month. There is spill response equipment (absorbents) located around the facility in case of spills to prevent any discharge to storm drains. The activities conducted on the site fall under SIC code 3569 and does not require general storm water coverage. The proposed storm water outfall will be identified as Outfall 002, see the report for further details. A topographic map showing the discharge location is presented in attachment A. This factsheet addresses the addition of the storm water outfall only. Refer to the factsheet developed in support of the existing permit for basis of other limits in the permit.

1.1 Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit amendment 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.

1.2 Existing Permit limits:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS	
	Mass Units (Lbs./Day)		Concentrations (mg/l)				
Discharge Parameter	Average Monthly	Max Daily	Minimum	Average Monthly	Max Daily	Minimum Frequency	Required Sample Type
Flow (mgd)	Monitor & Report	Monitor & Report	XXX	XXX	XXX	1/discharge	Estimated
pH (S.U.)	XXX	XXX	6.0 to 9.0 at all times			1/discharge	Grab
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	1/discharge	Grab
Total Sulfate	XXX	XXX	XXX	XXX	Report	1/discharge	Grab
Total Sodium	XXX	XXX	XXX	XXX	Report	1/discharge	Grab

1.3 Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.5
Latitude	40º 19' 29.95"	Longitude	-76º 33' 20.96"
Quad Name	Palmyra	Quad Code	1633
Wastewater Description:	Intermittent Discharge		

Receiving Waters	Killinger Creek	Stream Code	09705
NHD Com ID	56399247	RMI	0.75
Drainage Area	13.97	Yield (cfs/mi^2)	USGS Gage Station
Q_{7-10} Flow (cfs)	1.96	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-D	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Pathogens		
Source(s) of Impairment	Agriculture, Source Unknown		
TMDL Status	Final	Name	Quittapahilla Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	20	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		PA American Water Company	
PWS Waters	Swatara Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	12

Changes Since Last Permit Issuance: None

1.3.1 Water Supply Intake

The closest water supply intake located downstream from the discharge is PA American Water Company, in South Hanover Township, Dauphin County on the Swatara Creek. The distance downstream from the discharge to the intake is approximately 12 miles. The discharge will have no impact on the intake.

1.4 Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	40º 19' 2.20"	Longitude	-76º 34' 15.91"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Killinger Creek (TSF, MF)	Stream Code	09706
NHD Com ID	56399371	RMI	0.7000
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-D	Chapter 93 Class.	TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow regime modification, Pathogens, Siltation		
Source(s) of Impairment	Agriculture, Agriculture, Source Unknown		
TMDL Status	Final	Name	Quittapahilla Creek Watershed

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

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

Changes Since Last Permit Issuance: Storm water outfall. See report for details**.**

1.5 Stormwater Requirements

In general, NPDES PAG-03 General Stormwater Permit Requirements are used as the minimum standards for sampling and BMP requirements for individual industrial wastewater permit. The activities at the site fall under SIC code 3569, but no specific Appendices of NPDES PAG 03 general permit are applicable to this SIC code. Typically, the requirements in Appendix J apply to stormwater discharges associated with industrial activity from facilities whose industrial activity is not described by any other appendix and are designated as needing a permit in accordance with the Pennsylvania Clean Streams Law and/or 40 CFR § 122.26. The parameters presented on the table below will be monitored semi-annually. Total Aluminum, Total Iron, Total Lead, pH and Total Copper have been added to the table based on Best Professional Judgement since scrap metals and other waste materials are stored on site. The permittee shall monitor and report analytical results for the parameters listed below semi-annually on DMRs for Outfall 002. The benchmark values listed on the table are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, the permittee shall submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan

Parameter (mg/l)	Minimum Measuring Frequency	Sample Type (mg/l)	Benchmark Values
pH (S.U)	1 / 6months	Grab	XXX
Total Suspended Solids (TSS)	1 / 6months	Grab	100
Oil and Grease	1 / 6months	Grab	120
Total Aluminum	1 / 6months	Grab	XXX
Total Copper	1 / 6months	Grab	XXX
Total Iron	1 / 6months	Grab	XXX
Total Lead	1 / 6months	Grab	XXX

1.6 Anti-Degradation (93.4)

The effluent limits for this discharge 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. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

1.7 Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

1.8 303d Listed Streams:

The discharge is located on a stream segment that is designated on the 303(d) list as impaired, and the impairment is due to nutrients from agricultural activities in the watershed. TMDL was approved in 2000 but no waste load was allocated to this facility on Killinger creek. This facility will not add nutrients to the stream. From the discharge location, Killinger creek goes through a concrete channel till the confluence with Quitapahilla creek. Downstream from confluence, Quitapahilla creek is not nutrient impaired. No action is warranted at this time.

1.9 Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality. The permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs).

1.10 Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples can be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) and if the Method Detection Limits are less than the effluent limits. The sampling location must be after the last treatment unit and prior to discharge to the receiving water. If no discharge occurs during the reporting period, "no discharge" shall be reported on the DMR

2.0 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/discharge	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/discharge	Grab
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab
Total Cobalt	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab
Total Sodium	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab
Sulfate	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab
Chloride	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab
Bromide	XXX	XXX	XXX	XXX	Report	XXX	1/discharge	Grab

Compliance Sampling Location: Outfall 001

2.1 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 002, Effective Period: Permit Effective Date through Permit Expiration Date.

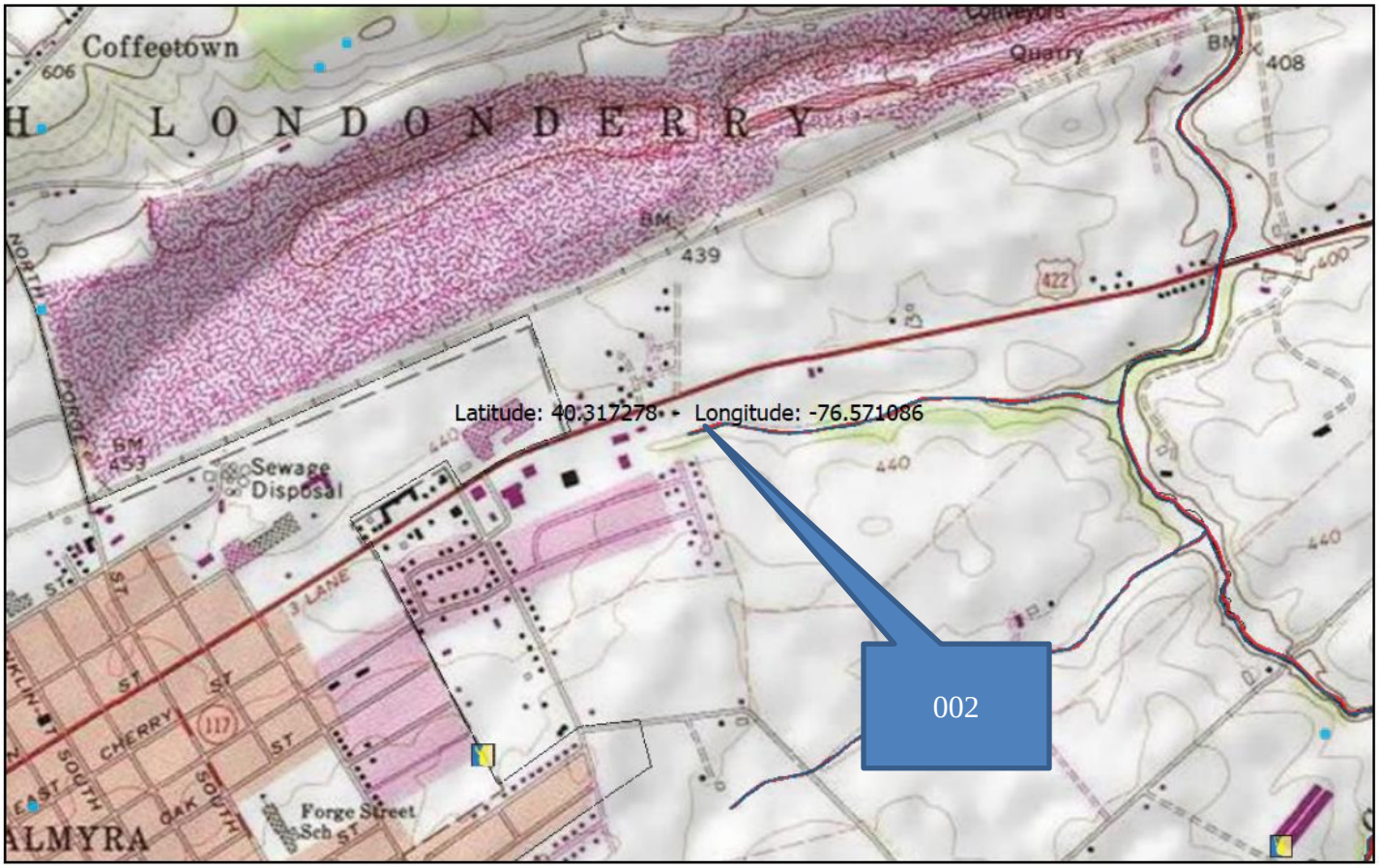
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002

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

Attachments

A. Topographical Map showing stormwater discharge location



January 20, 2022

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km