

Michigan Department of Environmental Quality- Water Bureau
WASTEWATER DISCHARGE PERMIT APPLICATION
SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PRINT

FACILITY NAME Palisades Nuclear Power Plant	NPDES PERMIT NUMBER MI0001457	OUTFALL NUMBER 000 Intake
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9. WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the MDEQ under separate correspondence. The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this Application.

A. Are there water treatment additives in the discharge from this facility?

☒ Yes.

☐ No. Proceed to Item 10.

B. Have these water treatment additives been previously approved?

☒ Yes. Submit a list of the previously-approved water treatment additives and the date on which they were approved. The information listed in Item C., Items 1-8 shall be updated if it has changed since the previous approval.

☐ No. Continue with Item C.

C. Submit a list of water treatment additives that are or may be discharged from the facility. Applicants are required to submit the information listed below for each additive.

1. The water treatment additive Material Safety Data Sheet.
2. The proposed water treatment additive discharge concentration.
3. The discharge frequency (i.e., number of hours per day, week, etc.).
4. The outfall from which the water treatment additive is to be discharged.
5. The type of removal treatment, if any, that the water treatment additive receives prior to discharge.
6. The water treatment additive function (i.e., microbiocide, flocculant, etc.).
7. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either *Ceriodaphnia* sp., *Daphnia* sp., or *Simocephalus* sp.).
8. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2)(a) of the Water Quality Standards. Examples of tests that would meet this requirement include a 96-hour LC50 for rainbow trout, bluegill, or fathead minnow.

The required toxicity information (described in Items 7 and 8 above) is currently available in the Water Bureau files for the water treatment additives listed on the MDEQ's Internet page. To access that information, go to <http://www.michigan.gov/deq>, click on "Site Map," at the bottom of the right column under **Water Quality Monitoring**, click on "Assessment of Michigan Waters." Under the **Information** heading, click on the "Water Treatment Additive List." If you intend to use one of the water treatment additives on this list, only the information in Items 1 through 6 above needs to be submitted to the Water Bureau.

Note: The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive.

10. WHOLE EFFLUENT TOXICITY (WET) TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water(s) in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results on a separate sheet, unless the test has been submitted to the MDEQ in the last three years. For assistance with WET testing, see "Whole Effluent Toxicity Test Guidance and Requirements" in the Appendix.

11. CONCENTRATED ANIMAL FEEDING OPERATION (CAFO) INFORMATION. To be completed by CAFOs only

The applicant shall provide: Specific information about the number and type of animals, and type of housing; the type of containment and storage, and the total capacity for CAFO waste storage; CAFO waste storage structure design; the total number of acres under the control of the applicant that is available for land application of CAFO waste; the estimated amounts of CAFO waste generated per year; the estimated amounts of CAFO waste that is transferred to other persons per year; a list and map(s) showing the location of all land application fields; and all potential receiving waters for both the production and all land application areas. For additional information, see "CAFO Guidance and Requirements" in the Appendix.

This completes Section III. Return the completed Application (Sections I, III, and IV and any attachments) to one of the addresses on Page ii of this Application. If assistance is needed to complete this Application, contact the Permits Section.

Michigan Department of Environmental Quality- Water Bureau
WASTEWATER DISCHARGE PERMIT APPLICATION
SECTION III - Industrial and Commercial Wastewater

Section III is to be completed by all facilities classified as Industrial or Commercial facilities. Industrial and Commercial facilities include, but are not limited to, facilities that discharge or propose to discharge a wastewater generated by a production process, a service provided, or through a remediation project. Municipal and public facilities are not required to complete Section III (unless requesting authorization for discharges other than sanitary wastewater).

A. Facility Information

PLEASE TYPE OR PRINT

FACILITY NAME Palisades Nuclear Power Plant	NPDES PERMIT NUMBER MI0001457
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1. BUSINESS INFORMATION

☒ **No Change From Last Application**

A. Provide up to four Standard Industrial Classification (SIC) or North American Industry Classification System (NAICS) codes, in order of economic importance, which best describe the major products or services provided by this facility.

1. 4911	2.	3.	4.
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B. Indicate if this facility is a primary industry (refer to Table 1 of the Appendix to determine if this facility is a primary industry).

- ☒ Yes. This facility is a primary industry. Indicate the primary industry as identified in Table 1 of the Appendix: Steam Electric
- ☐ No. This facility is not a primary industry.

C. Is this facility a Concentrated Animal Feeding Operation (CAFO)?

- ☐ Yes. Continue with Section III.B.11.
- ☒ No.

2. WATER SUPPLY AND DISCHARGE TYPE

☐ **No Change From Last Application**

A. Identify all water sources entering the facility and treatment systems, and provide average flows. The volume may be estimated from water supply meter readings, pump capacities, etc. Provide the name of the source where appropriate (i.e., Grand River, Lake Michigan, City of Millpond). To submit additional information, see Page ii, Item 3.

	Name and Location of Source	Average Volume or Flow Rate	Units
Municipal Supply	South Haven	0.018	MGD
Surface Water Intake	Lake Michigan	141.12	MGD
Private Well	NA		
Other: _____	NA		

B. Identify water discharged by the facility and treatment systems, and provide average flows. If water is first used for one purpose and then is subsequently used for another purpose, indicate the type and amount of the last use. For example, if water is initially used for noncontact cooling water and then for process water, indicate the amount of process water. The amount of water from sources should approximate the amount of water usage. If they are different, provide an explanation.

	Average Flow Rate	Units		Average Flow Rate	Units
Process Wastewater	0.035	MGD	Sanitary Wastewater	0.018	MGD
Contact Cooling Water	NA		Regulated Storm Water	Unspecified	MGD
Noncontact Cooling Water	115.2	MGD	High Pressure Test Water	NA	
Groundwater Cleanup	NA		Other: <u>Evap Loss</u>	17.28	MGD

Note: For A and B above, indicate units as MGD (million gallons per day), MGY (million gallons per year), GPD (gallons per day), or other appropriate unit.

Michigan Department of Environmental Quality- Water Bureau
WASTEWATER DISCHARGE PERMIT APPLICATION
 SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

Complete a separate Section III.B. - Outfall Information (Pages 20-25) - for each outfall at the facility. Make copies of this blank section of the Application as necessary for additional outfalls.

PLEASE TYPE OR PRINT

FACILITY NAME Palisades Nuclear Power Plant				NPDES PERMIT NUMBER MI0001457		OUTFALL NUMBER 001	
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1. OUTFALL INFORMATION - Instructions for this item are on Page 3 of the Appendix. ☒ No Change From Last Application, Items A. – D.

A.	Receiving Water Lake Michigan	Hydrologic Unit Code (HUC) 04050002								
B.	County Van Buren	Township Covert								
C.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; padding: 5px;">Town 02S</td> <td style="width: 15%; padding: 5px;">Range 17W</td> <td style="width: 15%; padding: 5px;">Section 05</td> <td style="width: 15%; padding: 5px;">1/4 NW</td> <td style="width: 15%; padding: 5px;">1/4, 1/4 SE</td> <td style="width: 20%; padding: 5px;">Private (French) Land Claim</td> </tr> </table>	Town 02S	Range 17W	Section 05	1/4 NW	1/4, 1/4 SE	Private (French) Land Claim			
Town 02S	Range 17W	Section 05	1/4 NW	1/4, 1/4 SE	Private (French) Land Claim					
D.	Latitude 42 19' 23"	Longitude 86 18' 56"								

E. Type of Wastewater Discharged (check all that apply to this outfall): ☒ No Change From Last Application, Item E.

☒ Contact Cooling

☐ Groundwater Cleanup

☐ Hydrostatic Pressure Test

☒ Noncontact Cooling Water

☒ Process Wastewater

☐ Sanitary Wastewater

☐ Storm Water - not regulated

☒ Storm Water - regulated

☐ Storm water subject to effluent guidelines (indicate under which category): _____

☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" - in the Appendix) _____

F. What is the Maximum Design Flow Rate for this outfall: 135.2 MGD ☒ No Change From Last Application, Items F. – G.

G. What is the Maximum Authorized Discharge Flow for this outfall for the next five years?

Seasonal Dischargers _____ MGY (Continue with Item H).

Continuous Dischargers 135.2 MGD (Continue with Item I).

H. Seasonal Discharge:

List the discharge periods (by month) and the volume discharged in the space provided below.

From	Through	Actual Discharge Volume (MGD)	Annual Total
NA	NA	NA	
From	Through	Actual Discharge Volume (MGD)	
From	Through	Actual Discharge Volume (MGD)	
From	Through	Actual Discharge Volume (MGD)	

I. Continuous Discharge:

How often is there a discharge from this outfall (on average)? 24 Hours/Day 365 Days/Year

Batch dischargers are required to provide the following additional information:

Is there effluent flow equalization? ☐ Yes ☒ No

Batch Peak Flow Rate: _____ Number of batches discharged per day: _____

	Minimum	Average	Maximum
Batch Volume (gallons)			
Batch Duration (minutes)			

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2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE ☒ No Change From Last Application

Federal regulations require that different industries report different information, depending on the type of facility. The information below is used to determine the applicable federal regulations for this facility. An abbreviated list is in the Summary of Information to be reported by Industry Type section of the Appendix. Applicants are required to provide the name and the SIC or the NAICS code for each process at the facility. Facilities with production-based limits must report an estimated annual production rate for the next five years, or the life of the permit. If the wastestream is not regulated under federal categorical standards, the applicant is required to report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information, see Page ii, Item 3.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Cooling Water Blowdown

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production:
 The cooling towers typically provide cooled water to the condensor. A portion of the noncontact cooling tower flow rate is discharged directly to the mixing basin where flow is recorded and reported during discharge.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Treated miscellaneous low volume wastestreams

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production:
 TMLV waste water consists of generator blowdown, demineralizer backwash, regeneration waste, reverse osmosis filter back wash, turbine sump drainage, floor drain, lab waste and radwaste wastewater.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Treated radwaste wastewater (001D)

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production:
 This process removes suspended solids and radioactivity by collection, filtration, and demineralizer prior to discharge to 001D. See Section I - Item 10 detailed Flow diagram.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Turbine Sump drainage (001F)

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production:
 The turbine sump building sump collects filtered floor drainage from the turbine building which is treated by the oil/water separator prior to discharge to 001F. See Section I - Item 10 - Flow diagram.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Floor Drainage

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production:
 Floor drainage from secondary systems is drained to the turbine sump. Auxillary building floor drainage is processed through the radwaste system eventually to 001D. See Section I - Item 10 Flow diagram.

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PROCESS INFORMATION

- A. Name of the process contributing to the discharge: _____
- B. SIC or NAICS code: _____
- C. Describe the process and provide measures of production: