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Received 2-6-24
Application No. 202400019

January 30, 2024
Project No. 230288

Shane Nixon
District Supervisor
Michigan Department of Environment, Great Lakes, and Energy
2100 West M-32
Gaylord, MI 49735

ROP Renewal Application
Wolverine Power Supply Cooperative Incorporated
Alpine Power Plant, Elmira Michigan
SRN P0582

Fishbeck has prepared a Title V Renewable Operating Permit (ROP) Renewal Application for Wolverine Power Supply Cooperative Incorporated Alpine Power Plant, located at 7432 M-32, Elmira, Michigan (ROP No. MI-ROP-P0582-2019a). The Renewal Application is due no later than February 28th, 2024.

This Renewal Application includes:

- EGLE ROP Application Form EQP 6000
- EGLE ROP Application Additional Information Form AI-001
- A marked up copy of MI-ROP-P0582-2019a

An electronic copy of the application and supporting documents will be provided to EGLE, which reduces the EGLE application administrative completeness review to 15 days.

If you have any questions or require additional information, please contact me at 248.324.2146 or sajarret@fishbeck.com.

Sincerely,

Stephanie A Jarrett

Stephanie Jarrett
Senior Environmental Engineer

By email and UPS
Copy: Joe Hazewinkel – Wolverine Power Cooperative Incorporated (by email only)

EGLE

RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
P0582		221112	MI-ROP-P0582-2019a	

Source Name: Wolverine Power Supply Cooperative Incorporated Alpine Power Plant

Street Address: 7432 M-32

City	State	ZIP Code	County
Elmira	MI	49730	Otsego

Section/Town/Range (if address not available)

Source Description: Wolverine Power Supply Cooperative, Inc., Alpine Power Plant is a natural gas-fired electric utility located on Highway M-32 about a mile east of Elmira, Michigan. The facility is in a rural area. Alpine Power Plant generates electricity and supplies it to the electrical power grid using two 203-MW natural gas fired, simple cycle turbines. In addition to the turbine-powered electrical generators, the facility includes two natural gas fired fuel heaters, rated at 3.5 MMBTU/hr heat input each, to preheat fuel before it goes to the generators; a diesel engine powering an emergency generator rated at 1,500 kW; a 347 HP diesel engine powering an emergency fire pump; and assorted support equipment, including natural gas-fired building heaters.

☐ Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.

OWNER INFORMATION

Owner Name	Section Number (if applicable)
Wolverine Power Supply Cooperative Inc.	

Mailing address (☐ check if same as source address)

10125 West Watergate Road

City	State	ZIP Code	County	Country
Cadillac	MI	49601	Wexford	USA

☐ Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: P0582	Section Number (if applicable):

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name			Title	
Joseph A Hazewinkel			Director of Environmental Affairs	
Company Name & Mailing address (☐ check if same as source address)				
Wolverine Power, 10125 West Watergate Road				
City	State	ZIP Code	County	Country
Cadillac	MI	49601	Wexford	USA
Phone number		E-mail address		
231.779.3367		jhazewinkel@wpsci.com		

Contact 2 Name (optional)			Title	
Stephanie Jarrett			Senior Environmental Engineer	
Company Name & Mailing address (☐ check if same as source address)				
Fishbeck, 39500 Mackenzie Drive				
City	State	ZIP Code	County	Country
Novi	MI	48337	Oakland	USA
Phone number		E-mail address		
248.324.2146		sajarrett@fishbeck.com		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Joseph J. Baumann			Chief Legal Officer	
Company Name & Mailing address (☐ check if same as source address)				
Wolverine Power, 10125 West Watergate Road				
City	State	ZIP Code	County	Country
Cadillac	MI	49601	Wexford	USA
Phone number		E-mail address		
231.775.5700		jbaumann@wpsci.com		

Responsible Official 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

☐ Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

SRN: P0582	Section Number (if applicable):

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.	
☒ Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP using official version from the AQD website (required)	☐ Stack information
☐ Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	☒ Acid Rain Permit Initial/Renewal Application
☒ Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	☒ Cross-State Air Pollution Rule (CSAPR) Information
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	☒ Paper copy of all documentation provided (required)
☐ Compliance Assurance Monitoring (CAM) Plan	☒ Electronic documents provided (optional)
☒ Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	☐ Other, explain:

Compliance Statement	
This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	☒ Yes ☐ No
The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.	
If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.	

Name and Title of the Responsible Official (Print or Type)

Joseph J Baumann, Chief Legal Officer

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

JJBaumann — 1/30/24

Signature of Responsible Official — **Date**

SRN: P0582	Section Number (if applicable):

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from **all** emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☐ Yes ☒ No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	☐ Yes ☒ No ☐ Yes ☒ No
C4.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO_2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.	☐ Yes ☒ No
C5.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.	☐ Yes ☒ No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	☒ Yes ☐ No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	☒ Yes ☐ No ☒ Yes ☐ No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	☐ Yes ☒ No ☐ Yes ☒ No ☐ ☐
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes, then a copy must be submitted as part of the ROP renewal application.	☒ Yes ☐ No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	☐ Yes ☒ No
☒	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-Acid Rain, AI-PTE, AI-Plans	

SRN: P0582	Section Number (if applicable):

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. ☐ Yes ☒ No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**

SRN: P0582	Section Number (if applicable):

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to **all** emission units and **all** applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If Yes, identify changes and additions on Part F, Part G and/or Part H.	☒ Yes ☐ No
E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identity the stack(s) that was/were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If Yes, complete Part F with the appropriate information.	☐ Yes ☒ No
E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	☐ Yes ☒ No

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: **AI-**

SRN: P0582	Section Number (if applicable):

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. If No, go to Part G. ☐ Yes ☒ No

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. ☐ Yes ☐ No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. ☐ Yes ☐ No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☐ Yes ☐ No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. ☐ Yes ☐ No

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: **AI-**

SRN: P0582	Section Number (if applicable):

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H. ☐ Yes ☒ No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☐ Rule 290 process with limited emissions		

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI-**

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes	☐ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes	☒ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes	☒ No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes	☒ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes	☒ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
H7. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes	☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. The AQD inadvertently changed Special Condition FG-CTG V.3 in the 2019a ROP modification. Original PTI condition only required testing at maximum load. The 5-year testing requirement for PM_{10}, $PM_{2.5}$, and VOC [fine particulate matter less than 10 microns and 2.5 microns, respectively and volatile organic compounds] outlined in ROP FGCTG V.3 appears was changed from testing at the maximum emitting normal operating condition in PTI 206-14 to testing at 3 loads or other loads approved by EGLE-AQD. The District agreed that PM_{10}, $PM_{2.5}$, and VOC testing condition should be changed back to the 206-14 PTI condition during the ROP renewal cycle. – See May 4, 2021 email between Shane Nixon and Stephanie Jarrett.	☒ Yes ☐ No
H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: P0582	Section Number (if applicable):

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15.	Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H16.	Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H17.	Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**Mark-Up

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: P0582	Section Number (if applicable):

1. Additional Information ID
AI-Mark-Up

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

A marked up copy of MI-ROP-P0582-2019a is attached. Wolverine Power is only requesting to change Special Condition FGCTG V.3 back to the original language of PTI 206-14.

Page of

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

EFFECTIVE DATE: August 28, 2019

REVISION DATE: May 25, 2021

ISSUED TO:

Wolverine Power Supply Cooperative Incorporated
Alpine Power Plant

State Registration Number (SRN): P0582

LOCATED AT:

7432 M-32, Elmira, Otsego County, Michigan 49730

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-P0582-2019a

Expiration Date: August 28, 2024

Administratively Complete ROP Renewal Application Due Between
February 28, 2023 and February 28, 2024

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Rule 210(1) of the administrative rules promulgated under Act 451, this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-P0582-2019a

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Shane Nixon

Shane Nixon, Cadillac / Gaylord District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**

- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**

- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"[2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
    d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**

c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	Less than 249 tpy[2]	12-month rolling time period as determined at the end of each calendar month	All process equipment source wide	SC VI.2	**R 336.1205(1)**
2. CO	Less than 249 tpy[2]	12-month rolling time period as determined at the end of each calendar month	All process equipment source wide	SC VI.2	**R 336.1205(1)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205(1))**

2. The permittee shall keep, in a satisfactory manner, records of monthly and 12-month rolling NOx and CO emissions for SOURCE-WIDE, as required by SC I.1 and SC I.2. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUCTG1	A nominal 203 MW natural gas fired simple cycle combustion turbine generator with a peak heat input of 2,045 MMBTU/hr.	06-13-2016	FGCTG
EUCTG2	A nominal 203 MW natural gas fired simple cycle combustion turbine generator with a peak heat input of 2,045 MMBTU/hr.	05-23-2016	FGCTG
EUEMERGEN	A nominal 1,500 KW emergency electrical generator powered by a diesel-fueled reciprocating internal combustion engine with a model year of 2007 or later, and a displacement of less than 10 liters/cylinder.	8-23-2016	NA
EUFIREPUMP	An emergency fire pump powered by a compression ignition engine rated at a nominal 175 horsepower and a displacement less than 30 liters per cylinder.	04-18-2016	NA
EUFUELHTR1	A nominal 3.5 MMBTU/hr heat input natural gas fired fuel gas heater.	06-13-2016 11-19-2020	FGFUELHTR
EUFUELHTR2	A nominal 3.5 MMBTU/hr heat input natural gas fired fuel gas heater.	05-23-2016 11-19-2020	FGFUELHTR

EUEMERGEN
EMISSION UNIT CONDITIONS

DESCRIPTION

A nominal 1,500 KW emergency electrical generator powered by a diesel-fueled reciprocating internal combustion engine with a model year of 2007 or later, and a displacement of less than 10 liters/cylinder.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Non-methane hydrocarbon (NMHC) + NOx	6.4 g/kW-hr [2]	Hourly	EUEMERGEN	SC V.1 SC VI.1	**40 CFR 60.4202(a)** **40 CFR 60.4205(b)** **40 CFR 89.112, Table 1**
2. CO	3.5 g/kW-hr [2]	Hourly	EUEMERGEN	SC V.1 SC VI.1	**40 CFR 60.4202(a)** **40 CFR 60.4205(b** **40 CFR 89.112, Table 1**
3. PM	0.20 g/kW-hr [2]	Hourly	EUEMERGEN	SC V.1 SC VI.1	**40 CFR 60.4202(a)** **40 CFR 60.4205(b** **40 CFR 89.112, Table 1**
4. NOx	18.1 pph [2]	Hourly	EUEMERGEN	SC V.2	**R 336.1205(1)** **40 CFR 52.21(c & d)**
5. CO	2.0 pph [2]	Hourly	EUEMERGEN	SC V.2	**R 336.1205(1)** **40 CFR 52.21(d)**
6. PM10	0.2 pph [2]	Hourly	EUEMERGEN	SC V.2	**R 336.1205(1),** **40 CFR 52.21(c & d)**
7. PM2.5	0.2 pph [2]	Hourly	EUEMERGEN	SC V.2	**R 336.1205(1)** **40 CFR 52.21(c & d)**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EUEMERGEN with a maximum sulfur content of 15 ppm (0.0015%) by weight and a minimum Cetane index of 40, or a maximum aromatic content of 35 volume percent.[2] **(R 336.1205(1), R 336.1402(1), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMERGEN for more than 100 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 100 hours includes the hours for the purpose of emergency operation, necessary maintenance checks and readiness testing as described in SC III.2.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**

2. The permittee may operate EUEMERGEN for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. EUEMERGEN may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity.[2] **(40 CFR 60.4211(f))**

3. If EUEMERGEN is a certified engine, the permittee shall meet the following requirements:
   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
   b. Change only those emission-related settings that are permitted by the manufacturer; and
   c. Meet the requirements as specified in 40 CFR Parts 89, 94, and/or 1068, as they apply to EUEMERGEN.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine.[2] **(40 CFR 60.4211(a & c))**

4. If EUEMERGEN is a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan and records of conducted maintenance for EUEMERGEN and must, to the extent practicable, maintain and operate EUEMERGEN in a manner consistent with good air pollution control practice for minimizing emissions.[2] **(40 CFR 60.4211(g)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUEMERGEN with a non-resettable hours meters to track the operating hours.[2] **(R 336.1205(1), R 336.1225, 40 CFR 60.4209)**

2. The nameplate electrical capacity of EUEMERGEN shall not exceed 1,500 kW, as certified by the equipment manufacturer.[2] **(R 336.1205(1), R 336.1225, 40 CFR 60.4202, 40 CFR 89.112(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Unless EUEMERGEN has been certified by the manufacturer as required by 40 CFR Part 60, Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211; the permittee shall conduct an initial performance test to demonstrate compliance with the emission limits in SC I.1 thru SC I.7 for EUEMERGEN within one year after EUEMERGEN is no longer configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions or within one year after the permittee changes emissions-related settings in a way that is not permitted by the manufacturer, to demonstrate compliance with the limits in 40 CFR 60.4205(b). If a performance test is required, the performance test shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to AQD. The final plan must be approved by AQD prior to testing. After conducting the initial performance test, the permittee shall conduct subsequent performance testing, for non-certified engines, every 8,760 hours of operation or three years, whichever comes first. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4211(g)(2), 40 CFR 60.4212)**

2. Upon request of the AQD District Supervisor, the permittee may be required to verify NOx, CO, PM10 and PM2.5 emission rates in SC 1.4-1.7 from EUEMERGEN by testing at owner's expense, in accordance with Department requirements. The hourly emission rate shall be determined by the average of three test runs per the method requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Supervisor. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and the District Office within 60 days following the last date of the test.[2] **(R 336.1213(3), R 336.1225, R 336.2001, R 336.2003, R 336.2004. 40 CFR 52.21(c & d)).**

3. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10/PM2.5	40 CFR Part 51, Appendix M
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

4. The permittee shall notify the AQD Technical Programs Unit and the District Office not less than 7 days of the time and place before performance tests are conducted. **(R 336.1213(3), R 336.2001(4))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUEMERGEN meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60, Subpart IIII. If EUEMERGEN becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(40 CFR 60.4211(g)(3))**

2. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUEMERGEN, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of EUEMERGEN, including what classified the operation as emergency and how many hours are spent for non-emergency operation.[2] **(R 336.1205(1)), 40 CFR 60.4211(f), 40 CFR 60.4214(b))**

3. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUEMERGEN, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b). The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil.[2] **(R 336.1205(1), R 336.1402(1), 40 CFR 80.510(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

III. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-EMERGEN	12[2]	14[2]	**R 336.1225** **40 CFR 52.21(c & d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and IIII, as they apply to EUEMERGEN.[2] **(40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and ZZZZ, as they apply to EUEMERGEN.[2] **(40 CFR Part 63, Subparts A & ZZZZ, 40 CFR 63.6595)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUFIREPUMP
EMISSION UNIT CONDITIONS

DESCRIPTION

An emergency fire pump powered by a compression ignition engine rated at a nominal 175 horsepower and a displacement less than 30 liters per cylinder.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NMHC + NOx	4.0 g/kW-hr [2]	Hourly	EUFIREPUMP	SC V.1 SC VI.2	**40 CFR 60.4205(c)**
2. CO	3.5 g/kW-hr [2]	Hourly	EUFIREPUMP	SC V.1 SC VI.2	**40 CFR 60.4205(c)**
3. PM	0.20 g/kW-hr [2]	Hourly	EUFIREPUMP	SC V.1 SC VI.2	**40 CFR 60.4205(c)**
4. NOx	1.7 pph [2]	Hourly	EUFIREPUMP	SC V.2	**R 336.1205(1)** **40 CFR 52.21(c & d)**
5. CO	1.1 pph [2]	Hourly	EUFIREPUMP	SC V.2	**R 336.1205(1)** **40 CFR 52.21(d)**
6. PM10	0.1 pph [2]	Hourly	EUFIREPUMP	SC V.2	**R 336.1205(1)** **40 CFR 52.21(c & d)**
7. PM2.5	0.1 pph [2]	Hourly	EUFIREPUMP	SC V.2	**R 336.1205(1)** **40 CFR 52.21(c & d)**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel, in EUFIREPUMP with a maximum sulfur content of 15 ppm (0.0015%) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent.[2] **(R 336.1205(1), R 336.1402(1), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUFIREPUMP for more than 100 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 100 hours includes the hours for the purpose of emergency operation, necessary maintenance checks and readiness testing as described in SC III.2.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**

2. The permittee may operate EUFIREPUMP for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. EUFIREPUMP may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing.[2] **(40 CFR 60.4211(f))**

3. If EUFIREPUMP is a certified engine, the permittee shall meet the following requirements:
   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
   b. Change only those emission-related settings that are permitted by the manufacturer; and
   c. Meet the requirements as specified in 40 CFR Part 89, 94, and/or 1068, as they apply to EUFIREPUMP.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine.[2] **(40 CFR 60.4211(a))**

4. If EUFIREPUMP is a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan and records of conducted maintenance for EUFIREPUMP and must, to the extent practicable, maintain and operate EUFIREPUMP in a manner consistent with good air pollution control practice for minimizing emissions.[2] **(40 CFR 60.4211(g)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUFIREPUMP with a non-resettable hours meters to track the operating hours.[2] **(R 336.1205(1), R 336.1225, 40 CFR 60.4209)**

2. The nameplate capacity of EUFIREPUMP shall not exceed 347 HP, as certified by the equipment manufacturer.[2] **(R 336.1205(1), R 336.1225, 40 CFR 60.4202, 40 CFR 89.112(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Unless EUFIREPUMP has been certified by the manufacturer as required by 40 CFR Part 60, Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211, the permittee shall conduct an initial performance test to demonstrate compliance with the emission limits in SC I.1 thru SC I.7 for EUFIREPUMP within one year EUFIREPUMP is no longer configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions or within one year after the permittee changes emissions-related settings in a way that is not permitted by the manufacturer, to demonstrate compliance with the limits in 40 CFR 60.4205(c). If a performance test is required, the performance test shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to AQD. The final plan must be approved by the AQD prior to testing. After conducting the initial performance test, the permittee shall conduct subsequent performance testing, for non-certified engines, every 8,760 hours or three years, whichever comes first. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4211(g)(2), 40 CFR 60.4212)**

2. Upon request of the AQD District Supervisor, the permittee may be required to verify NOx, CO, PM10 and PM2.5 emission rates in SC I.4 thru SC I.7 from EUFIREPUMP by testing at owner's expense, in accordance with Department requirements. The hourly emission rate shall be determined by the average of three test runs per the method requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Supervisor. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1213(3), R 336.1225, R 336.2001, R 336.2003, R 336.2004. 40 CFR 52.21(c & d)).**

3. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10/PM2.5	40 CFR Part 51, Appendix M
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

4. The permittee shall notify the AQD Technical Programs Unit and District Office not less than 7 days of the time and place before performance tests are conducted. **(R 336.1213(3), R 336.2001(4))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205(1), 40 CFR 52.21 (c & d))**

2. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUFIREPUMP meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60, Subpart IIII. If EUFIREPUMP becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(40 CFR 60.4211(g)(2))**

3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUFIREPUMP, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of EUFIREPUMP, including what classified the operation as emergency and how many hours are spent for non-emergency operation.[2] **(R 336.1205(1), 40 CFR 60.4211(f), 40 CFR 60.4214(b))**

4. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUFIREPUMP, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b). The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil.[2] **(R 336.1205(1), R 336.1402(1), 40 CFR 80.510(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit a notification specifying whether EUFIREPUMP will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation.[2] **(40 CFR Part 60, Subpart IIII)**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-FIREPUMP	8[2]	16[2]	**R 336.1225** **40 CFR 52.21(c & d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and IIII, as they apply to EUFIREPUMP.[2] **(40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and ZZZZ, as they apply to EUFIREPUMP.[2] **(40 CFR Part 63, Subparts A & ZZZZ, 40 CFR 63.6595)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCTG	Two nominal 203 MW natural gas fired simple cycle combustion turbine generators, each with a peak load of 2,045 MMBTU/hr.	EUCTG1 EUCTG2
FGFUELHTR	Two nominal 3.5 MMBTU/hr heat input natural gas fired fuel gas heaters.	EUFUELHTR1 EUFUELHTR2

FGCTG
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two nominal 203 MW natural gas fired simple cycle combustion turbine generators, each with a peak load of 2,045 MMBTU/hr.

Emission Unit: EUCTG1, EUCTG2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	3.27E-2 lb/MMBTU Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.2	**R 336.1205(1) 40 CFR 52.21(c & d)**
2. NOx	15 ppm at 15 percent O_2 or 0.43 lb/MWh	Hourly	EUCTG1 and EUCTG2 each	SC. V.1	**40 CFR 60.4320(a)**
3. NOx	66.8 pph Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.2	**R 336.1205(1) 40 CFR 52.21(c & d)**
4. NOx	30 lb/event[2]	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
5. NOx	25 lb/event[2]	Each shutdown event	EUCTG1 and EUCTG2 each	SC VI.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
6. NOx	244 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	**R 336.1205(1) 40 CFR 52.21(c & d)**
7. CO	2.0E-2 lb/MMBTU Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.2	**R 336.1205(1) 40 CFR 52.21(d)**
8. CO	40.9 pph Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.2	**R 336.1205(1) 40 CFR 52.21(d)**
9. CO	320 lb/event[2]	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	**R 336.1205(1) 40 CFR 52.21(d)**
10. CO	336 lb/event[2]	Each shutdown event	EUCTG1 and EUCTG2 each	SC VI.3	**R 336.1205(1) 40 CFR 52.21(d)**
11. CO	246 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	**R 336.1205(1) 40 CFR 52.21(d)**

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
12. VOC as methane	1.40E-3 lb/MMBTU Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) R 336.1702(a)**
13. VOC as methane	2.9 pph Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) R 336.1702(a)**
14. PM10	6.6E-3 lb/MMBTU Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
15. PM10	13.5 pph Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
16. PM2.5	6.6E-3 lb/MMBTU Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
17. PM2.5	13.5 pph Not including startup / shutdown[2]	Hourly	EUCTG1 and EUCTG2 each	SC V.3	**R 336.1205(1) 40 CFR 52.21(c & d)**
18. CO_2	120 lb/MMBTU	Hourly	EUCTG1 and EUCTG2 each	SC II.1 SC VI.7	**40 CFR 60.5520(a & d)(1) 40 CFR Part 60, Subpart TTTT, Table 2**

II. MATERIAL LIMIT(S)

1. The permittee shall only combust natural gas in FGCTG.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 60.4330, 40 CFR 60.5520(d)(1))**

2. The total natural gas use for FGCTG shall not exceed 14,567 MMSCF per year on a 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**

3. The permittee shall not burn in FGCTG any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBTU) heat input.[2] **(40 CFR 60.4330(a)(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGCTG unless a Malfunction Abatement Plan (MAP) as described in Rule 911(2) is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.[2] **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c & d))**

2. The permittee shall not operate FGCTG unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the AQD District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved.[2] **(R 336.1205(1), R 336.1911, R 336.1912, 40 CFR 60.4333(a))**

3. Startup and shut down operations for each combustion turbine in FGCTG shall be minimized as specified in SC III.2. Startup is defined as the period of time from initial combustion of fuel until the unit reaches a minimum load of 101.2 MW of electrical output (loads greater than 50% of design capacity). Shutdown is defined as that period of time from the initial lowering of the turbine output below 101.2 MW of electrical output (50% of full operating load), with the intent to shut down, until fuel is no longer burned in the unit. **(R 336.1205(1))**[2]

4. The permittee shall not operate EUCTG1 or EUCTG2 unless low NOx and CO manufacturer installed combustion technologies are maintained and operated in a satisfactory manner, for each combustion turbine generator. Satisfactory manner includes operating and maintaining each unit in accordance with an approved MAP for FGCTG as required in SC III.1.[2] **(R 336.1205(1), R 336.1225, R 336.1910, 40 CFR 52.21(c & d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for FGCTG shall not exceed, on a fuel heat input basis, a nominal 2,045 MMBtu per hour for each combustion turbine generator.[2] **(R 336.1205(1), R 336.1225, 40 CFR52.21(c & d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas flow rate to EUCTG1 and EUCTG2 each on a continuous basis.[2] **(R 336.1205(1), 40 CFR 52.21(c & d))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EUCTG1 and EUCTG2 each on a continuous basis.[2] **(R 336.1205(1), 40 CFR 52.21(c & d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall verify the NOx emission rate in SC I.2 from each turbine, EUCTG1 and EUCTG2, at 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. Compliance with the emission limit is achieved if the three-run arithmetic average NOx emission rate at each tested level meets the applicable emission limit in SC I.2. Testing shall be performed on an annual basis (no more than 14 months following the previous performance test). If the NOx emission result from the performance test is less than or equal to 75% of the NOx emission limit for the turbine as specified in 40 CFR 60.4320(a) [SC I.2], the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75% of the NOx emission limit as specified in 40 CFR 60.4320(a) for the turbine, the permittee must resume annual performance tests. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report with the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1213, R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4340(a), 40 CFR 60.4400))**

2. The permittee shall verify the NOx and CO emission rates and mass emissions in SC I.1, SC I.3, SC I.7, and SC I.8 from each turbine, EUCTG-1 and EUCTG2, at 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three test runs per the method requirements. The permittee shall complete testing once every five years unless an alternate testing schedule is approved by the District Supervisor. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1213(3), R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)**

3. ~~The permittee shall verify the VOC, PM10, and PM2.5 emission rates and mass emissions in SC I.12-17 from each turbine, EUCTG-1 and EUCTG2, at 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three test runs per the method requirements. The permittee shall complete testing once every five years unless an alternate testing schedule is approved by the District Supervisor. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit Supervisor and to the District Supervisor. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit Supervisor and to the District Supervisor within 60 days following the last date of the test.[2] **(R 336.1213(3), R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)**~~ Within 180 days after achieving the maximum production rate, but no later than 12 months after commencement of initial start-up, verification of VOC, PM10, and PM2.5 emission rates and mass emission rates in SC I.11 – I.16 from each turbine, EU-CTG1 and EU-CTG2, at maximum emitting normal operating conditions, by testing at owner's expense, in accordance with Department requirements, will be required. The permittee must complete the testing once every five years, thereafter for PM10, unless an alternate testing schedule is approved by the District Supervisor. For VOC and PM2.5, the AQD District Supervisor may request future testing to demonstrate continued compliance with the VOC and PM2.5 emission limits. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit Supervisor and to the District Supervisor. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit Supervisor and to the District Supervisor within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004)**

Commented [sajarrett2]: The 5-year testing requirement for PM10, PM2.5, and VOC [fine particulate matter less than 10 microns and 2.5 microns, respectively and volatile organic compounds] outlined in ROP FGCTG V.3 was inadvertently changed from testing at the maximum emitting normal operating condition in PTI 206-14 to testing at 3 loads or other loads approved by EGLE-AQD. As the condition was changed from the original permit and testing is only required once every 5 years, EGLE- AQD District Office agreed that the condition would be changed back to the 206-14 language during this renewal – See May 4, 2021 email between Shane Nixon and Stephanie Jarrett.

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4. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1213(3), 40 CFR 52.21(c & d))**

2. The permittee shall keep, in a satisfactory manner, records of daily, monthly and 12-month rolling NOx and CO emission records for EUCTG1 and EUCTG2, as required by SC I.5 and SC I.10. The calculations shall be performed as specified in Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1205(1)(a) &(b), 40 CFR 52.21(c & d))**

3. The permittee shall keep, in a satisfactory manner, daily records of each startup and shut down event, including duration of the event. The permittee shall calculate startup and shut down emissions using the data as supplied by the vendor on a per event basis. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1)(a & b), 40 CFR 52.21(c & d))**

4. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUCTG1 and EUCTG2 each on a daily, monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1)(a & b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**

5. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
   a. Compliance tests and any testing required under the special conditions of this permit;
   b. Monitoring data;
   c. Total sulfur content of the natural gas as required by 40 CFR 60.4365(a);
   d. Verification of heat input capacity required to show compliance with SC IV.1;
   e. Amounts of fuel combusted in each turbine, EUCTG1 and EUCTG2, on a calendar month basis;
   f. All records required by 40 CFR 60.7;
   g. Records of the dates, times, duration and associated number of startup and shutdown events;
   h. All calculations necessary to show compliance with the limits contained in this permit.

   All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f).[2] **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 52.21(c & d), 40 CFR 60.7(f))**

6. The permittee may elect not to monitor the total sulfur content of the fuel combusted in FGCTG as required in SC VI.5, if the fuel is demonstrated not to exceed the potential sulfur emissions in SC II.3. The required demonstration must be made by maintaining the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, or the natural gas has potential sulfur emissions of less than 0.060 lb. SO2/MMBtu heat input.[2] **(40 CFR 60.4365)**

7. The permittee shall keep, in a satisfactory manner, purchase records for the natural gas burned in FGCTG. **(40 CFR 60.5520(d)(1))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-CTG1	264[2]	85[2]	**R 336.1225** **40 CFR 52.21(c & d)**
2. SV-CTG2	264[2]	85[2]	**R 336.1225** **40 CFR 52.21(c & d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and KKKK, as they apply to FGCTG.[2] **(40 CFR Part 60, Subparts A & KKKK)**

2. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart TTTT, as they apply to FGCTG. **(40 CFR Part 60, Subpart TTTT)**

3. The permittee shall comply with the acid rain permitting provisions of 40 CFR 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-59926-2019 is hereby incorporated into this ROP as Appendix 9. **(R 336.1299(2)(a))**

4. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1299(2)(a) and 40 CFR 72.9(c)(1)(i). **(R 336.1213(10))**

5. The permittee shall comply with the provisions of the Transport Rule NOx Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, as they apply to FGCTG. **(40 CFR Part 97, Subpart AAAAA)**

6. The permittee shall comply with the provisions of the Transport Rule NOx Ozone Season Trading program, as specified in 40 CFR Part 97, Subpart BBBBB, as they apply to FGCTG. **(40 CFR Part 97, Subpart BBBBB)**

7. The permittee shall comply with the provisions of the Transport Rule SO_2 Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, as they apply to FGCTG. **(40 CFR Part 97, Subpart CCCCC)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGFUELHTR
FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Two nominal 3.5 MMBTU/hr heat input natural gas fired fuel gas heaters.

Emission Unit: EUFUELHTR1, EUFUELHTR2

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	3.7 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGFUELHTR	SC VI.2	**R 336.1205(1) 40 CFR 52.21(c & d)**
2. CO	2.8 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGFUELHTR	SC VI.2	**R 336.1205(1) 40 CFR 52.21(d)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	29.9 MMSCF/yr [2]	12 month rolling time period as determined at the end of each calendar month.	FGFUELHTR	SC VI.3	**R 336.1205(1) 40 CFR 52.21(d)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall burn only natural gas in FGFUELHTR.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each heater EUFUELHTR1 and EUFUELHTR2, shall not exceed 3.5 MMBtu per hour on a fuel heat input basis.[2] **(R 336.1205(1), 40 CFR 52.21(c & d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c & d))**

2. The permittee shall keep, in a satisfactory manner, records of monthly and 12-month rolling NOx and CO emission records for each heater, EUFUELHTR1 and EUFUELHTR2, and both heaters combined, as required by SC I.1 and SC I.2, using emission factors acceptable to the AQD. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1))**

3. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for FGFUELHTR on a monthly basis and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**

4. The permittee shall maintain records of all information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
   a. Monitoring data;
   b. Verification of heat input capacity required to show compliance with SC IV.1;
   c. Amounts of fuel combusted in each fuel heater, EUFUELHTR1 and EUFUELHTR2, on a calendar month basis;
   d. All calculations necessary to show compliance with the limits contained in this permit.

   All of the above information shall be stored in a format acceptable to the AQD.[2] **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1912, 40 CFR 52.21(c & d))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-FUELHTR1[a]	10[2]	16[2]	**R 336.1225** **40 CFR 52.21(c & d)**
2. SV-FUELHTR2[a]	10[2]	16[2]	**R 336.1225** **40 CFR 52.21(c & d)**
[a] Emissions shall be discharged vertically upwards through a stack equipped with a rain cap.			

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
		HAP	Hazardous Air Pollutant
EGLE	Michigan Department of Environment, Great Lakes, and Energy	Hg	Mercury
		hr	Hour
EU	Emission Unit	HP	Horsepower
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallons of Applied Coating Solids	kW	Kilowatt
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	m	Meter
HVLP	High Volume Low Pressure*	mg	Milligram
ID	Identification	mm	Millimeter
IRSL	Initial Risk Screening Level	MM	Million
ITSL	Initial Threshold Screening Level	MW	Megawatts
LAER	Lowest Achievable Emission Rate	NMOC	Non-methane Organic Compounds
MACT	Maximum Achievable Control Technology	NO_x	Oxides of Nitrogen
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	Particulate Matter equal to or less than 10 microns in diameter
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pounds per hour
		ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	%	Percent
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonable Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	TAC	Toxic Air Contaminant
SCR	Selective Catalytic Reduction	Temp	Temperature
SNCR	Selective Non-Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	µg	Microgram
USEPA/EPA	United States Environmental Protection Agency	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
VE	Visible Emissions	yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any Permit to Install and/or Operate, that relate to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. MI-PTI-P0582-2019a. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
206-14	Entire facility, including two natural gas-fired combustion turbine generators, two natural gas-fired fuel heaters, one diesel engine powering an emergency generator, and one diesel engine powering an emergency fire pump.	EUEMERGEN EUFIREPUMP FGCTG FGFUELHTR

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP-P0582-2019.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
100-20	202100026 / May 25, 2021	PTI 100-20 was to allow the use of rain caps for the stacks of each process heater (EUFUELHTR1 and EUFUELHTR2) in FGFUELHTR.	FGFUELHTR

Appendix 7. Emission Calculations

NATURAL GAS-FIRED COMBUSTION TURBINES:
The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGCTG:

NOx

The permittee shall use the following formulas to calculate NOx emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 244 tpy based on a 12-month rolling time period average.

Daily Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb/event emission rate using data supplied by the turbine vendor on a per-event basis, as specified in FGCTG Emission Limits Table, SC VI.3.

Until stack testing can be completed the applicant shall use the lb/MMBTU emission rate for normal operation specified in FGCTG Emission Limits Table. Stack testing the combustion turbines at various loads must be completed to develop emission factors (EF). To determine which emission factor to use, the permittee shall compare the monitored and recorded combustion turbine load to the emission factor that was developed at that load during testing. (If the load falls between tested values, the permittee shall default to the more conservative value for that day of operation.)

The actual combustion turbine daily fuel usage shall be used to calculate the tons per day (TPD) for FGCTG. (An average is not acceptable.) The daily fuel usage shall be converted to a MMBtu/day heat input by using a conversion factor of 1,020 MMBTU/MMcf of natural gas.

Emissions of NOx in TPD from FGCTG are calculated as follows:

$$TPD = \left(\frac{NOxEF_{EU-CTG1}lb}{MMBtu}\right)*\left(\frac{1{,}020MMBtu}{MMscf}\right)*\left(\frac{MMscf_{EU-CTG1}}{day}\right)*\left(\frac{ton}{2{,}000lb}\right)$$
$$+\left(\frac{NOxEF_{EU-CTG2}lb}{MMBtu}\right)*\left(\frac{1{,}020MMBtu}{MMscf}\right)*\left(\frac{MMscf_{EU-CTG2}}{day}\right)*\left(\frac{ton}{2{,}000lb}\right)$$
$$+\left(\frac{NOxEF_{EU-CTG1Startup/Shutdown}lb}{Event}\right)*\left(\frac{NumberEvents}{day}\right)*\left(\frac{ton}{2{,}000lb}\right)$$
$$+\left(\frac{NOxEF_{EU-CTG2Startup/Shutdown}lb}{Event}\right)*\left(\frac{NumberEvents}{day}\right)*\left(\frac{ton}{2{,}000lb}\right)$$

$NOxEF_{EUCTG}$ = The NOx emission factor for the specific turbine included in FGCTG.

$MMscf_{EUCTG}/day$ = The daily fuel flow rate for the specific turbine included in FGCTG.

Monthly Emissions:
The permittee shall sum the daily NOx emissions from FGCTG for a given month to calculate the monthly NOx emissions.

12-Month Rolling Emissions:
The permittee shall sum the NOx emissions from FGCTG in a given month to the NOx emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.

CO

The permittee shall use the following formulas to calculate CO emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 246 tpy based on a 12-month rolling time period average.

Daily Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb./event emission rate using data supplied by the turbine vendor on a per-event basis, as specified in FGCTG Emission Limits Table, SC VI.3

Until stack testing can be completed the applicant shall use the lb./MMBtu emission rate for normal operation specified in FGCTG Emission Limits Table. Stack testing the combustion turbines at various loads must be completed to develop emission factors (EF). To determine which emission factor to use, the permittee shall compare the monitored and recorded combustion turbine load to the emission factor that was developed at that load during testing. (If the load falls between tested values, the permittee shall default to the more conservative value for that day of operation.)

The actual combustion turbine daily fuel usage shall be used to calculate the TPD for FGCTG. (An average is not acceptable.) The daily fuel usage shall be converted to a MMBtu/day heat input by using a conversion factor of 1,020 MMBtu/MMcf of natural gas.

Emissions of CO in TPD from FGCTG are calculated as follows:

$$TPD = \left(\frac{COEF_{EU-CTG1} lb}{MMBtu}\right) * \left(\frac{1{,}020 MMBtu}{MMscf}\right) * \left(\frac{MMscf_{EU-CTG1}}{day}\right) * \left(\frac{ton}{2{,}000 lb}\right)$$
$$+ \left(\frac{COEF_{EU-CTG2} lb}{MMBtu}\right) * \left(\frac{1{,}020 MMBtu}{MMscf}\right) * \left(\frac{MMscf_{EU-CTG2}}{day}\right) * \left(\frac{ton}{2{,}000 lb}\right)$$
$$+ \left(\frac{COEF_{EU-CTG1 Startup/Shutdown} lb}{Event}\right) * \left(\frac{NumberEvents}{day}\right) * \left(\frac{ton}{2{,}000 lb}\right)$$
$$+ \left(\frac{COEF_{EU-CTG2 Startup/Shutdown} lb}{Event}\right) * \left(\frac{NumberEvents}{day}\right) * \left(\frac{ton}{2{,}000 lb}\right)$$

$COEF_{EUCTG}$ = The CO emission factor for the specific turbine included in FGCTG.

$MMscf_{EUCTG}/day$ = The daily fuel flow rate for the specific turbine included in FGCTG.

Monthly Emissions:
The permittee shall sum the daily CO emissions from FGCTG for a given month to calculate the monthly CO emissions.

12-Month Rolling Emissions:
The permittee shall sum the CO emissions from FGCTG in a given month to the CO emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGCTG:

FACILITY-WIDE EMISSIONS:

CO:
The permittee shall sum the emissions calculated for FGCTG in the above CO portion of this appendix with those from EUEMERGEN, EUFIREPUMP, FGFUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the CO FGFACILITY limit of less than 249 tpy.

NOx:
The permittee shall sum the emissions calculated for FGCTG in the above NOx portion of this appendix with those from EUEMERGEN, EUFIREPUMP, FGFUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the NOx FGFACILITY limit of less than 249 tpy.

Appendix 8. Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Appendix 9. Acid Rain Permit

EGLE

Michigan Department of
Environment, Great Lakes, and Energy
Air Quality Division

PHASE II ACID RAIN PERMIT
Permit No. MI-AR-59926-2019

Permittee	Alpine Power Plant
Address	7432 M-32, Elmira, Michigan
SRN	P0582
ORIS code	59926
Issue Date	August 28, 2019
Effective:	Issuance date of this facility's Renewable Operating Permit at the facility in accordance with 40 CFR 72.73.
Expiration	This permit shall expire when the facility's Renewable Operating Permit expires, in accordance with 40 CFR 72.73.
ROP No.	MI-ROP-P0582-2019

The Acid Rain Permit Contents

1. A statement of basis prepared by the Air Quality Division (AQD) containing:

   References to statutory and regulatory authorities, and with comments, notes, and justification that apply to the source in general;

2. Terms and conditions including:

   A table of sulfur dioxide allowances to be allocated during the term of the permit, if applicable, authorized by this permit during Phase II. Unless they are subject to sections 405(g)(2) or (3) of the Clean Air Act, new units are not allocated allowances in 40 CFR part 73 and must obtain allowances by other means (sec. 403(e) of the Clean Air Act).;

   Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements; and,

   Any applicable nitrogen oxides compliance plan. Unless they are coal fired utility, units regulated pursuant to sections 404, 405, or 409 of the Clean Air Act, new units are not subject to the acid rain nitrogen oxides requirements [40 CFR 76.1(a)].

3. The permit application that this source submitted, as corrected by the AQD. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

Statement of Basis

Statutory and Regulatory Authorities.

In accordance with the Natural Resources and Environmental Protection Act, 1994 PA 451 and Titles IV and V of the Clean Air Act, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), issues this permit pursuant to the provisions of R 336.1210 to R 336.1218, and R 336.1299(d).

For further information contact:

Mr. Brian Carley
Environmental Quality Specialist
Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division, Jackson District Office
301 East Louis Glick Highway
Jackson, Michigan 49201-1556
Telephone: 517-780-7843
Facsimile: 517-780-7855

There are no comments, notes and/or justification that apply to the source in general for this section.

Terms and Conditions:

Phase II Sulfur Dioxide Allowance Allocation and Nitrogen Oxides Requirements for each affected unit.

		2019	2019	2019	2019	2019
Unit AI1	SO_2 allowances	This affected unit shall hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under § 73.34(c) of this chapter) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and comply with the applicable Acid Rain emissions limitation for sulfur dioxide in accordance with 40 CFR 72.9 (c).				

		2019	2019	2019	2019	2019
Unit AI2	SO_2 allowances	This affected unit shall hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under § 73.34(c) of this chapter) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and comply with the applicable Acid Rain emissions limitation for sulfur dioxide in accordance with 40 CFR 72.9 (c).				

Comments, notes and justifications regarding permit decisions, and changes made to the permit application forms during the review process:

Permit Application: (attached)

Acid Rain Permit Application submitted November 12, 2015

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258
Approval expires 11/30/2012

Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ■ New ☐ Revised ☐ for ARP permit renewal

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name	State	Plant Code
Alpine Power Plant	MI	59926

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
AI1	Yes
AI2	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

EPA Form 7610-16 (Revised 7-2014)

Facility (Source) Name (from STEP 1): Alpine Power Plant

Permit Requirements

STEP 3

Read the standard requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:

(i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

(i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Facility (Source) Name (from STEP 1) Alpine Power Plant

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission

of a new certificate of representation changing the designated representative;

STEP 3, Cont'd.

Recordkeeping and Reporting Requirements, Cont'd.

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:
(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with

Facility (Source) Name (from STEP 1) Alpine Power Plant

any other provision of the Act, including the provisions of title I of the Act relating

STEP 3, Cont'd.

Effect on Other Authorities, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;
(2) Limiting the number of allowances a source can hold; *provided,* that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4
Read the certification statement, sign, and date.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Brian L. Warner, CHMM	
Signature	Date 11/10/15

EPA Form 7610-16 (Revised 7-2014)

Appendix 10. Cross State Air Pollution Rule (CSAPR) Trading Program Title V Requirements

Description of CSAPR Monitoring Provisions

The CSAPR subject units, and the unit-specific monitoring provisions, at this source are identified in the following tables. These units are subject to the requirements for the CSAPR NO_X Annual Trading Program, CSAPR NO_X Ozone Season Group 2 Trading Program, and CSAPR SO_2 Group 1 Trading Program, which are included below as Sections I, II, and III, respectively.

Each unit will use one of the following as the monitoring methodology for each parameter as provided below and shall comply with the general monitoring, recordkeeping, reporting and other requirements in conditions 1 through 5 below and in paragraph (b) of Sections I, II, and III:

- Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart B (for SO_2 monitoring) or 40 CFR Part 75, Subpart H (for NO_X monitoring)
- Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, Appendix D
- Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR Part 75, Appendix E
- Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19
- EPA-approved alternative monitoring system requirements pursuant to 40 CFR Part 75, Subpart E

Unit ID: AI1	
Parameter	Monitoring Methodology
SO_2	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19
NO_X	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19
Heat Input	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19

Unit ID: AI2	
Parameter	Monitoring Methodology
SO_2	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19
NO_X	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19
Heat Input	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (CSAPR NO_X Annual Trading Program), 97.830 through 97.835 (CSAPR NO_X Ozone Season Group 2 Trading Program), and 97.630 through 97.635 (CSAPR SO_2 Group 1 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading programs.

2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at http://www.epa.gov/airmarkets/emissions/monitoringplans.html.

Field Code Changed

3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR 75.66 and 97.435 (CSAPR NO_X Annual Trading Program), 97.835 (CSAPR NO_X Ozone Season

Group 2 Trading Program), and/or 97.635 (CSAPR SO_2 Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at http://www.epa.gov/airmarkets/emissions/petitions.html.

Field Code Changed

4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (CSAPR NO_X Annual Trading Program), 97.830 through 97.834 (CSAPR NO_X Ozone Season Group 2 Trading Program), and/or 97.630 through 97.634 (CSAPR SO_2 Group 1 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (CSAPR NO_X Annual Trading Program), 97.835 (CSAPR NO_X Ozone Season Group 2 Trading Program), and/or 97.635 (CSAPR SO_2 Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on the EPA's website at http://www.epa.gov/airmarkets/emissions/petitions.html.

Field Code Changed

5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (CSAPR NO_X Annual Trading Program), 97.830 through 97.834 (CSAPR NO_X Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO_2 Group 1 Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add or change this unit's monitoring system description.

SECTION I: CSAPR NO_X Annual Trading Program requirements (40 CFR 97.406)

(a) Designated representative requirements.
The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

(b) Emissions monitoring, reporting, and recordkeeping requirements.
(1) The owners and operators, and the designated representative, of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
(2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of CSAPR NO_X Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NO_X Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_X emissions requirements.
(1) CSAPR NO_X Annual emissions limitation.
(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_X Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Annual units at the source.
(ii). If total NO_X emissions during a control period in a given year from the CSAPR NO_X Annual units at a CSAPR NO_X Annual source are in excess of the CSAPR NO_X Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:
(A). The owners and operators of the source and each CSAPR NO_X Annual unit at the source shall hold the CSAPR NO_X Annual allowances required for deduction under 40 CFR 97.424(d); and

(B). The owners and operators of the source and each CSAPR NO_X Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(2) CSAPR NO_X Annual assurance provisions.

(i). If total NO_X emissions during a control period in a given year from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the state and Indian country within the borders of such State exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_X emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_X Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NO_X emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state and Indian country within the borders of such state for such control period, by which each common designated representative's share of such NO_X emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the state and Indian country within the borders of such state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the CSAPR NO_X Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the State and Indian country within the borders of such state during a control period in a given year exceed the state assurance level if such total NO_X emissions exceed the sum, for such control period, of the state NO_X Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).

(iv). It shall not be a violation of 40 CFR Part 97, Subpart AAAAA or of the Clean Air Act if total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the State and Indian country within the borders of such State during a control period exceed the state assurance level or if a common designated representative's share of total NO_X emissions from the CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the state and Indian country within the borders of such state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold CSAPR NO_X Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each CSAPR NO_X Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(3) Compliance periods.

(i). A CSAPR NO_X Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(ii). A CSAPR NO_X Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A CSAPR NO_X Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_X Annual allowance that was allocated for such control period or a control period in a prior year.

(ii). A CSAPR NO_X Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_X Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR NO_X Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart AAAAA.

(6) Limited authorization. A CSAPR NO_X Annual allowance is a limited authorization to emit one ton of NO_X during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the CSAPR NO_X Annual Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR Part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR NO_X Annual allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Annual allowances in accordance with 40 CFR Part 97, Subpart AAAAA.

(2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each CSAPR NO_X Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart AAAAA.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_X Annual Trading Program.

(2) The designated representative of a CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall make all submissions required under the CSAPR NO_X Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability.

(1) Any provision of the CSAPR NO_X Annual Trading Program that applies to a CSAPR NO_X Annual source or the designated representative of a CSAPR NO_X Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_X Annual units at the source.

(2) Any provision of the CSAPR NO_X Annual Trading Program that applies to a CSAPR NO_X Annual unit or the designated representative of a CSAPR NO_X Annual unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR NO_X Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Annual source or CSAPR NO_X Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country.

Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the state.

SECTION II: CSAPR NO_X Ozone Season Group 2 Trading Program Requirements (40 CFR 97.806)

(a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.813 through 97.818.

(b) Emissions monitoring, reporting, and recordkeeping requirements.

(1) The owners and operators, and the designated representative, of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.831 (initial monitoring system certification and recertification procedures), 97.832 (monitoring system out-of-control periods), 97.833 (notifications concerning monitoring), 97.834 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

(2) The emissions data determined in accordance with 40 CFR 97.830 through 97.835 shall be used to calculate allocations of CSAPR NO_X Ozone Season Group 2 allowances under 40 CFR 97.811(a)(2) and (b) and 97.812 and to determine compliance with the CSAPR NO_X Ozone Season Group 2 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_X emissions requirements.

(1) CSAPR NO_X Ozone Season Group 2 emissions limitation.

(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_X Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.824(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Ozone Season Group 2 units at the source.

(ii). If total NO_X emissions during a control period in a given year from the CSAPR NO_X Ozone Season Group 2 units at a CSAPR NO_X Ozone Season Group 2 source are in excess of the CSAPR NO_X Ozone Season Group 2 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A). The owners and operators of the source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall hold the CSAPR NOX Ozone Season Group 2 allowances required for deduction under 40 CFR 97.824(d); and

(B). The owners and operators of the source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and

each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(2) CSAPR NO_X Ozone Season Group 2 assurance provisions.

(i). If total NO_X emissions during a control period in a given year from all CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the state and Indian country within the borders of such state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_X emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_X Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.825(b), of multiplying—

(A). The quotient of the amount by which the common designated representative's share of such NO_X emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state and Indian country within the borders of such state for such control period, by which each common designated representative's share of such NO_X emissions exceeds the respective common designated representative's assurance level; and

(B). The amount by which total NO_X emissions from all CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the state and Indian country within the borders of such state for such control period exceed the state assurance level.

(ii). The owners and operators shall hold the CSAPR NO_X Ozone Season Group 2 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

(iii). Total NO_X emissions from all CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the state and Indian country within the borders of such state during a control period in a given year exceed the state assurance level if such total NO_X emissions exceed the sum, for such control period, of the State NO_X Ozone Season trading budget under 40 CFR 97.810(a) and the state's variability limit under 40 CFR 97.810(b).

(iv). It shall not be a violation of 40 CFR Part 97, Subpart EEEEE or of the Clean Air Act if total NO_X emissions from all CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the state and Indian country within the borders of such state during a control period exceed the state assurance level or if a common designated representative's share of total NO_X emissions from the CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the state and Indian country within the borders of such state during a control period exceeds the common designated representative's assurance level.

(v). To the extent the owners and operators fail to hold CSAPR NO_X Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B). Each CSAPR NO_X Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(3) Compliance periods.

(i). A CSAPR NO_X Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.

(ii). A CSAPR NO_X Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

(i). A CSAPR NOX Ozone Season Group 2 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.

(ii). A CSAPR NO_X Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR NO_X Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart EEEEE.

(6) Limited authorization. A CSAPR NO_X Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_X during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the CSAPR NO_X Ozone Season Group 2 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR Part 97, Subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR NO_X Ozone Season Group 2 allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Ozone Season Group 2 allowances in accordance with 40 CFR Part 97, Subpart EEEEE.

(2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.806(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.816 for the designated representative for the source and each CSAPR NO_X Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.816 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart EEEEE.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_X Ozone Season Group 2 Trading Program.

(2) The designated representative of a CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_X Ozone Season Group 2 Trading Program, except as provided in 40 CFR 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability.

(1) Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 source or the designated representative of a CSAPR NO_X Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_X Ozone Season Group 2 units at the source.
(2) Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 unit or the designated representative of a CSAPR NO_X Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.
No provision of the CSAPR NO_X Ozone Season Group 2 Trading Program or exemption under 40 CFR 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Ozone Season Group 2 source or CSAPR NO_X Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country.
Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the state.

SECTION III: CSAPR SO_2 Group 1 Trading Program requirements (40 CFR 97.606)

(a) Designated representative requirements.
The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

(b) Emissions monitoring, reporting, and recordkeeping requirements.
(1) The owners and operators, and the designated representative, of each CSAPR SO_2 Group 1 source and each CSAPR SO_2 Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
(2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of CSAPR SO_2 Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO_2 Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) SO_2 emissions requirements.
(1) CSAPR SO_2 Group 1 emissions limitation.
(i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO_2 Group 1 source and each CSAPR SO2 Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO_2 Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO_2 emissions for such control period from all CSAPR SO_2 Group 1 units at the source.
(ii). If total SO_2 emissions during a control period in a given year from the CSAPR SO_2 Group 1 units at a CSAPR SO_2 Group 1 source are in excess of the CSAPR SO_2 Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
(A). The owners and operators of the source and each CSAPR SO_2 Group 1 unit at the source shall hold the CSAPR SO_2 Group 1 allowances required for deduction under 40 CFR 97.624(d); and
(B). The owners and operators of the source and each CSAPR SO_2 Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR Part 97, Subpart CCCCC and the Clean Air Act.

(2) CSAPR SO_2 Group 1 assurance provisions.
  (i). If total SO_2 emissions during a control period in a given year from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state and Indian country within the borders of such state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO_2 emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO_2 Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—
    (A). The quotient of the amount by which the common designated representative's share of such SO_2 emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state and Indian country within the borders of such state for such control period, by which each common designated representative's share of such SO_2 emissions exceeds the respective common designated representative's assurance level; and
    (B). The amount by which total SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state and Indian country within the borders of such state for such control period exceed the state assurance level.
  (ii). The owners and operators shall hold the CSAPR SO_2 Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  (iii). Total SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state and Indian country within the borders of such state during a control period in a given year exceed the state assurance level if such total SO_2 emissions exceed the sum, for such control period, of the state SO_2 Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).
  (iv). It shall not be a violation of 40 CFR Part 97, Subpart CCCCC or of the Clean Air Act if total SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state and Indian country within the borders of such state during a control period exceed the state assurance level or if a common designated representative's share of total SO_2 emissions from the CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in the state and Indian country within the borders of such state during a control period exceeds the common designated representative's assurance level.
  (v). To the extent the owners and operators fail to hold CSAPR SO_2 Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    (B). Each CSAPR SO_2 Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart CCCCC and the Clean Air Act.

(3) Compliance periods.
  (i). A CSAPR SO_2 Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
  (ii). A CSAPR SO_2 Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.
  (i). A CSAPR SO_2 Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR SO_2 Group 1 allowance that was allocated for such control period or a control period in a prior year.
  (ii). A CSAPR SO_2 Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR SO_2

Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each CSAPR SO_2 Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart CCCCC.

(6) Limited authorization. A CSAPR SO_2 Group 1 allowance is a limited authorization to emit one ton of SO_2 during the control period in one year. Such authorization is limited in its use and duration as follows:

(i). Such authorization shall only be used in accordance with the CSAPR SO_2 Group 1 Trading Program; and

(ii). Notwithstanding any other provision of 40 CFR Part 97, Subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A CSAPR SO_2 Group 1 allowance does not constitute a property right.

(d) Title V permit revision requirements.

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO_2 Group 1 allowances in accordance with 40 CFR Part 97, Subpart CCCCC.

(2) This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements.

(1) Unless otherwise provided, the owners and operators of each CSAPR SO_2 Group 1 source and each CSAPR SO_2 Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each CSAPR SO_2 Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

(ii). All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart CCCCC.

(iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO_2 Group 1 Trading Program.

(2) The designated representative of a CSAPR SO_2 Group 1 source and each CSAPR SO_2 Group 1 unit at the source shall make all submissions required under the CSAPR SO_2 Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability.

(1) Any provision of the CSAPR SO_2 Group 1 Trading Program that applies to a CSAPR SO_2 Group 1 source or the designated representative of a CSAPR SO_2 Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO_2 Group 1 units at the source.

(2) Any provision of the CSAPR SO_2 Group 1 Trading Program that applies to a CSAPR SO_2 Group 1 unit or the designated representative of a CSAPR SO_2 Group 1 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities.

No provision of the CSAPR SO_2 Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO_2 Group 1 source or CSAPR SO_2 Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country.

Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the state.

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: P0582	Section Number (if applicable):

1. Additional Information ID
AI-Acid Rain

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

The signed Acid Rain application is attached.

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258
Approval expires 05/31/2025

Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ☐ **new** ☐ **revised** ■ **for ARP permit renewal**

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name	State	Plant Code
Alpine Power Plant	MI	59926

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
AI1	Yes
AI2	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

Facility (Source) Name (from STEP 1) 59926

STEP 3

Read the standard requirements.

Permit Requirements

(1) The designated representative of each affected source and each affected unit at the source shall:
   (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
   (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:
   (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
   (ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:
   (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
   (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
   (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
   (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Facility (Source) Name (from STEP 1) 59926

STEP 3, Cont'd.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
   (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
   (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
   (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
   (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
   (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
   (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Facility (Source) Name (from STEP 1) 59926

STEP 3, Cont'd.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

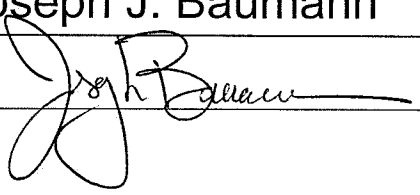
(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Certification

Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Joseph J. Baumann	
Signature 	Date 1/31/24

Instructions for the Acid Rain Program Permit Application

The Acid Rain Program requires the designated representative to submit an Acid Rain permit application for each source with an affected unit. A complete Certificate of Representation must be received by EPA before the permit application is submitted to the Title V permitting authority. A complete Acid Rain permit application, once submitted, is binding on the owners and operators of the affected source and is enforceable in the absence of a permit until the Title V permitting authority either issues a permit to the source or disapproves the application.

Please type or print. If assistance is needed, contact the Title V permitting authority.

STEP 1 A Plant Code is a 4- or 5-digit number assigned by the Department of Energy's (DOE) Energy Information Administration (EIA) to facilities that generate electricity. For older facilities, "Plant Code" is synonymous with "ORISPL" and "Facility" codes. If the facility generates electricity but no Plant Code has been assigned, or if there is uncertainty regarding what the Plant Code is, send an email to the EIA. The email address is EIA-860@eia.gov.

STEP 2 In column "a," identify each unit at the facility by providing the appropriate unit identification number, consistent with the identifiers used in the Certificate of Representation and with submissions made to DOE and/or EIA. Do not list duct burners. For new units without identification numbers, owners and operators must assign identifiers consistent with EIA and DOE requirements. Each Acid Rain Program submission that includes the unit identification number(s) (e.g., Acid Rain permit applications, monitoring plans, quarterly reports, etc.) should reference those unit identification numbers in exactly the same way that they are referenced on the Certificate of Representation.

Submission Deadlines

For new units, an initial Acid Rain permit application must be submitted to the Title V permitting authority 24 months before the date the unit commences operation. Acid Rain permit renewal applications must be submitted at least 6 months in advance of the expiration of the acid rain portion of a Title V permit, or such longer time as provided for under the Title V permitting authority's operating permits regulation.

Submission Instructions

Submit this form to the appropriate Title V permitting authority. If you have questions regarding this form, contact your local, State, or EPA Regional Acid Rain contact, or call EPA's Clean Air Markets Hotline at (202) 343-9620.

Paperwork Burden Estimate

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2060-0258). Responses to this collection of information are mandatory (40 CFR 72.30 and 72.31). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 8 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: P0582	Section Number (if applicable):

1. Additional Information ID
AI-PTE

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

The Potential to Emit Calculations, as submitted with the PTI App 206-14, are attached. No changes have been made to the facility to change PTE.

Page of

Table 1 - Total Annual Project NSR Regulated Pollutant Emissions Summary

ROP Application

Alpine Power Plant, Elmira, Michigan

NSR Regulated Pollutant	CTG [1] (tpy)	Emergency Generator (tpy)	Backup Fire Pump (tpy)	Fuel Heaters (tpy)	Misc. Exempt Natural Gas Heaters (tpy)	Total Annual Potential Emissions [2] (tpy)	Title V Major Source Threshold (tpy)	Major Source? (*Yes* or No)
CO	246.0	0.1	0.0	2.8	2.2	**249**	100	Yes
NO_X	244.0	0.9	0.0	3.7	2.6	**249**	100	Yes
PM	19.6	0.007	0.002	0.06	0.05	**19.7**	100	No
PM_{10}	19.6	0.01	0.002	0.7	0.2	**20.5**	100	No
$PM_{2.5}$	19.6	0.01	0.002	0.7	0.2	**20.5**	100	No
SO_2	5.7	0.001	0.0001	0.02	0.02	**5.7**	100	No
VOC	39.2	0.02	0.002	0.5	0.1	**39.8**	100	No
Lead	----	----	----	0.00001	0.00001	**0.00003**	100	No
Total HAPs[3]	1.0	0.001	0.0002	0.003	0.002	**1.0**	10/25	No

[1] CTG emissions are total for both CTGs and includes startup and shutdown emissions, which are based on 600 startup/shutdown events per 12-month rolling time period for demonstration purposes only. Facility-wide PTE limit for NOX and CO are 249 tpy, which takes into account that the facility is not limited on startup/shutdowns.

[2] Facility-wide NOX and CO emissions are limited by PTI 206-14; therefore PTE for NOX and CO is 249 tpy.

[3] Total Facility HAPs are less than 10 tpy, therefore any single HAP is less than 10 tpy.

Table 2 - NSR Regulated Pollutant Emissions From CTGs ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application

Alpine Power Plant, Elmira, Michigan

Maximum CTG Generator Capacity (1 CTG) =	*203.3*	*MWe at 81°F and 100% load*
One CTG 100% Load Heat Input Rate =	*2,045*	*MMBtu/hr at 81°F and 100% load (HHV Basis)*
Annual Operation =	*2,408*	*hr/yr (represents total, combined annual operation for both CTGs at 100% load and 600 total startup/shutdown events per year)*
Total Annual Heat Input Rate =	*4,923,445*	*MMBtu/yr and represents baseload operation at 100% load only for both CTGs (HHV basis)*

NSR Regulated Pollutant	Emission Factor (Baseload Operation) (See Footnotes for Emission Factor Basis)	Short-Term Emissions per CTG (Baseload Operation) (lb/hr)	Short-Term Emissions Both CTGs Combined (Baseload Operation) (lb/hr)[7]	Annual Emissions Both CTGs Combined (Baseload Operation) (tpy)	Startup and Shutdown Emissions [1] (tpy)	Total Annual Emissions [2] (tpy)
CO [3]	2.0000E-02 lb/MMBtu	40.9	81.8	49.2	196.8	246.0
NO_X [3]	3.2652E-02 lb/MMBtu	66.8	133.5	80.4	16.5	96.9
PM (Filterable Only) [4]	6.6E-03 lb/MMBtu	13.5	27.0	16.2	3.4	19.6
PM_{10} (Filterable + Condensable)[4]	6.6E-03 lb/MMBtu	13.5	27.0	16.2	3.4	19.6
$PM_{2.5}$ (Filterable + Condensable)[4]	6.6E-03 lb/MMBtu	13.5	27.0	16.2	3.4	19.6
SO_2 [3]	2.1666E-03 lb/MMBtu	4.4	8.9	5.3	0.4	5.7
VOC [3]	1.4025E-03 lb/MMBtu	2.9	5.7	3.5	35.7	39.2
H_2SO_4 [5]	2.12E-05 lb/MMBtu	0.04	0.1	0.05	0.004	0.06
CO_2 [3]	----	238,983	477,966	287,736	8,174	295,910
CH_4 [6]	2.20E-03 lb/MMBtu	4.5	9.0	5.4	0.37	5.8
N_2O [6]	2.20E-04 lb/MMBtu	0.5	0.9	0.5	0.04	0.6
CO_2e [6]	----	239,230	478,460	288,033	19,637	307,671

[1] Based on Table 2 at 600 startup/shutdown events per 12-month rolling time period ***for demonstration purposes only*** .

[2] Represents the sum of 100% load and startup/shutdown events. See Table 2 for emissions related to startup/shutdown events.

[3] Emission factors based on CTG manufacturer, except for CO. CO emission rate is based on 13 ppmv at 12% CO2, which is an approximate 50% increase over vendor provided emission information. CO_2 mass emission rate provided by CTG manufacturer is in units of lb/hr.

[4] $PM/PM_{10}/PM_{2.5}$ emission factor from AP-42 Table 3.1-2a. To be conservative, PM emissions have been estimated to be equivalent to PM_{10} and $PM_{2.5}$, even though PM is only to include filterable portion (PM determined from performance testing using USEPA Methods 5 or 17 of 40 CFR 60 Appendix A).

[5] The H_2SO_4 emission factor presumes approximately 0.8% of the SO_2 is emitted as SO_3 and then converts to H_2SO_4 in the presence of moisture. This is then multiplied by the ratio of the molecular weight of H_2SO_4 to SO_3 (which is 98/80).

[6] Based on GWP and emission factors obtained from 40 CFR 98 Subparts A and C, respectively, for natural gas fuel. A factor of 2.20462 is used to convert kg/MMBtu to lb/MMBtu.

[7] Emissions for 2 CTGs are twice the *Short-Term Emissions per CTG (Baseload Operation)* .

[8] The annual fuel use rate is *14,680* MMCF per 12-month time period to equate to **247 tpy of NO_X** ***without any startup/shutdown events*** .

Table 1.1 Emission Calculation Methods

$E_{ST} = C_{ST} \times EF$

$E_A = E_{ST} \times$ Annual Operation at 100% Load / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{ST} = CTG Heat Input Capacity (MMBtu/hr); and

EF = emission factor (lb/MMBtu)

Table 3 - Estimated CTG Startup and Shutdown NSR Regulated Pollutant Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application

Alpine Power Plant, Elmira, Michigan

600 *Estimated Total 12-month Rolling Startup and Shutdown Events for Both CTGs Combined.*

Estimated Startup and Shutdown Emissions, Single CTG

	Fuel	NO_x	CO	VOC	$PM_{10}/PM_{2.5}$	SO_2	H_2SO_4	GHG	Duration	
Mode of Operation	**MMBtu/Event**	**lb/Event**	**lb/Event**	**lb/Event**	**lb/Event**	**lb/Event**	**lb/event**	**lb/event**	**Minutes**	**Hours**
Cold Start	292	30	320	49	5.8	0.63	0.006	34,193	8	0.13
Shutdown	267	25	336	70	5.3	0.58	0.006	31,265	8	0.13

1. NO_x, CO and VOC emission rates provided by CTG manufacturer.
2. Conservatively estimated that PM_{10} and $PM_{2.5}$ are emitted at a rate of 0.02 lb/MMBtu (to account for less efficient combustion of carbon in fuel) and SO_2 is 0.0022 lb/MMBtu during startup and shutdown events.
3. For H_2SO_4 emissions, see footnote 4 related to Table 1.1.
4. GHG emissions based on 40 CFR 98 Subparts A and C for GWP and Emission Factors, respectively, for natural gas fuel. A factor of 2.20462 is used to convert kg/MMBtu to lb/MMBtu.
5. Duration in minutes provided by potential CTG manufacturer.

12-Month Rolling Time Period Heat Input and Emissions Due to Startup and Shutdown Events

Fuel	NO_x	CO	VOC	$PM_{10}/PM_{2.5}$	SO_2	H_2SO_4	GHG	Duration	
(MMBtu/yr)	**(tpy)**	**(tpy)**	**(tpy)**	**(tpy)**	**(tpy)**	**(tpy)**	**(tpy)**	**Minutes**	**Hours**
335,400	16.5	196.8	35.7	3.4	0.4	0.004	19,637	9,600	160.00

Table 4 - Emergency RICE NSR Regulated Pollutant Estimated Emissions (Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)

ROP Application

Alpine Power Plant, Elmira, Michigan

Table 4.1 - NSR Regulated Pollutant Emissions from Diesel Fired Emergency Generator

Nominal RICE Rating =	*2,011*	*HP*
Nominal Generator Rating =	*1,500*	*kW*
Nominal RICE Heat Input =	*13.44*	*MMBtu/hr*
Annual Operating Hours =	*100*	*hr/yr*

NSR Regulated Pollutant	Emission Factor (See Notes)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
CO [1]	0.44 g/HP-hr	2.0	0.1
NO_x [1]	4.08 g/HP-hr	18.1	0.9
PM [1]	0.03 g/HP-hr	0.1	0.007
PM_{10} [2]	1.76E-02 lb/MMBtu	0.2	0.01
$PM_{2.5}$ [2]	1.76E-02 lb/MMBtu	0.2	0.01
SO_2 [3]	1.52E-03 lb/MMBtu	0.02	0.001
VOC [1]	0.11 g/HP-hr	0.5	0.02
CO_2e [4]	163.6 lb/MMBtu	2,199	110

[1] Emission factors are based on potential engine manufacturer for emergency generators and are less than the requirements contained in NSPS Subpart IIII, 40 CFR 60.4202(a)(2) which refers to Table 1 of 40 CFR 89.112 for emission limits.

[2] PM_{10} and $PM_{2.5}$ emission factor is from the vendor provided PM rate (as g/HP-hr and converted to lb/MMBtu) plus the condensable PM (as lb/MMBtu) from USEPA AP-42, Chapter 3.4, Table 3.4-2.

[3] SO_2 emissions are based on USEPA AP-42, Chapter 3.4, Table 3.4-1. Sulfur content of diesel fiel is 0.0015%.

[4] CO_2e global warming potential and emission factors obtained from 40 CFR 98 Subparts A and C, respectively. The global warming potential for CH_4 (25) and N_2O (298) are consistent with the USEPA published changes on November 29, 2013. A factor of 2.20462 is used to convert kg/MMBtu to lb/MMBtu.

Table 4.1 Emission Calculation Methods

Using lb/MMBtu Emission Factors

$E_{ST} = C_{HI} \times EF$

$E_A = E_{ST} \times$ Annual Operating Hours / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{HI} = RICE Heat Input Capacity (MMBtu/hr); and

EF = emission factor (lb/MMBtu)

Using g/kW-hr Emission Factors

$E_{ST} = C_{kW} \times EF / 453.59$ g/lb

$E_A = E_{ST} \times$ Annual Operating Hours / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{kW} = RICE Power Output Capacity (kW); and

EF = emission factor (g/kW-hr)

Table 4 - Emergency RICE NSR Regulated Pollutant Estimated Emissions (Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)

ROP Application

Alpine Power Plant, Elmira, Michigan

Table 4.2 - NSR Regulated Pollutant Emissions from Diesel Fired Back Up Fire Pump

Nominal RICE Rating (Each) =	*147*	*HP*	**actual FP Size**
Each RICE Nominal Heat Input =	*1.0*	*MMBtu/hr*	
Annual Operating Hours =	*100*	*hr/yr*	

NSR Regulated Pollutant	Emission Factor (See Notes)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
CO [1]	1.4 g/HP-hr	0.5	0.0
NO_x [1]	2.2 g/HP-hr	0.7	0.0
PM [1]	1.18E-01 g/HP-hr	0.0	0.002
PM_{10} [2]	4.48E-02 lb/MMBtu	0.0	0.00
$PM_{2.5}$ [2]	4.48E-02 lb/MMBtu	0.0	0.00
SO_2 [3]	1.52E-03 lb/MMBtu	0.002	0.0001
VOC [1]	0.1 g/HP-hr	0.0	0.002
CO_2e [4]	163.6 lb/MMBtu	169	8

[1] Emission factors are based on potential engine manufacturer and are less than the requirements contained in NSPS Subpart IIII, 40 CFR 60.4202(d) for emergency fire pumps, which refers to Table 4 of NSPS Subpart IIII for emission limits.

[2] PM_{10} and $PM_{2.5}$ emission factor is from the vendor provided PM rate (as g/HP-hr and converted to lb/MMBtu) plus the condensable PM (as lb/MMBtu) from USEPA AP-42, Chapter 3.4, Table 3.4-2. AP-42 Chapter 3.3 does not provide condensable PM. Thus, the condensable PM is from Chapter 3.4.

[3] SO_2 emissions are based on USEPA AP-42, Chapter 3.4, Table 3.4-1. Sulfur content of diesel fiel is 0.0015%. Emission factor is lb/MMBtu (HHV).

[4] CO_2e global warming potential and emission factors obtained from 40 CFR 98 Subparts A and C, respectively. Emission factor is lb/MMBtu (HHV). The global warming potential for CH_4 (25) and N_2O (298) are consistent with the changes made by the USEPA on November 29, 2013.

Table 4.2 Emission Calculation Methods

Using lb/MMBtu Emission Factors

$E_{ST} = C_{HI} \times EF$

$E_A = E_{ST} \times$ Annual Operating Hours / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{HI} = RICE Heat Input Capacity (MMBtu/hr); and

EF = emission factor (lb/MMBtu)

Using g/HP-hr Emission Factors

$E_{ST} = C_{HP} \times EF / 453.59$ g/lb

$E_A = E_{ST} \times$ Annual Operating Hours / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{HP} = RICE Power Output Capacity (HP); and

EF = emission factor (g/HP-hr)

Table 5 - Estimated NSR Pollutant Emissions from Natural Gas-Fired Fuel Heaters *(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)*

ROP Application
Alpine Power Plant, Elmira, Michigan

Heat Input Capacity per Fuel Heater =	*3.5*	*MMBtu/hr*
Natural Gas HHV =	*1,026*	*Btu/CF*
Equivalent Annual Fuel Usage Rate per Fuel Heater =	*3.41E-03*	*MMCF/hr*
Equivalent Annual Fuel Usage Rate per Fuel Heater =	*29.9*	*MMCF/yr*
Total Annual Heat Input Limit or Capacity =	*30,660*	*MMBtu/yr*
Annual Operation =	*8,760*	*hr/yr*

NSR Regulated Pollutant	Emission Factor (See Notes)		Short-Term Emissions per Fuel Heater (lb/hr)	Total Annual Emissions for Both Heaters (tpy)
CO [1]	0.09	lb/MMBtu	0.3	2.8
NO_X [1]	0.12	lb/MMBtu	0.4	3.7
PM (Filterable) [2]	1.9	lb/MMCf	0.01	0.06
PM_{10} (Filterable + Condensable) [1]	0.023	lb/MMBtu	0.1	0.7
$PM_{2.5}$ (Filterable + Condensable) [1]	0.023	lb/MMBtu	0.1	0.7
SO_2 [2]	0.6	lb/MMCf	0.002	0.02
VOC [1]	0.017	lb/MMBtu	0.1	0.5
Lead [2]	5.00E-04	lb/MMCf	1.71E-06	1.49E-05
H_2SO_4 [3]	5.88E-03	lb/MMCf	2.01E-05	1.76E-04
CO_2 [4]	117	lb/MMBtu	409	3,587
CH_4 [4]	2.20E-03	lb/MMBtu	0.01	0.07
N_2O [4]	2.20E-04	lb/MMBtu	0.0008	0.007
GHG as CO_2e [4]	117	lb/MMBtu	410	3,590

[1] Emission factors for CO, NO_x, PM_{10}, $PM_{2.5}$, and VOC are based on vendor data.
[2] Emission factors are based on USEPA AP-42 Chapter 1.4, Tables 1.4-1 and 1.4-2.
[3] The H_2SO_4 emission factor assumes approximately 0.8% of the SO_2 is emitted as SO_3 and then converts to H_2SO_4 in the presence of moisture. This is then multiplied by the ratio of the molecular weight of H_2SO_4 to SO_3 (which is 98/80).
[4] Based on GWP and emission factors obtained from 40 CFR 98 Subparts A and C, respectively, for natural gas fuel. A factor of 2.20462 is used to convert kg/MMBtu to lb/MMBtu.

Emission Calculation Methods

$E_{ST} = C_{ST} \times EF / HHV$

$E_A = C_A \times EF / HHV / 2{,}000$ lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);
E_A = Annual Maximum Emissions (tpy);
C_{ST} = Total Heat Input Capacity (MMBtu/hr);
C_A = Annual Maximum Heat Input Capacity based on 6,380 hours/yr of operation (MMBtu/yr);
EF = emission factor (lb/MMBtu); and
HHV = Natural Gas Higher Heating Value (Btu/CF)

Table 6 - Estimated NSR Pollutant Emissions from Natural Gas-Fired Exempt Heaters

ROP Application

Alpine Power Plant, Elmira, Michigan

Heat Input Capacity Exempt Heaters Combined =	*6.1*	*MMBtu/hr*
Natural Gas HHV =	*1,026*	*Btu/CF*
Equivalent Annual Fuel Usage Rate per Fuel Heater =	*5.94E-03*	*MMCF/hr*
Equivalent Annual Fuel Usage Rate per Fuel Heater =	*52.0*	*MMCF/yr*
Total Annual Heat Input Limit or Capacity =	*53,348*	*MMBtu/yr*
Annual Operation =	*8,760*	*hr/yr*

NSR Regulated Pollutant	Emission Factor (See Notes)	Short-Term Emissions (lb/hr)	Total Annual Emissions (tpy)
CO [1]	84.00 lb/MMCF	0.5	2.2
NO_X [1]	100.00 lb/MMCf	0.6	2.6
PM (Filterable) [1]	1.9 lb/MMCf	0.01	0.05
PM_{10} (Filterable + Condensable) [1]	7.600 lb/MMCF	0.0	0.2
$PM_{2.5}$ (Filterable + Condensable) [1]	7.600 lb/MMCF	0.0	0.2
SO_2 [1]	0.6 lb/MMCf	0.004	0.02
VOC [1]	5.500 lb/MMCF	0.0	0.1
Lead [1]	5.00E-04 lb/MMCf	2.97E-06	1.30E-05
CO_2 [2]	117 lb/MMBtu	712	3,120
CH_4 [2]	2.20E-03 lb/MMBtu	0.01	0.06
N_2O [2]	2.20E-04 lb/MMBtu	0.0013	0.006
GHG as CO_2e [2]	117 lb/MMBtu	713	3,123

[1] Emission factors are based on USEPA AP-42 Chapter 1.4, Tables 1.4-1 and 1.4-2.

[2] Based on GWP and emission factors obtained from 40 CFR 98 Subparts A and C, respectively, for natural gas fuel. A factor of 2.20462 is used to convert kg/MMBtu to lb/MMBtu.

Emission Calculation Methods

$E_{ST} = C_{ST} \times EF / HHV$

$E_A = C_A \times EF / HHV / 2{,}000$ lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{ST} = Total Heat Input Capacity (MMBtu/hr);

C_A = Annual Maximum Heat Input Capacity based on 6,380 hours/yr of operation (MMBtu/yr);

EF = emission factor (lb/MMBtu); and

HHV = Natural Gas Higher Heating Value (Btu/CF)

Table 7 - Project Related TAC and HAP Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application
Alpine Power Plant, Elmira, Michigan

Total Potential HAP Emissions = 1.0 tpy

(Since the <u>total</u> HAPs are less than 10 tpy, the project is, by default, minor for a single HAP.)

Table 7.1 - Short-Term and Annual TAC and HAP Emission Rates for CTGs

Maximum Heat Input Rate = 2,045 MMBtu/hr
Annual Operation = 2,408 hr/yr

TAC / HAP	CAS Number	Emission Factor [1] (lb/MMBtu)	Potential HAPs Emission Rates [2] (lb/hr)	(tpy)	HAP? (*Yes* or No)
1,3-Butadiene	106-99-0	4.30E-07	8.79E-04	1.06E-03	*Yes*
Acetaldehyde	75-07-0	4.00E-05	8.18E-02	9.85E-02	*Yes*
Acrolein	107-02-8	6.40E-06	1.31E-02	1.58E-02	*Yes*
Benzene	71-43-2	1.20E-05	2.45E-02	2.95E-02	*Yes*
Ethylbenzene	100-41-4	3.20E-05	6.54E-02	7.88E-02	*Yes*
Formaldehyde [3]	50-00-0	9.90E-05	2.02E-01	2.44E-01	*Yes*
Naphthalene	91-20-3	1.30E-06	2.66E-03	3.20E-03	*Yes*
PAH [4]	----	2.20E-06	4.50E-03	5.42E-03	*Yes*
Propylene Oxide	75-56-9	2.90E-05	5.93E-02	7.14E-02	*Yes*
Toluene	108-88-3	1.30E-04	2.66E-01	3.20E-01	*Yes*
Xylenes	1330-20-7	6.40E-05	1.31E-01	1.58E-01	*Yes*
			Total CTG HAPs =	***1.0***	

[1] Except for formaldehyde, the HAP emission factors are based upon the emissions factors of AP-42 Chapter 3.1, Table 3.1-3.

[2] The short-term emissions are based on the hourly maximum heat input rate and the annual emissions are based on the annual operation at 100% capacity. Annual emissions reflect the potential for ***<u>both</u>*** CTGs.

[3] Formaldehyde emission factor is based on a GE 7FA turbine from the June 2007 stack test for Zeeland Power Company, Zeeland, Michigan, with an additional 10% cushion.

[4] "PAH" consists of a grouping of sixteen HAP polycyclic aromatic hydrocarbons.

<u>Table 7.1 Emission Calculation Methods</u>

$E_{ST} = C_{ST} \times EF$
$E_A = E_{ST} \times$ *Annual Operation / 2,000 lb/ton*

where:

E_{ST} *= Short Term Emissions (lb/hr);*
E_A *= Annual Maximum Emissions (tpy);*
C_{ST} *= Total Heat Input Capacity (MMBtu/hr); and*
EF = emission factor (lb/MMBtu)

Table 7 - Project Related TAC and HAP Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application
Alpine Power Plant, Elmira, Michigan

Table 7.2 - Short-Term and Annual TAC and HAP Emission Rates for One Emergency Generator

Mechanical Power = *2,011* *HP*
Equivalent Heat Input Rate = *13.44* *MMBtu/hr*
Annual Operation = *100* *hr/yr*

TAC / HAP	CAS Number	Emission Factor [6] (lb/MMBtu)	Short-term Emission Rate (lb/hr)	Annual Emission Rate (tpy)	HAP? (*Yes* or No)
Acenaphthene	83-32-9	4.68E-06	6.29E-05	3.14E-06	No
Acenaphthylene	208-96-8	9.23E-06	1.24E-04	6.20E-06	No
Acetaldehyde	75-07-0	2.52E-05	3.39E-04	1.69E-05	*Yes*
Acrolein	107-02-8	7.88E-06	1.06E-04	5.30E-06	*Yes*
Anthracene	120-12-7	1.23E-06	1.65E-05	8.27E-07	No
Benzene	71-43-2	7.76E-04	1.04E-02	5.21E-04	*Yes*
Benzo (a) anthracene	56-55-3	6.22E-07	8.36E-06	4.18E-07	*Yes*
Benzo (b) fluoranthene	205-99-2	1.11E-06	1.49E-05	7.46E-07	*Yes*
Benzo (a) pyrene	50-32-8	2.57E-07	3.45E-06	1.73E-07	*Yes*
Benzo (g,h,i) perylene	191-24-2	5.56E-07	7.47E-06	3.74E-07	*Yes*
Benzo (k) fluoranthene	207-08-9	2.18E-07	2.93E-06	1.46E-07	*Yes*
Chrysene	218-01-9	1.53E-06	2.06E-05	1.03E-06	*Yes*
Dibenz(a,h)anthracene	53-70-3	3.46E-07	4.65E-06	2.33E-07	*Yes*
Fluoranthene	206-44-0	4.03E-06	5.42E-05	2.71E-06	No
Fluorene	86-73-7	1.28E-05	1.72E-04	8.60E-06	No
Formaldehyde	50-00-0	7.89E-05	1.06E-03	5.30E-05	*Yes*
Indeno(1,2,3-c,d)pyrene	193-39-5	4.14E-07	5.56E-06	2.78E-07	*Yes*
Naphthalene	91-20-3	1.30E-04	1.75E-03	8.74E-05	*Yes*
PAH [4]	----	2.12E-04	2.85E-03	1.42E-04	*Yes*
Phenanthrene	85-01-8	4.08E-05	5.48E-04	2.74E-05	No
Propylene	115-07-1	2.79E-03	3.75E-02	1.87E-03	No
Pyrene	129-00-0	3.71E-06	4.99E-05	2.49E-06	No
Toluene	108-88-3	2.81E-04	3.78E-03	1.89E-04	*Yes*
Xylenes	1330-20-7	1.93E-04	2.59E-03	1.30E-04	*Yes*
			Total Emergency Generator HAPs =	***0.001***	

[6] Emission factors obtained from USEPA AP-42, Chapter 3.4, Tables 3.4-3 and 3.4-4.

Table 7.2 Emission Calculation Methods

$E_{ST} = C_{ST} \times EF$
$E_A = E_{ST} \times$ Annual Operation / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);
E_A = Annual Maximum Emissions (tpy);
C_{ST} = Total Heat Input Capacity (MMBtu/hr); and
EF = emission factor; (lb/MMBtu)

Table 7 - Project Related TAC and HAP Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application
Alpine Power Plant, Elmira, Michigan

Table 7.3 - Short-Term and Annual TAC and HAP Emission Rates for One Backup Fire Pump

Mechanical Power = *147* *HP*
Equivalent Heat Input Rate = *1.03* *MMBtu/hr*
Annual Operation = *100* *hr/yr*

TAC / HAP	CAS Number	Emission Factor [7] (lb/MMBtu)	Short-term Emission Rate (lb/hr)	Annual Emission Rate (tpy)	HAP? (*Yes* or No)
1,3-Butadiene	106-99-0	3.91E-05	4.03E-05	2.01E-06	*Yes*
Acenaphthene	83-32-9	1.42E-06	1.46E-06	7.31E-08	No
Acenaphthylene	208-96-8	5.06E-06	5.21E-06	2.61E-07	No
Acetaldehyde	75-07-0	7.67E-04	7.90E-04	3.95E-05	*Yes*
Acrolein	107-02-8	9.25E-05	9.53E-05	4.76E-06	*Yes*
Anthracene	120-12-7	1.87E-06	1.93E-06	9.63E-08	No
Benzene	71-43-2	9.33E-04	9.61E-04	4.80E-05	*Yes*
Benzo (a) anthracene	56-55-3	1.68E-06	1.73E-06	8.65E-08	*Yes*
Benzo (b) fluoranthene	205-99-2	9.91E-08	1.02E-07	5.10E-09	*Yes*
Benzo (a) pyrene	50-32-8	1.88E-07	1.94E-07	9.68E-09	*Yes*
Benzo (g,h,i) perylene	191-24-2	4.89E-07	5.04E-07	2.52E-08	*Yes*
Benzo (k) fluoranthene	207-08-9	1.55E-07	1.60E-07	7.98E-09	*Yes*
Chrysene	218-01-9	3.53E-07	3.64E-07	1.82E-08	*Yes*
Dibenz(a,h)anthracene	53-70-3	5.83E-07	6.00E-07	3.00E-08	*Yes*
Fluoranthene	206-44-0	7.61E-06	7.84E-06	3.92E-07	No
Fluorene	86-73-7	2.92E-05	3.01E-05	1.50E-06	No
Formaldehyde	50-00-0	1.18E-03	1.22E-03	6.08E-05	*Yes*
Indeno(1,2,3-c,d)pyrene	193-39-5	3.75E-07	3.86E-07	1.93E-08	*Yes*
Naphthalene	91-20-3	8.48E-05	8.73E-05	4.37E-06	*Yes*
PAH [4]	----	1.68E-04	1.73E-04	8.65E-06	*Yes*
Phenanthrene	85-01-8	2.94E-05	3.03E-05	1.51E-06	No
Propylene	115-07-1	2.58E-03	2.66E-03	1.33E-04	No
Pyrene	129-00-0	4.78E-06	4.92E-06	2.46E-07	No
Toluene	108-88-3	4.09E-04	4.21E-04	2.11E-05	*Yes*
Xylenes	1330-20-7	2.85E-04	2.94E-04	1.47E-05	*Yes*
			Total Backup Fire Pump HAPs =	***0.0002***	

[7] Emission factors obtained from USEPA AP-42, Chapter 3.3, Table 3.3-2.

Table 7.3 Emission Calculation Methods

$E_{ST} = C_{ST} \times EF$

$E_A = E_{ST} \times$ Annual Operation / 2,000 lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);
E_A = Annual Maximum Emissions (tpy);
C_{ST} = Total Heat Input Capacity (MMBtu/hr); and,
EF = emission factor; (lb/MMBtu)

Table 7 - Project Related TAC and HAP Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application
Alpine Power Plant, Elmira, Michigan

Table 7.4 - Short-Term and Annual TAC and HAP Emissions From Two Fuel Heaters

Heat Input Capacity = *7.0* *MMBtu/hr (2 Heaters at 3.5 MMBtu/hr Each)*
Annual Heat Input = *61,320* *MMBtu/yr*
Natural Gas HHV = *1,026* *Btu/CF*

TAC / HAP	CAS No.	Emission Factor Value [8] (lb/MMCF)	Emission Factor Units	Short-Term Emissions per Fuel Heater (lb/hr)	Combined Short-Term Emissions (lb/hr)	Annual Maximum Emissions (tpy)	HAP? (*Yes* or No)
Metals							
Arsenic	7440-38-2	2.00E-04	lb/MMCF	6.82E-07	1.36E-06	5.98E-06	*Yes*
Barium	7440-39-3	4.40E-03	lb/MMCF	1.50E-05	3.00E-05	1.31E-04	No
Beryllium	7440-41-7	1.20E-05	lb/MMCF	4.09E-08	8.19E-08	3.59E-07	*Yes*
Cadmium	7440-43-9	1.10E-03	lb/MMCF	3.75E-06	7.50E-06	3.29E-05	*Yes*
Chromium	18540-29-9	1.40E-03	lb/MMCF	4.78E-06	9.55E-06	4.18E-05	*Yes*
Cobalt	7440-48-4	8.40E-05	lb/MMCF	2.87E-07	5.73E-07	2.51E-06	*Yes*
Copper	7440-50-8	8.50E-04	lb/MMCF	2.90E-06	5.80E-06	2.54E-05	No
Manganese	7439-96-5	3.80E-04	lb/MMCF	1.30E-06	2.59E-06	1.14E-05	*Yes*
Mercury	7439-97-6	2.60E-04	lb/MMCF	8.87E-07	1.77E-06	7.77E-06	*Yes*
Molybdenum	7439-98-7	1.10E-03	lb/MMCF	3.75E-06	7.50E-06	3.29E-05	No
Nickel	7440-02-0	2.10E-03	lb/MMCF	7.16E-06	1.43E-05	6.28E-05	*Yes*
Selenium	7782-49-2	2.40E-05	lb/MMCF	8.19E-08	1.64E-07	7.17E-07	*Yes*
Vanadium	7440-62-2	2.30E-03	lb/MMCF	7.85E-06	1.57E-05	6.87E-05	No
Zinc	7440-66-6	2.90E-02	lb/MMCF	9.89E-05	1.98E-04	8.67E-04	No
Organics							
2-Methyl Naphthalene	91-57-6	2.40E-05	lb/MMCF	8.19E-08	1.64E-07	7.17E-07	*Yes*
3-Methylcholanthrene	56-49-5	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	No
Acenaphthene	83-32-9	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	No
Acenaphthylene	208-96-8	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	No
Anthracene	120-12-7	2.40E-06	lb/MMCF	8.19E-09	1.64E-08	7.17E-08	No
Benzene	71-43-2	2.10E-03	lb/MMCF	7.16E-06	1.43E-05	6.28E-05	*Yes*
Benzo (a) anthracene	56-55-3	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	*Yes*
Benzo (a) pyrene	50-32-8	1.20E-06	lb/MMCF	4.09E-09	8.19E-09	3.59E-08	*Yes*
Benzo (b) fluoranthene	205-99-2	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	*Yes*
Benzo (g,h,i) perylene	191-24-2	1.20E-06	lb/MMCF	4.09E-09	8.19E-09	3.59E-08	*Yes*
Benzo (k) fluoranthene	207-08-9	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	*Yes*
Chrysene	218-01-9	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	*Yes*
Dibenzo(a,h) anthracene	53-70-3	1.20E-06	lb/MMCF	4.09E-09	8.19E-09	3.59E-08	*Yes*
Dichlorobenzene, mixed isomers	25321-22-6	1.20E-03	lb/MMCF	4.09E-06	8.19E-06	3.59E-05	No
Dimethylbenz(a)anthracene	57-97-6	1.60E-05	lb/MMCF	5.46E-08	1.09E-07	4.78E-07	No
Fluoranthene	206-44-0	3.00E-06	lb/MMCF	1.02E-08	2.05E-08	8.96E-08	*Yes*
Fluorene	86-73-7	2.80E-06	lb/MMCF	9.55E-09	1.91E-08	8.37E-08	*Yes*
Formaldehyde	50-00-0	7.50E-02	lb/MMCF	2.56E-04	5.12E-04	2.24E-03	*Yes*
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	lb/MMCF	6.14E-09	1.23E-08	5.38E-08	*Yes*
Naphthalene	91-20-3	6.10E-04	lb/MMCF	2.08E-06	4.16E-06	1.82E-05	*Yes*
n-Butane	106-97-8	2.10E+00	lb/MMCF	7.16E-03	1.43E-02	6.28E-02	No
N-Hexane	110-54-3	1.80E+00	lb/MMCF	6.14E-03	1.23E-02	5.38E-02	No
N-Pentane	109-66-0	2.60E+00	lb/MMCF	8.87E-03	1.77E-02	7.77E-02	No
Phenanthrene	85-01-8	1.70E-05	lb/MMCF	5.80E-08	1.16E-07	5.08E-07	*Yes*
Pyrene	129-00-0	5.00E-06	lb/MMCF	1.71E-08	3.41E-08	1.49E-07	*Yes*
Toluene	108-88-3	3.40E-03	lb/MMCF	1.16E-05	2.32E-05	1.02E-04	*Yes*
Total Fuel Heaters HAPs =						***0.003***	

[8] Emission factors obtained from USEPA AP-42, Chapter 1.4, Tables 1.4-3 and 1.4-4.

Table 7.4 Emission Calculation Methods

$E_{ST} = C_{ST} \times EF / HHV$
$E_A = C_A \times EF / HHV / 2{,}000$ lb/ton

where:

E_{ST} = *Short Term Emissions (lb/hr);*
E_A = *Annual Maximum Emissions (tpy);*
C_{ST} = *Total Heat Input Capacity (MMBtu/hr);*
C_A = *Annual Maximum Heat Input Capacity based on 8,760 hours/yr of operation (MMBtu/yr);*
EF = emission factor (lb/MMCF); and,
HHV = Natural Gas Higher Heating Value (Btu/CF)

Table 7 - Project Related TAC and HAP Emissions ***(Provided March 9, 2015 to AQD Permits Section for PTI 206-14 Application)***

ROP Application
Alpine Power Plant, Elmira, Michigan

Table 7.5 - Short-Term and Annual TAC and HAP Emissions From Exempt Natural Gas Heaters

Heat Input Capacity Exempt Heaters

Combined =	*6.1*	*MMBtu/hr'*
Annual Heat Input =	*53,348*	*MMBtu/yr*
Natural Gas HHV =	*1,026*	*Btu/CF*

TAC / HAP	CAS No.	Emission Factor Value [8] (lb/MMCF)	Emission Factor Units	Short-Term Emissions per Fuel Heater (lb/hr)	Annual Maximum Emissions (tpy)	HAP? (*Yes* or No)
Metals						
Arsenic	7440-38-2	2.00E-04	lb/MMCF	1.19E-06	5.20E-06	*Yes*
Barium	7440-39-3	4.40E-03	lb/MMCF	2.61E-05	1.14E-04	No
Beryllium	7440-41-7	1.20E-05	lb/MMCF	7.12E-08	3.12E-07	*Yes*
Cadmium	7440-43-9	1.10E-03	lb/MMCF	6.53E-06	2.86E-05	*Yes*
Chromium	18540-29-9	1.40E-03	lb/MMCF	8.31E-06	3.64E-05	*Yes*
Cobalt	7440-48-4	8.40E-05	lb/MMCF	4.99E-07	2.18E-06	*Yes*
Copper	7440-50-8	8.50E-04	lb/MMCF	5.05E-06	2.21E-05	No
Manganese	7439-96-5	3.80E-04	lb/MMCF	2.26E-06	9.88E-06	*Yes*
Mercury	7439-97-6	2.60E-04	lb/MMCF	1.54E-06	6.76E-06	*Yes*
Molybdenum	7439-98-7	1.10E-03	lb/MMCF	6.53E-06	2.86E-05	No
Nickel	7440-02-0	2.10E-03	lb/MMCF	1.25E-05	5.46E-05	*Yes*
Selenium	7782-49-2	2.40E-05	lb/MMCF	1.42E-07	6.24E-07	*Yes*
Vanadium	7440-62-2	2.30E-03	lb/MMCF	1.37E-05	5.98E-05	No
Zinc	7440-66-6	2.90E-02	lb/MMCF	1.72E-04	7.54E-04	No
Organics						
2-Methyl Naphthalene	91-57-6	2.40E-05	lb/MMCF	1.42E-07	6.24E-07	*Yes*
3-Methylcholanthrene	56-49-5	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	No
Acenaphthene	83-32-9	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	No
Acenaphthylene	208-96-8	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	No
Anthracene	120-12-7	2.40E-06	lb/MMCF	1.42E-08	6.24E-08	No
Benzene	71-43-2	2.10E-03	lb/MMCF	1.25E-05	5.46E-05	*Yes*
Benzo (a) anthracene	56-55-3	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	*Yes*
Benzo (a) pyrene	50-32-8	1.20E-06	lb/MMCF	7.12E-09	3.12E-08	*Yes*
Benzo (b) fluoranthene	205-99-2	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	*Yes*
Benzo (g,h,i) perylene	191-24-2	1.20E-06	lb/MMCF	7.12E-09	3.12E-08	*Yes*
Benzo (k) fluoranthene	207-08-9	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	*Yes*
Chrysene	218-01-9	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	*Yes*
Dibenzo(a,h) anthracene	53-70-3	1.20E-06	lb/MMCF	7.12E-09	3.12E-08	*Yes*
Dichlorobenzene, mixed isomers	25321-22-6	1.20E-03	lb/MMCF	7.12E-06	3.12E-05	No
Dimethylbenz(a)anthracene	57-97-6	1.60E-05	lb/MMCF	9.50E-08	4.16E-07	No
Fluoranthene	206-44-0	3.00E-06	lb/MMCF	1.78E-08	7.80E-08	*Yes*
Fluorene	86-73-7	2.80E-06	lb/MMCF	1.66E-08	7.28E-08	*Yes*
Formaldehyde	50-00-0	7.50E-02	lb/MMCF	4.45E-04	1.95E-03	*Yes*
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	lb/MMCF	1.07E-08	4.68E-08	*Yes*
Naphthalene	91-20-3	6.10E-04	lb/MMCF	3.62E-06	1.59E-05	*Yes*
n-Butane	106-97-8	2.10E+00	lb/MMCF	1.25E-02	5.46E-02	No
N-Hexane	110-54-3	1.80E+00	lb/MMCF	1.07E-02	4.68E-02	No
N-Pentane	109-66-0	2.60E+00	lb/MMCF	1.54E-02	6.76E-02	No
Phenanthrene	85-01-8	1.70E-05	lb/MMCF	1.01E-07	4.42E-07	*Yes*
Pyrene	129-00-0	5.00E-06	lb/MMCF	2.97E-08	1.30E-07	*Yes*
Toluene	108-88-3	3.40E-03	lb/MMCF	2.02E-05	8.84E-05	*Yes*
Total Fuel Heaters HAPs =					***0.002***	

[8] Emission factors obtained from USEPA AP-42, Chapter 1.4, Tables 1.4-3 and 1.4-4.

Table 7.5 Emission Calculation Methods

$E_{ST} = C_{ST} \times EF / HHV$

$E_A = C_A \times EF / HHV / 2{,}000$ lb/ton

where:

E_{ST} = Short Term Emissions (lb/hr);

E_A = Annual Maximum Emissions (tpy);

C_{ST} = Total Heat Input Capacity (MMBtu/hr);

C_A = Annual Maximum Heat Input Capacity based on 8,760 hours/yr of operation (MMBtu/yr);

EF = emission factor (lb/MMCF); and,

HHV = Natural Gas Higher Heating Value (Btu/CF)

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: P0582	Section Number (if applicable):

1. Additional Information ID
AI-Plans

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

The Malfunction Abatement Plan and Start-up Shutdown Plan are attached.

Malfunction Abatement Plan

Wolverine Power Cooperative, Inc.

Alpine Power Plant

Elmira, Michigan

November 15, 2016

Fishbeck, Thompson, Carr & Huber, Inc.
engineers | scientists | architects | constructors

MALFUNCTION ABATEMENT PLAN
ALPINE POWER PLANT

PREPARED FOR:
WOLVERINE POWER COOPERATIVE
ELMIRA, MICHIGAN

NOVEMBER 15, 2016

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LIST OF ABBREVIATIONS/ACRONYMS

CT	combustion turbines
°F	degrees Fahrenheit
FG	Flexible Group
MAP	Malfunction Abatement Plan
MDEQ	Michigan Department of Environmental Quality
MW	megawatt
NO_X	nitrogen oxides
PI	Plant Information
psig	pounds per square inch gage
PTI	Permit to Install
ROP	Renewable Operating Permit

1.0 INTRODUCTION

This MAP has been prepared to comply with the Wolverine Power Supply Cooperative, Inc. Alpine Power Plant (Wolverine Power) PTI No. 206-14, specifically, FG-CTG Condition III.1. The purpose of this document is to describe actions that will be taken at this facility: (1) to prevent excess emissions during malfunctions via scheduled maintenance; (2) identify any issues which could cause imminent malfunction; and (3) in the event of any sudden malfunction of equipment, as required by the ROP. To describe the steps to be taken to prevent excess emissions via scheduled maintenance of the equipment, this Plan is arranged in accordance with Michigan Air Pollution Control Rule 911.

Rule 911 states:

> *(1) Upon request of the department, a person responsible for the operation of a source of an air contaminant shall prepare a malfunction abatement plan to prevent, detect, and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation.*
>
> *(2) A malfunction abatement plan required by subrule (1) of this rule shall be in writing and shall, at a minimum, specify all of the following:*
>
> *(a) A complete preventative maintenance program, including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.*
>
> *(b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.*
>
> *(c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.*
>
> *(3) A malfunction abatement plan required by subrule (1) of this rule shall be submitted to the department and shall be subject to review and approval by the department. If, in the opinion of the commission, the plan does not adequately carry out the objectives as set forth in subrules (1) and (2) of this rule, then the department may disapprove the plan, state its reasons for disapproval, and order the preparation of an amended plan within the time period specified in the order. If, within the time period specified in the order, an amended plan is submitted which, in the opinion of the department, fails to meet the objective, then the department, on its own initiative, may amend the plan to cause it to meet the objective.*
>
> *(4) Within 180 days after the department approves a malfunction abatement plan, a person responsible for the preparation of a malfunction abatement plan shall implement the malfunction abatement plan required by subrule (1) of this rule.*

2.0 DEFINING MALFUNCTIONS

Rule 113(a) defines a malfunction as:

> *Malfunction means any sudden, infrequent and not reasonably preventable failure of a source, process, process equipment, or air pollution control equipment to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.*

A true malfunction must have a reasonable potential to cause an exceedance in emissions or operating parameter. Following is a list of malfunction events covered by this Plan.

- Failure of emission control system components, e.g., monitoring equipment and/or data acquisition equipment.
- Sudden and unavoidable failure of control or process equipment, not due to poor operation or maintenance.

3.0 EMISSION CONTROL DEVICE

Wolverine Power utilizes two natural gas-fired CTs, which inherently have low emissions; therefore, no post-combustion air cleaning devices are employed. Each CT is equipped with Dry Low NO_X Burner technology to minimize NO_X emissions, which is part of the integral design of each CT. Dry Low NO_X Burner technology prevents the formation of NO_X, as opposed to capturing and destroying NO_X after its formation.

For the purpose of the preventative maintenance requirement in Rule 911(2)(a), Wolverine Power will perform normal and routine maintenance activities on the CTs to ensure their proper and reliable operation. Air emissions will be minimized by proper operation of the CTs.

4.0 SOURCE DESCRIPTION

Wolverine Power operates two natural gas-fired General Electric Frame 7FA.05 simple-cycle CTs, each with a nominal 203 MW electrical output, and each equipped with dry low NO_X burners.

Table 1 – Source Description

Emission Source	Control Equipment	Emissions Controlled
FG-CTG	2 Dry Low NO_X Burners	NO_X

5.0 RESPONSIBLE PERSONNEL

Primary responsibility for the operation, maintenance, and repair of the facility rests with the Chief Operator. The Chief Operator will direct plant personnel to perform repairs. Should the need arise, outside contractors may be brought in to complete repairs. Titles of the personnel responsible for tasks under this MAP, and their duties, are listed in Table 2.

Table 2 – Responsible Personnel

Position	Responsibility
Chief Operator	Overall operations and maintenance; responsible for overseeing the inspection, maintenance, and repair of the CTs.
Operations and Maintenance	Corrective actions, malfunction response, and routine inspections. Preventative maintenance inspections and repairs.
VP of Environmental Strategy	Company-wide environmental monitoring and oversight.
Outside Contractors	Calibration, repairs, and maintenance of emission control instrumentation.

6.0 PREVENTATIVE MAINTENANCE PROGRAM, OPERATIONAL VARIABLES, AND CORRECTIVE PROCEDURES

Preventative maintenance will include scheduled equipment inspections, replacement of parts in accordance with manufacturer recommendations and schedule, and maintaining an inventory of critical spare parts. To ensure normal operation of the CTs, some inspections of the plant equipment which are to be done on a daily basis, at minimum, when the plant is in operation, are made during the operator's hourly inspections. These inspections include checks made to the plant control systems and checks for any physical problems, such as oil leaks or any disrepair. Normal lubrication of equipment is also performed at this time.

Wolverine Power has a built in alarm for the dry low NO_X burners. This alarm ensures that the combustion unit is running properly by measuring combustion parameters and estimating NO_X emissions. If the calculated NO_X emission concentration is above 9 ppm, or if the dry low NO_X burner is not operating within the correct parameters, an alarm will be triggered. Once an alarm is triggered, the unit will not be able to operate under normal conditions until the unit parameters return to the normal operating ranges.

6.1 OPERATIONAL VARIABLES

As the dry low NO_X burners are integral to the CT design, the electric generating unit parameters, integral NO_X emission concentration, and fuel flow are monitored as well as the variables listed in Table 3.

Table No. 3 – Operational Variables

Operating Parameter	Normal Operating Range
Load (%)	>50%
Compressor Discharge Pressure (psig)	140 to 252
Inlet Guide Vane (%)	(-10) to 30.7
Combustion Reference Temperature	91 to 100
Exhaust Temperature (°F)	900 to 1300
Exhaust Temperature Span (°F)	200

6.2 OPERATION AND MAINTENANCE SCHEDULE

Wolverine Power is using a Maintenance Management computer software program for all preventative maintenance. Work orders are provided on a weekly basis. These work orders are printed, completed, and reviewed for completeness at the end of each week. If a work order is not completed, when the next week's Open Work Order Reports are run and work orders are printed, the incomplete order will be flagged as backlogged. The backlogged work order will remain flagged until it is marked complete. The preventative maintenance activities in the program are all in accordance with the Original Equipment Manager recommendations and scheduled to take place within their specified time ranges.

Operators perform hourly gauge readings and inspections of the plant when operating. These inspections include checking the plant control systems and looking for any physical problems, such as oil leaks or any disrepair. Gauge readings and any significant issues identified during an inspection are recorded. An example of the Hourly Operational Walkdown Inspection Sheet – which may be updated at any time – is included as Appendix 1. Any updates will be kept at the plant and made available to the MDEQ upon request.

6.3 CORRECTIVE ACTION

If a malfunction occurs during plant operations which causes, or may cause, excess emissions, the equipment causing the (potential) excess emission will be evaluated as soon as practicable in accordance with safe operating procedures to determine the proper procedure to correct the issue or to determine that the malfunction will not cause excess emissions.

The corrective procedures or operational changes used to ensure compliance with the emission limits involve careful monitoring of the PI systems. If a malfunction results in the possibility of an emissions exceedance, the unit will not allow normal operation and an alarm will sound. If the unit has any difficulty during operation, such as mechanical or control system failure which results in high emissions, the first step will be to validate the data in an expeditious manner and determine the cause of the deficiency.

Repairs or operational changes will be quickly assessed with the unit on-line for the purpose of minimizing emissions. Every reasonable and practical effort will be made to bring a malfunctioning unit back into compliance; however, if these efforts are unsuccessful or continued operation is dangerous either to equipment or personnel, the unit will be shut down and the problem corrected. If possible, the unit may be restarted during the calendar day and brought to normal operating loads to average in the lower emission of higher load operation along with the high emissions during start-up period to avoid any exceedances of the emission limits contained in the permit.

6.4 PREVENTATIVE MAINTENANCE RECORDS

The following records will be maintained:

- Wolverine Power will keep records of inspections which are outside normal operating ranges (i.e., Exception Reports). These records will include the date, finding(s), and corrective action(s) taken or repair(s) made, if necessary.
- All significant, unscheduled maintenance activities performed on the CTs. Records will include the date, finding(s), and corrective action(s) taken, or repair(s) made, if necessary.

7.0 MAJOR PARTS KEPT ONSITE FOR QUICK REPLACEMENT

Spare parts are managed by a computerized maintenance management system. This system is used to manage parts onsite, parts warehoused offsite at the manufacturer, and the manufacturer's contact information. The principal replacement parts needed to ensure the continued and reliable operation of the CTs are primarily electronic cards for the control system (Control Cards). These Control Cards are usually kept onsite.

Appendix 1

U____ Hourly Walkdowns H_2

Date:	96GK1 Gen pressure	63HVG-2 H2 Regulated pressure gauge	63HVG-1 Regulated pressure	Gas Purity-line to TE/CE/Case	96SA-3 CE seal oil pressure differential (psi)	96SA-4 TE Seal oil differential (psi)	96SA-5 TOT SO DIFF (PSI)	96SF-3 SO REG DIFF (PSI)	Bearing Oil Feed 4A / 4B	Bulk H2/Cylinder PSI H2 House
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STARTUP/SHUTDOWN AND EMISSION MINIMIZATION PLAN
COMBUSTION TURBINES

WOLVERINE POWER COOPERATIVE, INC.
ALPINE POWER PLANT

FEBURARY 9, 2018

FINAL SUBMITTAL

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LIST OF ABBREVIATIONS/ACRONYMS

APP	Alpine Power Plant
AQD	Air Quality Division of the MDEQ
CT	combustion turbine
°F	degrees Fahrenheit
EU	Emission Unit
FSR	Fuel Stroke Reference
(HMI	Human Machine Interface
MDEQ	Michigan Department of Environmental Quality
PTI	Permit to Install
SS	Startup/Shutdown (Plan)

On May 15, 2015, the Wolverine Power Supply Cooperative, Inc. Alpine Power Plant (APP) received an approved Air Permit to Install (PTI 206-14). The issued air permit contains several permit conditions which are intended to ensure that the facility maintains compliance with the state and federal air quality standards and regulations. These permit conditions are further separated in the issued air permit based on what is commonly referred to as Emission Units (EUs).

The emission unit identified as FG-CTG contains Special Condition III.2 which specifies:

> *The permittee shall not operate FG-CTG unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the AQD District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved.*

To comply with this requirement, the following Startup/Shutdown Emissions Minimization (SS-EM) Plan has been developed, with the assistance of the equipment manufacturer (GE). However, we encourage Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) staff to make recommendations for improvement of this document whenever the need arises. This is considered a dynamic document and can be modified from time to time, as agreed to by Wolverine Power and MDEQ-Air Quality staff.

It is also important to remember that proper startup and shutdown procedures (1) protect worker safety, (2) help maintain proper operation of the CTs, and (3) minimize the opportunities for CT equipment failures – all of which are intended to minimize emissions. Therefore, development and adherence to an effective SS Plan also meets the intent of an Emission Minimization Plan.

EMISSION MINIMIZATION DURING CT STARTUP AND SHUTDOWN OPERATIONS

Even though this permit review process was not subject to a federal PSD Best Available Control Technology (BACT) demonstration, Wolverine's business philosophy continues to emphasize good environmental stewardship. During development of the permit application and subsequent AQD discussions during the AQD permit review process, we openly discussed the startup/ shutdown protocol with AQD permit staff and also evaluated the ambient air impacts from these events.

As noted during these discussions, controlling ***when*** these units are required to startup or shutdown are primarily dependent upon regional and local energy demand and at the request of regulated entities outside the ownership and control of Wolverine Power. It is also in Wolverine's best interests to bring these CT units online as quickly as possible as fuel use and combustion efficiency is not optimized until the CT approaches the 50% load rate. In the original permit application we identified 50% load as the rate at which the startup cycle is complete, or shut down cycle has commenced. In either situation, there remains a balance between worker safety, optimizing fuel combustion, and avoiding thermal shock wear and increased maintenance issues within the CT unit itself. Basically, these CT units go through a step-function, multistep load increases (or decreases), before the unit becomes available for supplying the electrical grid and/or shuts down.

Based on the very nature of the startup/shutdown process, and dealing with widely varying stack flows, it is also known that emissions during a startup and/or shut down event cannot be sampled and measured. There are no acceptable USEPA Test Methods available for quantification of these emissions through a startup or shutdown cycle. Therefore, startup/shutdown emissions are estimated by the CT manufacturer and expressed on a *"pounds of emissions per event"* basis. The total number of events are recorded and the emissions are then calculated and added to a monthly log for comparison to the permitted emission limits. In other words, the *duration* of a startup/shutdown event is not the primary determining factor – worker safety concerns, and preventing thermal shock to avoid excessive equipment wear are the overriding issues.

Lastly, to limit the opportunity for operator error, the startup and shutdown cycles these CT units are controlled by supplier-provided computer systems and software. Emission guarantees are also based on using these fully-automated systems, and any operator deviations from the automated systems could potentially void the manufacturers' warrantees. These pre-programmed operating systems are designed to protect these units from excessive wear and tear by avoiding the potential for Thermal Shock situations.

The following SS Plan is summarized in three separate tasks to help simplify the entire process for the plant operators. These three tasks identify equipment inspections and operating instructions related to:

1. A CT pre-inspection and startup plan
2. A CT normal and emergency shutdown procedure
3. A CT Cool Down procedure for equipment protection

This approach is similar to what is being used at other Wolverine owned and operated facilities and has a proven record of effectiveness to protect worker safety and avoid unnecessary equipment wear. Unnoticed, these types of incidents can lead to premature equipment failures.

CT START-UP

GENERAL

Startup of a single turbine/generator unit may be accomplished either in the control room or either PEECC.

The following description lists operator, control system and machine actions or events in starting the gas turbine. The following assumes that the unit is in a ready to start condition.

STARTING PROCEDURE

A. Conditions prior to starting: Turning gear, Lube pump and Lift pump on. The display will indicate speed, temperature, various conditions etc. Start permissive screen is checked for any outstanding alarms or alerts. All should be satisfied before start.

B. Load Commutated Inverter must be connected to Generator before start is initiated. This activates large 3 phase switches and satisfies the final start permissive.

C. Select “START” and confirm the selection.

1. Unit auxiliaries will be started and vital valves / motors operated. During this period, a test of the emergency lube oil pump is completed. If any test fails the start will be inhibited.
2. The turbine shaft will begin to spin up to 900rpm using the generator as a motor.
3. When the unit reaches approximately 25% speed / 900rpm known as purge speed a timer will go for 4 min to allow for purge of all residual natural gas.
4. Upon completion of purge the unit will coast down to approximately 500rpm and ignition sequence begins.
5. When flame is established, the HMI display will indicate flame based on the status of the flame detectors.
6. The HMI will indicate ACCELERATING and the turbine will increase in speed using gas energy as well as the starting device to spin the motor up to full speed. When it reaches 91% speed, the starting device will disengage.
7. When the turbine reaches operating speed (98%), the operating speed signal “14HS” will be displayed on the HMI. Generator field flashing is initiated. If the synchronizing is not selected on the HMI, as the turbine reaches operating speed, HMI display will change to:
   FULL SPEED NO LOAD
8. The operator will then select the Synch screen, confirm exciter operation and synch scope monitor before selecting AUTO SYNCH.
9. The turbine speed is then automatically matched to the system and when the proper phase relationship is achieved the generator breaker will close. The machine will load to Spinning Reserve unless a load control point BASE, EXTERNAL LOAD or PRESELECTED LOAD has been selected.
10. The HMI will display SPINNING RESERVE, once the unit has reached this load point. The operator will then confirm smooth running status using alarm screens and experience before loading the generator to requested load.

CT SHUTDOWN

NORMAL SHUTDOWN

Normal shutdown is initiated by selecting STOP on the HMI Main Startup Display. The control system will follow automatically through generator unloading, generator breaker opening, turbine speed reduction, fuel shutoff at part speed and initiation of the cool down sequence. Upon fuel shutoff and flame out an operator will continue to monitor in the control room while an additional operator will check the turbine for unexpected issues.

EMERGENCY SHUTDOWN

Emergency shutdown is initiated by depressing the EMERGENCY STOP pushbutton, located on the turbine control panel or remotely located at the operator station. The EMERGENCY STOP button will disable the turning gear and cool down sequence. Unless this is intended, the button should be released (unlatched) during coast down.

CAUTION

In the event of an emergency shutdown in which internal damage of any rotating equipment is suspected, do not turn the rotor after shutdown. Maintain lube oil pump operation; a lack of circulating lube oil following a hot shutdown will result in rising bearing temperatures which can result in damaged bearing surfaces. If the malfunction that caused the shutdown can be quickly repaired, or if a check reveals no internal damage affecting the rotating parts, recommence the cool down cycle.

CT COOL DOWN

The HMI Main Startup Display contains COOL DOWN CONTROL. Upon unit shutdown, either normal or emergency, the unit will automatically select cool down control ON. Cool down control will maintain the unit operating on turning gear with the lube oil and hydraulic pumps running. Once the unit reaches turning gear speed 6.3rpm`, the lift oil pump will come on to account for lack of oil wedge.

Proper cool down operation of the gas turbine is critical for the following reasons:

a. To avoid high vibrations on unit restart;
b. To control the unit clearances to avoid a compressor or turbine rub that would reduce overall unit performance.
c. Control the rotor stresses to achieve maximum rotor life.

The standard cool down practice after a normal fired shutdown or unit trip from any load should be rotation by unit turning gear until all turbine wheelspace temperatures are < 150°F as measured while unit at turning gear speed. At this condition the unit can be removed from turning gear. GER 3620 indicates the recommend turning gear practices when the unit is left idle prior to startup and for extended durations.

If required, the cool down cycle may be accelerated using the starting device; in which case it will be operated at cranking speed. The same 150°F requirement for removal of all rotation applies, but note that this temperate is to be measured and verified while the unit is at turning gear speed, not at cranking condition. Crank cool, as it is called, is not often employed as it causes unnecessary thermal stresses on the unit.

CAUTION

Opening up the turbine compartment doors should not be done as a means to accelerate cool down period. The compartment is engineered to provide specific cooling paths around the turbine to ensure uniform cooling. Disrupting this cooling path will result in uneven cooling of the outer casings resulting in excessive stress and uneven clearances.