pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Amendment, Major**	**NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER**	Application No.	**PA0001228 A-1**
Facility Type	**Industrial**		APS ID	**1006168**
Major / Minor	**Minor**		Authorization ID	**1296200**

Applicant and Facility Information

Applicant Name	**Curtiss Wright Corp**	Facility Name	**Curtiss Wright Electro Mechanical Corp**
Applicant Address	1000 Wright Way Cheswick, PA 15024-1008	Facility Address	1000 Wright Way Cheswick, PA 15024-1008
Applicant Contact	Brian Eckels	Facility Contact	Heather List
Applicant Phone	724-275-5000	Facility Phone	724-275-5755
Client ID	208140	Site ID	241874
SIC Code	3621	Municipality	Harmar Township
SIC Description	Manufacturing - Motors And Generators	County	Allegheny
Date Application Received	November 14, 2019	EPA Waived?	Yes
Date Application Accepted	November 20, 2019	If No, Reason	

Purpose of Application: Permit Amendment to include an additional Internal Monitoring Point

Summary of Review

The Department received an NPDES amendment application from Curtiss Wright Electro-Mechanical Corporation on November 14, 2019. The site operations consist of manufacturing and testing of mechanical equipment with SIC codes of 3561 (Pumps and Pumping Engineering), 3621 (Motors and Generators), and 3559 (Nuclear Control Rod Drive Mechanisms).

Curtiss-Wright Electro-Mechanical Corporation manufactures pumps, motors, generators and other components for both nuclear and non-nuclear applications. Activities include machining, cutting, grinding, welding and assembly of stainless-steel parts to fine tolerance. The facility refurbishes and repairs equipment used at existing nuclear power facilities. Repair and manufactured pumps are tested in “test loops”. When testing occurs, water is continuously recirculated throughout the test loop so the pumps can be evaluated under various conditions. Test runs can last from a few days to multiple months. Discharges of test loop water occurs when a pump is inserted or removed from the test loop. This results in batch discharges. The amendment is to amend the August 24, 2018 NPDES permit to include a new IMP (IMP 133) that will discharge non-contact cooling water from a new test loop, Test Loop Y-2.

Test Loop Y-2 will consist of a submersible pump that is submerged during the test. The test will be conducted in an open-top tank, filled with approximately 20,000 gallons of cooling water. Well water will be used as the cooling water, which will be continuously flowed into and out of the tank at a rate of approximately 0.0288 MGD. The flow rate may vary depending on testing needs but will be between 0.0144 MGD and 0.0432 MGD. No chemical additives will be used. The well waster used as cooling water will contact the exterior of the pump. The cooling water from the tank will discharge to Outfall 003 and will be monitored at IMP 133. A closed loop piping system of primary test water will be flowed through the pump. Water from the cooling tower will be used as the primary water, which will be discharge to the sanitary sewer. The first prototype test is anticipated to begin as early as August of 2020. The first test of the prototype will take approximately three months, or 180 hours of run time. There are currently no orders for products after the prototype. This means that the prototype test may be the only one. However, if additional orders are received after the prototype testing is compete, subsequent tests will be

Approve	Deny	Signatures	Date
X		Adam Olesnanik / Environmental Engineering Specialist	11-21-19
✓		Michael E. Fifth / P.E. / Environmental Engineer Manager	11/22/19

Summary of Review

completed at an estimated frequency of 2 to 4 test per year, beginning approximately one-year after the order is received. Each product after the prototype is estimated to only require 1 month of testing, compared to the 3 months required for the prototype test.

The site has six outfalls (001 through 006), seven existing internal monitoring points (113, 123, 303, 403, 603, 901, and 903), and is proposing to add an additional internal monitoring point (IMP 133). Outfalls 002, 004, 005, and 006 received only stormwater. Outfall 001 received stormwater, non-contact cooling water, and discharges from IMP 901. IMP 901 receives discharge water from test loops using DI water. Outfall 003 received stormwater, non-contact cooling water, and discharges from IMPs 113, 123, 303, 403, 603, 903, and the proposed IMP 133. IMP 403 and 603 receive discharge water from test loops using DI water. IMP 113, 123, 303, and 903 receive discharge water from test loops that have lithium hydroxide as a chemical additive. The proposed IMP 133 received discharge water from a test loop using filtered well water. The purpose of having internal monitoring points is to monitor the discharge from the individual test loops that feed to Outfall 001 or Outfall 003. Outfalls 002, 003, 004, 005, and 006 discharge to an unnamed tributary to the Allegheny River designated in 25 PA Code, Chapter 93 as a Warm Water Fishery and Outfall 001 discharges to a drainage swale to the Allegheny River. No changes are being proposed for all of the existing outfalls and IMPs, and the limitations imposed on these points will not be discussed in this fact sheet.

The permittee has no open violations.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003 (IMP 113, 123, 303, 403, 603, 903, & 133)	Design Flow (MGD)	0.277
Latitude	40º 33' 10”	Longitude	-79º 48' 50"
Quad Name	New Kensington West	Quad Code	1407
Wastewater Description:	IW Process Effluent without ELG		

Receiving Waters	Unnamed Tributary to Allegheny River	Stream Code	42368
NHD Com ID	123972662	RMI	0.80
Drainage Area	0.0679	Yield (cfs/mi^2)	0.006
Q_{7-10} Flow (cfs)	0.000268	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	900	Slope (ft/ft)	0.0001
Watershed No.	18-A	Chapter 93 Class.	WWF
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	Oakmont Borough Municipal Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,390
PWS RMI	13.3	Distance from Outfall (mi)	2.24

Development of Effluent Limitations

IMP No. 133 **Design Flow (MGD)** 0.0288
Wastewater Description: Non-contact cooling water from Test Loop Y-2

Technology Based Effluent limits

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1) as indicated in Table 1.

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code §§ 95.2(1) as indicated in Table 1.

Dissolved iron limitations are imposed pursuant to 25 Pa. Code §§ 95.2(4).

Table 1: TBELs for IMP 133

Parameter	Monthly Average	Daily Maximum	Units
Flow	Monitor and Report		MGD
Iron, dissolved	Report	7.0	$^{mg}/_{L}$
pH	Not less than 6.0 nor greater than 9.0		S.U.

As non-contact cooling water, temperature limitations are required; however, the temperature limitations will not be imposed at the internal monitoring point and are imposed at the discharge point, Outfall 003. The Temperature is limited at the discharge point because the waste streams from the other IMPs can combine and influence the temperature of the discharge.

The discharge is similar to the other test loop discharges at the site; therefore, the limits imposed on the other IMPs for the Test Loop discharges will be imposed at IMP 133. These limitations were originally imposed on a BPJ basis using limitations that are imposed on hydrostatic testing discharges.

Table 2: Proposed BPJ Limits at IMP 133

Parameter	Monthly Average	Daily Maximum	Monitor Frequency	Sample Type
Flow (MGD)	Monitor and Report		2/month	Estimate
Total Suspended Solids (mg/L)	30	60	2/month	Grab
Dissolved Oxygen (mg/L)	-	5.0 minimum	2/month	Grab
Iron, dissolved (mg/L)	Report	7.0	2/month	Grab
pH (S.U.)	Not less than 6.0 nor greater than 9.0		2/month	Grab

Water Quality Based Effluent Limits

Due to the facilities location there is no upland flow contribution at the point of discharge. The receiving stream has a Q_{7-10} of zero. For this reason, water quality-based temperature limits are not proposed at IMP 113. Whenever industrial facilities discharge wastewater to an intermittent or zero-flow stream, the discharges must meet the water quality criteria published in PA Code Chapter 93.8.

Anti-Backsliding

The previous permit limitations imposed at IMP 133 can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l); however, IMP 133 is new to the permit and does not have existing limitations imposed in the current permit.

Proposed Final Effluent Limitations for IMP 133

The proposed final effluent limitation and monitoring frequency for IMP 133 is displayed below in Table 3.

Table 3: Proposed Final Limits at IMP 133

Parameter	Monthly Average	Daily Maximum	Monitor Frequency	Sample Type
Flow (MGD)	Monitor and Report		2/month	Estimate
Total Suspended Solids (mg/L)	30	60	2/month	Grab
Dissolved Oxygen (mg/L)	-	5.0 minimum	2/month	Grab
Iron, dissolved (mg/L)	Report	7.0	2/month	Grab
pH (S.U.)	Not less than 6.0 nor greater than 9.0		2/month	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: