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DCP Midstream
370 17th Street, Suite 2500
Denver, CO 80202

303-605-2029

MACES _____ MAERS _____
FILE App No. 2019 00200

December 3, 2019

UPS Tracking No.: 1Z F46 915 01 9279 3356

Mr. Shane Nixon
Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Air Quality Division (AQD)
Gaylord District Office
2100 West M-32
Gaylord, MI 49735

**Re: Renewal Application for Renewable Operating Permit (ROP)
DCP Antrim Gas, LLC - South Chester Antrim CO₂ Removal Facility (SRN: N2940)**

Dear Mr. Nixon:

DCP Operating Company, LP (DCP) is submitting the enclosed Renewal Application for Renewable Operating Permit (ROP) No. MI-ROP-N2940-2015 for the DCP Antrim Gas, LLC - South Chester Antrim Carbon Dioxide (CO₂) Removal Facility located at 6250 Old State Road, Johannesburg, Otsego County, MI.

DCP operates an absorption treating process to remove CO₂ and excess water from Antrim formation natural gas in accordance with the terms and conditions of ROP No. MI-ROP-N2940-2015. The ROP was issued on July 6, 2015 and will expire on July 6, 2020. As required by R 336.1210(9) of the Michigan Air Pollution Control Rules, the facility must submit an administratively complete ROP renewal application not more than 18 months, but not less than 6 months, prior to the expiration date of the current ROP. The current ROP expires July 6, 2020; therefore, an ROP renewal application must be submitted and deemed administratively complete by January 6, 2020. This ROP renewal application is being submitted electronically, in addition to hard copy, to allow 15 days for an administrative completeness determination pursuant to R 336.1210(2)(a)(i)(B).

The six (6) engines (EUENGINE1, EUENGINE2, and EUGEN06 through EUGEN09) contained in ROP No. MI-ROP-N2940-2015 have been permanently decommissioned, as follows:

- EUGEN06 through EUGEN09 were permanently shut down on August 9, 2019; and
- EUENGINE1 and EUENGINE2 were permanently shut down on September 4, 2019.

The engines have been decommissioned and are being replaced by one (1) natural gas-fired combustion turbine (EUTUR03) and one (1) diesel-fired emergency engine (EUEMRGEN01) contained in Permit to Install (PTI) No. 162-18. The engines will be removed from the facility; therefore, DCP is proposing to remove the terms and conditions associated with EUENGINE1, EUENGINE2, and EUGEN06 through EUGEN09 contained in flexible groups FGGENINES, FGMACTZZZZ, and FGGEN6789 as part of this renewal application. With the removal of EUENGINE1 and EUENGINE2, the associated malfunction abatement plan (MAP) for both engines is no longer applicable and is therefore not included with this renewal application.

The terms and conditions of PTI No. 162-18 are being incorporated into the ROP as part of this renewal application. DCP received approval of PTI No. 162-18 on March 25, 2019 for the installation

and operation of one (1) natural gas-fired combustion turbine (EUTUR03) and one (1) diesel-fired emergency engine (EUEMRGEN01). Potential emissions from EUTUR03 and EUEMRGEN01 are provided as part of the PTI application package on file with EGLE-AQD permitting section. PTI No. 162-18 also incorporates a change to the CO₂ emission limit for EUPLANT6AMINE by limiting CO₂ emissions on a monthly basis rather than a daily basis. EUEMRGEN01 started operation on October 31, 2019, and it is anticipated EUTUR03 will be operational in the first quarter of 2020.

The ROP renewal application, ROP application certification form (C-001), and supporting documentation are enclosed. If there are questions regarding this ROP renewal application, please contact me at (303) 605-2029.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marie Cameron".

Marie Cameron, P.E.
Senior Environmental Engineer

cc: Ms. Sharon LeBlanc, EGLE-AQD
Ms. Tauna Rignall, DCP
Ms. Mary Mello, NTH Consultants, Ltd.
EGLE-ROP@michigan.gov

Noble-Woods, Deb (EGLE)

From: Mary Mello <MMello@nthconsultants.com>
Sent: Tuesday, December 3, 2019 3:35 PM
To: EGLE-ROP
Cc: Nixon, Shane (EGLE); LeBlanc, Sharon (EGLE); Cameron, Marie E; Winn, Chad E; Bennett, David; Rhiana Dornbos
Subject: N2940 - ROP Renewal Application
Attachments: 1 - ROP Renewal Application Form EQP6000_signed.pdf; 2 - N2940 _ROP_MARK-UP.docx; 3 - Supplemental Data.zip

Good Afternoon,

On behalf of DCP Operating Company, LP (DCP), attached is the Renewable Operating Permit (ROP) renewal application for DCP Antrim Gas, LLC - South Chester Antrim Carbon Dioxide (CO₂) Removal Facility ROP No. MI-ROP-N2940-2015.

Per the ROP renewal application instructions, the attachments are in the following order:

- Copy of signed ROP Application Form
- ROP mark-up (Microsoft Word version)
- Supplemental Data:
 - Copy of signed cover letter and supplemental write up
 - Copy of signed ROP Application C-001 Certification form
 - Copy of Permit to Install (PTI) No. 162-18

A hard copy of the complete application package has been mailed to the attention of Mr. Shane Nixon at the Air Quality Division (AQD) Gaylord District Office in Gaylord, MI. The hard copy includes original signed cover letter and forms by the facility's Responsible Official.

Sincerely,

Mary Mello

Project Professional

Direct: 248.662.2033 | Mobile: 248.990.1035

41780 Six Mile Rd., Suite 200; Northville, MI 48168

mmello@nthconsultants.com



NTH Consultants, Ltd. | *Over 50 Years of Engineering Excellence*

**RENEWABLE OPERATING PERMIT APPLICATION
C-001: CERTIFICATION**

MACES _____ MAERS _____
FILE App 20190200

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 provide this information may result in civil and/or criminal penalties. Please type or print clearly.


This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN N2940
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Stationary Source Name DCP Antrim Gas, LLC - South Chester Antrim CO2 Removal Facility	
City Johannesburg	County Otsego

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input checked="" type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media	<input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI PARTC,H	

CONTACT INFORMATION	
Contact Name Marie Cameron, P.E.	Title Senior Environmental Engineer
Phone number 303-605-2029	E-mail address mecameron@dcpmidstream.com

This form must be signed and dated by a Responsible Official.				
Responsible Official Name Tauna Rignall			Title General Manager, NBU Operations	
Mailing address 3026 4 th Avenue				
City Greeley	State CO	ZIP Code 80631	County Weld	Country USA
As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.				
 Signature of Responsible Official			<u>12/3/19</u> Date	

DEC 04 2019

**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

App No 201900300

SRN N2940	SIC Code 4922	NAICS Code 486210	Existing ROP Number MI-ROP-N2940-2015	Section Number (if applicable) N/A
Source Name DCP Antrim Gas, LLC - South Chester Antrim CO2 Removal Facility				
Street Address 6250 Old State Road				
City Johannesburg	State MI	ZIP Code 49751	County Otsego	
Section/Town/Range (if address not available)				
Source Description DCP Operating Company, LP owns and operates an absorption treating process at the South Chester Antrim CO2 Removal Facility for removal of CO2 and excess water from Antrim formation natural gas.				
<input type="checkbox"/> 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 DCP Operating Company, LP	Section Number (if applicable) N/A			
Mailing address (<input type="checkbox"/> check if same as source address) 370 17th Street, Suite 2500				
City Denver	State CO	ZIP Code 80202	County Denver	Country 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: N2940	Section Number (if applicable):
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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 Marie Cameron, P.E.		Title Senior Environmental Engineer		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) DCP Operating Company, LP; 370 17th Street, Suite 2500				
City Denver	State CO	ZIP Code 80202	County Denver	Country USA
Phone number 303-605-2029		E-mail address mecameron@dcpmidstream.com		

Contact 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Tauna Rignall		Title General Manager, NBU Operations		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) DCP Operating Company, LP; 3026 4 th Avenue				
City Greeley	State CO	ZIP Code 80631	County Weld	Country USA
Phone number 303-446-4116		E-mail address TRignall@dcpmidstream.com		

Responsible Official 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		


<input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

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.	
<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP using official version from the AQD website (required)	<input type="checkbox"/> Stack information
<input checked="" type="checkbox"/> Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input type="checkbox"/> Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input checked="" type="checkbox"/> Electronic documents provided (optional)
<input type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)	
Tauna Rignall, General Manager, NBU Operations	
<i>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.</i>	
	<u>12/3/19</u>
Signature of Responsible Official	Date

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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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, NO _x , PM ₁₀ , PM _{2.5} , 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 the MDEQ, 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/>
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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/>	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-PARTC,H	

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)]
EUBUILDINGHEAT1	Office building space heater, rated at 140,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUBUILDINGHEAT2	Office building space heater, rated at 105,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUSHOPHEAT1	Shop space heater, rated at 7,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUSHOPHEAT2	Shop space heater, rated at 7,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUSHOPHEAT3	Shop space heater, rated at 7,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUSHOPHEAT4	Shop space heater, rated at 7,000 Btu/hr heat input	Rule 212(4)(c)	Rule 282(2)(b)(i)

Comments:

The above listed emission units are identified in the facility's current ROP Staff Report.

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

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 <u>Yes</u> , identify changes and additions on Part F, Part G and/or Part H.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <u>not</u> reported in the most recent MAERS reporting year? If <u>Yes</u> , identify the stack(s) that was/were not reported on applicable MAERS form(s).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If <u>Yes</u> , complete Part F with the appropriate information.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
E4. Have any emission units identified in the existing ROP been dismantled? If <u>Yes</u> , identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Comments:</p> <p>E4: EUGEN06 through EUGEN09 were shut down on August 9, 2019. EUENGINE1 and EUENGINE2 were shut down on September 4, 2019. The engines have been decommissioned and will be removed from the facility.</p>	
<input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: AI-	

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 <u>Yes</u> , complete the following table. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If <u>No</u> , go to Part G.			
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
162-18	EUTUR03	Natural Gas fired Centaur 50 turbine with a 4.0MW nameplate capacity with SoLoNOx configuration (Heat input 53.5 MMBtu/hr)	Installation in progress
162-18	EUEMERGEN01	Diesel fired emergency engine	October 31, 2019
162-18	EUPLANT6AMINE	Plant 6 MDEA process for removing CO2 from natural gas at a rate of 35 MMSCFD	June 1, 1996
F2. Do any of the PTIs listed above change, add, or delete terms/conditions to established emission units in the existing ROP? If <u>Yes</u> , 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. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
F3. Do any of the PTIs listed above identify new emission units that need to be incorporated into the ROP? If <u>Yes</u> , 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. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were <u>not</u> reported in MAERS for the most recent emissions reporting year? If <u>Yes</u> , identify the stack(s) that were not reported on the applicable MAERS form(s). <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 <u>Yes</u> , describe the changes on an AI-001 Form. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Comments: F2 and F3: PTI No. 162-18, approved March 25, 2019, contains updated terms/conditions to EUPLANT6AMINE, and new terms and conditions for new emission units EUTUR03 and EUEMERGEN01. Refer to the mark-up copy of the ROP contained in Appendix B for incorporation of PTI No. 162-18 terms and conditions. EUTUR03 and EUEMERGEN01 were not installed or operating in 2018; therefore, the units were not included in MAERS for the most recent emissions reporting year (RY2018).			
<input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: AI-			

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. Yes No

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

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
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(c) surface coating line		
<input type="checkbox"/> 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 <u>Yes</u> , answer the questions below.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If <u>Yes</u> , describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 <u>Yes</u> , 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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If <u>Yes</u> , on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify <u>each</u> 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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If <u>Yes</u> , 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.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H6. Does the source propose to add, change and/or delete source-wide requirements? If <u>Yes</u> , identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H7. Are you proposing to streamline any requirements? If <u>Yes</u> , identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

<p>H8. Does the source propose to add, change and/or delete emission limit requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>FGENGINES and FGGEN6789: Delete requirements as the engines have been decommissioned and will be removed from the facility.</p> <p>EUPLANT6AMINE and FGPLANTRA: Delete Rule 901 for nuisance prevention as that is not an applicable UAR.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H9. Does the source propose to add, change and/or delete material limit requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>H10. Does the source propose to add, change and/or delete process/operational restriction requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>FGENGINES and FGMACTZZZZ: Delete requirements as the engines have been decommissioned and will be removed from the facility.</p> <p>EUPLANT6AMINE: Delete Rule 901 for nuisance prevention as that is not an applicable UAR.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H11. Does the source propose to add, change and/or delete design/equipment parameter requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>EUPLANT6AMINE: Delete Rule 901 for nuisance prevention as that is not an applicable UAR.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H14. Does the source propose to add, change and/or delete testing/sampling requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>FGENGINES and FGGEN6789: Delete requirements as the engines have been decommissioned and will be removed from the facility.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H15. Does the source propose to add, change and/or delete monitoring/recordkeeping requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>FGENGINES, FGMACTZZZZ, and FGGEN6789: Delete requirements as the engines have been decommissioned and will be removed from the facility.</p> <p>EUPLANT6AMINE and FGPLANTRA: Delete Rule 901 for nuisance prevention as that is not an applicable UAR.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>H16. Does the source propose to add, change and/or delete reporting requirements? If <u>Yes</u>, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.</p> <p>FGENGINES, FGMACTZZZZ, and FGGEN6789: Delete requirements as the engines have been decommissioned and will be removed from the facility.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

H17. 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

FGGEN6789: Delete requirements as the engines have been decommissioned and will be removed from the facility.

EUPLANT6AMINE and FGPLANTRA: Delete Rule 901 for nuisance prevention as that is not an applicable UAR.

H18. 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

FGENGINES and FGMACTZZZZ: Delete requirements as the engines have been decommissioned and will be removed from the facility.

H19. 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-PARTC,H**



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: N2940

Section Number (if applicable):

1. Additional Information ID

AI-PARTC,H

Additional Information

2. Is This Information Confidential?

 Yes No

PART C -

C4 and C5: Please refer to PTI Application No. 162-18 supporting documentation from EGLE-AQD permitting section for potential emission calculations of criteria pollutants and hazardous air pollutants (HAPs) for one (1) new natural gas-fired combustion turbine (EUTUR03) and one (1) new diesel-fired emergency engine (EUEMRGEN01).

C9: The ROP lists malfunction abatement plan (MAP) requirements for EUENGINE1 and EUENGINE2. However, with the removal of EUENGINE1 and EUENGINE2, the associated MAP referenced in the ROP for both engines is no longer applicable; therefore, the MAP is not included with this renewal application.

PART H -

For EUPLANT6AMINE and FGPLANTRA, Rule 901 is cited as the UAR for various conditions. However, this is not an applicable UAR. Rule 901 is not a permit rule; it is Michigan's "nuisance rule" used to address a nuisance situation affecting the public.

On July 2, 2013, EGLE provided clarification in Policy and Procedure No. AQD-021 on how Rule 901 is to be used in the PTI process. EGLE stated:

If necessary, permit conditions will be developed which address nuisance prevention by the source. Conditions of this type will be limited to operational and/or performance-based methods and shall not include emission limitations. Examples of operational or performance management type permit conditions, that could be included in a permit, are the frequency of watering unpaved roadways, the use of covers on tanks, the installation of load-out control, or prohibiting the use of a material. If a condition is established solely for the purpose of nuisance prevention, then Rule 901 will be identified as an applicable requirement. If a condition is included in the permit, but its primary purpose is not the prevention of nuisance situations, then Rule 901 will not be identified as an applicable requirement. Instead, the permit file documentation will identify the measures the source is using to aid in the prevention of a nuisance situation whenever Rule 901 is not identified as an applicable requirement for the PTI condition.

Conditions for EUPLANT6AMINE and FGPLANTRA are not operational or performance measures related to minimizing or preventing a nuisance. Therefore, Rule 901 should be deleted.

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**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

EFFECTIVE DATE: July 6, 2015

ISSUED TO:

**DCP Antrim Gas, LLC
South Chester Antrim CO2 Removal Facility**

State Registration Number (SRN): N2940

LOCATED AT:

6250 Old State Road, Johannesburg, Otsego County, Michigan 49751

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N2940-2015

Expiration Date: July 6, 2020

Administratively Complete ROP Renewal Application Due Between:
January 6, 2019 and January 6, 2020

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 Michigan Air Pollution Control Rule 210(1), 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-N2940-2015

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, 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 Environmental Quality

Janis Ransom, Cadillac 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 Environmental Quality (MDEQ) 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 are 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))

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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))

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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 states 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. (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.

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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)):
- 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.
 - 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))
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))
 - 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))
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. (R 336.1213(6)(b)(iii))

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- 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))

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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(8))

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):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - 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))

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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, MDEQ.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, MDEQ, 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:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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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.

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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
EUENGINE1	Natural gas-fired 930-HP-Caterpillar-399-TA-rich burn-engine equipped with a 3-way catalyst	06/01/1996	FGENGINES FGMACTZZZZ
EUENGINE2	Natural gas-fired 930-HP-Caterpillar-399-TA-rich burn-engine equipped with a 3-way catalyst	06/01/1996	FGENGINES FGMACTZZZZ
EUTUR01	Natural gas fired Centaur 40-T4700 turbine with a 3.5 MW nameplate capacity	06/01/1997	FGTURB1AND2
EUTUR02	Natural gas fired Centaur 40-T4700 turbine with a 3.5 MW nameplate capacity	06/01/1997	FGTURB1AND2
EUGEN06	1,150-hp-natural-gas-fired-Caterpillar-3516-lean burn-generator-engine	06/01/1995	FGGEN6789 FGMACTZZZZ
EUGEN07	1,150-hp-natural-gas-fired-Caterpillar-3516-lean burn-generator-engine	06/01/1995	FGGEN6789 FGMACTZZZZ
EUGEN08	1,150-hp-natural-gas-fired-Caterpillar-3516-lean burn-generator-engine	06/01/1995	FGGEN6789 FGMACTZZZZ
EUGEN09	1,150-hp-natural-gas-fired-Caterpillar-3516-lean burn-generator-engine	06/01/1995	FGGEN6789 FGMACTZZZZ
EUPLANT1HEATER	Plant 1 natural gas-fired, 40 MMBTU/hr heat input, heat media heater	04/01/1991	FGPLANTPH
EUPLANT2HEATER	Plant 2 natural gas-fired, 51.231 MMBTU/hr heat input, heat media heater	03/01/1994	FGPLANTPH
EUPLANT3HEATER	Plant 3 natural gas-fired, 51.231 MMBTU/hr heat input, heat media heater	06/01/1995	FGPLANTPH
EUPLANT4HEATER	Plant 4 natural gas-fired, 51.231 MMBTU/hr heat input, heat media heater	01/01/1996	FGPLANTPH
EUPLANT5HEATER	Plant 5 natural gas-fired, 51.231 MMBTU/hr heat input, heat media heater	06/01/1997	FGPLANTPH
EUPLANT6HEATER	Plant 6 natural gas-fired, 27 MMBTU/hr heat input, heat media heater	06/01/1996	FGPLANTPH
EUPLANT1AMINE	Plant 1 methyldiethanolamine (MDEA) process for removing CO ₂ from natural gas at a rate of 60 MMSCFD	04/01/1991	FGPLANTRA
EUPLANT2AMINE	Plant 2 MDEA process for removing CO ₂ from natural gas at a rate of 70 MMSCFD	03/01/1994	FGPLANTRA
EUPLANT3AMINE	Plant 3 MDEA process for removing CO ₂ from natural gas at a rate of 70 MMSCFD	06/01/1995	FGPLANTRA
EUPLANT4AMINE	Plant 4 MDEA process for removing CO ₂ from natural gas at a rate of 70 MMSCFD	01/01/1996	FGPLANTRA

Commented [MM1]: DCP proposes to remove EUENGINE1 and EUENGINE2 from the ROP as these units were permanently shutdown on September 4, 2019 and have been decommissioned. The units will be removed from the facility.

Commented [MM2]: DCP proposes to remove EUGEN06, EUGEN07, EUGEN08 and EUGEN09 from the ROP as these units were permanently shutdown on August 9, 2019 and have been decommissioned. The units will be removed from the facility.

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUPLANT5AMINE	Plant 5 MDEA process for removing CO ₂ from natural gas at a rate of 70 MMSCFD	06/01/1997	FGPLANTRA
EUPLANT6AMINE	Plant 6 MDEA process for removing CO ₂ from natural gas at a rate of 35 MMSCFD	06/01/1996	NA
EUP1DEHY	Plant 1 triethylene glycol dehydrator	04/01/1991	FGGD01
EUP2DEHY	Plant 2 triethylene glycol dehydrator	03/01/1994	FGGD01
EUP3DEHY	Plant 3 triethylene glycol dehydrator	06/01/1995	FGGD01
EUP4DEHY	Plant 4 triethylene glycol dehydrator	01/01/1996	FGGD01
EUP5DEHY	Plant 5 triethylene glycol dehydrator	06/01/1997	FGGD01
EUP6DEHY	Plant 6 triethylene glycol dehydrator	06/01/1996	FGGD01
<u>EUTUR03</u>	<u>Natural Gas fired Centaur 50 turbine with a 4.0MW nameplate capacity with SoLoNOx configuration (Heat input 53.5 MMBtu/hr)</u>	<u>TBD</u>	<u>NA</u>
<u>EUEMRGEN01</u>	<u>Diesel fired emergency engine</u>	<u>TBD</u>	<u>NA</u>

EUPLANT6AMINE
EMISSION UNIT CONDITIONS

Commented [MM3]: Incorporating the terms and conditions of PTI No. 162-18.

DESCRIPTION

Plant 6 MDEA process for removing CO₂ from natural gas at a rate of 35 MMSCFD.

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. CO ₂	574,250 pounds per day 8,614 tons per calendar month ¹	NA Monthly	EUPLANT6AMINE	SC VI.3	R-336.1904

Commented [MM4]: R 336.1901 for nuisance prevention is not an applicable UAR.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not process more than 4,950,000 cubic feet of CO₂ in EUPLANT6AMINE per day.¹ (R-336.1904)

Commented [MM5]: R 336.1901 for nuisance prevention is not an applicable UAR.

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the flow rate of natural gas entering EUPLANT6AMINE.¹ (R-336.1904)
- The permittee shall install, calibrate, maintain, and operate a device to monitor and record the CO₂ content of the gas entering EUPLANT6AMINE on a daily basis.¹ (R-336.1904)

Commented [MM6]: R 336.1901 for nuisance prevention is not an applicable UAR.

Commented [MM7]: R 336.1901 for nuisance prevention is not an applicable UAR.

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))

- The permittee shall monitor and record the flow rate of natural gas entering the plant on a continuous basis in a manner and with instrumentation acceptable to the Air Quality AOD District Division Supervisor.¹ (R-336.1904)

Commented [MM8]: R 336.1901 for nuisance prevention is not an applicable UAR.

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2. The permittee shall monitor and record the CO₂ content of the gas entering the EUPLANT6AMINE on a daily basis.¹ ~~(R 336.1904)~~
3. The permittee shall calculate and record the CO₂ emission rate from EUPLANT6AMINE ~~for each calendar day in tons per month for each calendar month~~ using a method acceptable to the ~~Air Quality~~AQD District ~~Division~~Supervisor.¹ ~~(R 336.1904)~~
4. ~~The permittee shall calculate and record the amount of CO₂ processed for each calendar day using a method acceptable to the Air Quality Division. (R 336.1213(3)(b))~~

Commented [MM9]: R 336.1901 for nuisance prevention is not an applicable UAR.

Commented [MM10]: R 336.1901 for nuisance prevention is not an applicable UAR.

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))

See Appendix 8

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCO2	12 ¹	50 ¹	R-336.1904

Commented [MM11]: R 336.1901 for nuisance prevention is not an applicable UAR.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

EUTUR03
EMISSION UNIT CONDITIONS

Commented [MM12]: Incorporating the terms and conditions of PTI No. 162-18.

DESCRIPTION

Natural Gas fired Centaur 50 turbine with a 4.0MW nameplate capacity with SoLoNOx configuration (Heat input 53.5 MMBtu/hr)

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

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I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	42 ppm on a dry basis at 15% O ₂ ^A	30-day rolling average as determined each operating day	EUTUR03	SC V.2, V.3	40 CFR 60.4320(a)(1) – Table 1
2. NO _x	150 ppm on a dry basis at 15% O ₂ ^B	30-day rolling average as determined each operating day	EUTUR03	SC VI.2	40 CFR 60.4320(a)(1) – Table 1
3. NO _x	5.35 pph ^A	Hourly	EUTUR03	SC V.2, V.3	R 336.1205(1)(a) & (3)
4. NO _x	38.7 tpy	12-month rolling time period as determined at the end of each calendar month	EUTUR03	SC VI.3	R 336.1205(1)(a) & (3)
5. CO	6.47 pph ^A	Hourly	EUTUR03	SC V.1	R 336.1205(1)(a) & (3)
6. CO	165 ppm on a dry basis at 15% O ₂ ^B	30-day rolling average as determined each operating day	EUTUR03	SC VI.2	R 336.1205(1)(a)
7. CO	43.4 tpy	12-month rolling time period as determined at the end of each calendar month	EUTUR03	SC VI.3	R 336.1205(1)(a) & (3)

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^A Limit is for temperature above 0°F
^B Limit is for temperature below 0°F

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	total sulfur 0.060 lb/MMBtu	NA	EUTUR03	SC VI.1	40 CFR 60.4330(a)(2)

III. PROCESS/OPERATIONAL RESTRICTION(S)

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1. The permittee shall use only natural gas as fuel in EUTUR03. (R 336.1205(1)(a) & (3))
2. The permittee shall not operate EUTUR03 at temperatures below 0°F for more than 650 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a))
3. The total startup events for EUTUR03 shall not exceed 100 startups per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a) & (3))
4. The total shutdown events for EUTUR03 shall not exceed 100 shutdowns per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a) & (3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum rated capacity of EUTUR03 shall not exceed 4.0MW. (R 336.1205(1)(a) & (3))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage rate for EUTUR03 on a continuous basis. The device shall be operated in accordance with 40 CFR 60.4345(c). (R 336.1205(1)(a) & (3), 40 CFR 60.4345)

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee shall verify CO emission rates from EUTUR03 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 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. After the initial test, testing shall be completed at least once every five years. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. The permittee must submit 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. (R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004)
2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify NO_x emission rates from each unit in EUTUR03, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. (R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)
3. To demonstrate continuous compliance, the permittee shall perform subsequent performance tests to verify NO_x emission rates from each unit in EUTUR03, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK:
 - a. If the previous performance test exceeded 75 percent of the NO_x emission limit, SC I.1, then the permittee shall perform annual performance tests which are no more than 14 calendar months apart.
 - b. If the previous performance test was less than or equal to 75 percent of the NO_x emission limit, SC I.1, then the permittee shall perform subsequent performance tests once every two years which are no more than 26 calendar months apart.

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No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. (R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4340(a), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a record of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for gaseous fuel, which specifies the maximum total sulfur content. (40 CFR 60.4365)
2. The permittee shall record the hours of operation at temperatures below 0°F to show compliance with SC III.2. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1205(1)(a) & (3))
#
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total NO_x and CO emissions for EUTUR03, as required by SC I.4 and SC I.7. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using the method outlined in Appendix 7 or a new method as approved by the AQD District Supervisor. (R 336.1205(1)(a) & (3))
#
4. The permittee shall keep, in a satisfactory manner, records of the monthly total and 12-month rolling total of startup events and shutdown events for EUTUR03 to show compliance with SC III.3, and SC III.4. Records must be kept in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1205(1)(a) & (3))
#
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 for EUTUR03. 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 the capacity rating;
 - e. Identification, type, and amount of fuel combusted on a calendar month basis;
 - f. All records required by 40 CFR 60.7, including the initial startup notification and performance tests;
 - g. Records of the number of all startup and shutdown events per turbine;
 - h. All calculations necessary to show compliance with the limits contained in this permit.

Commented [MM13]: NOx and CO calculations for EUTUR03 from Appendix A in PTI No. 162-18 have been added to Appendix 7 in this ROP mark-up.

All of the above information shall be stored in a format acceptable to the AQD District Supervisor and shall be consistent with the requirements of 40 CFR 60.7. (R 336.1205(1)(a) & (3), 40 CFR 60.7, 40 CFR 60.4365(a), 40 CFR Part 60 Subpart KKKK)

VII. REPORTING

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

Commented [MM14]: Added reporting requirements consistent with the ROP.

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~~4. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. (40 CFR 60.7)~~

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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:

<u>Stack & Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
1. SVTUR03	53	60	R 336.1205(1)(a)

IX. OTHER REQUIREMENT(S)

- ~~1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and KKKK, as they apply to EUTUR03. (40 CFR Part 60 Subparts A & KKKK)~~
- ~~2. Within 180 days after the initial startup and commissioning of EUTUR03, engines (EUENGINE1 and EUENGINE2) shall be permanently shut down. Generator engines (EUGEN06, EUGEN07, EUGEN08 and EUGEN09) shall be shut down before installation of EUTUR03. Notification of the shutdowns shall be submitted to the AQD District supervisor with 30 days after the shutdown. (R 336.1205(1)(a) & (3))~~

Commented [MM15]: Propose to remove requirement as the notification of engine shutdowns for the six (6) engines was sent to EGLE on September 5, 2019. This requirement is complete.

EUEMRGEN01
EMISSION UNIT CONDITIONS

Commented [MM16]: Incorporating the terms and conditions of PTI No. 162-18.

DESCRIPTION

Diesel fired emergency engine

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

<u>Pollutant</u>	<u>Limit</u>	<u>Time Period/ Operating Scenario</u>	<u>Equipment</u>	<u>Monitoring/ Testing Method</u>	<u>Underlying Applicable Requirements</u>
1. NMHC + NO _x	6.4 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112
2. CO	3.5 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112
3. PM	0.20 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112

II. MATERIAL LIMIT(S)

1. The permittee shall burn only ultra-low sulfur diesel fuel in EUEMRGEN01 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. (R 336.1205(1)(a) & (3), R 336.1401, 40 CFR 60.4207(b), 40 CFR 80.510(b))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMRGEN01 for more than 300 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a) & (3))

2. The permittee may operate EUEMRGEN01 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. The 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. (40 CFR 60.4211(f)(2))

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3. Each engine in EUEMRGEN01 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 as

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provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), the 50 hours per calendar year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. (40 CFR 60.4211(f)(3))

4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year, the permittee shall meet the following requirements for each engine of EUEMRGEN01:

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- 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 89, 94, and/or 1068, as it applies to you.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. (40 CFR 60.4211(a))

5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for each engine of EUEMRGEN01 and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR 60.4211(g)(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each EUEMRGEN01 with non-resettable hours meters to track the operating hours. (R 336.1205(1)(a) & (3), 40 CFR 60.4209(a))

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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 conduct an initial performance test for EUEMRGEN01 within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engines have been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60 Subpart IIII. If a performance test is required, the performance tests 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 the AQD. 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 within 60 days following the last date of the test. Subsequent performance testing shall be conducted every 8,760 hours of engine operation or 3 years, whichever comes first. (40 CFR 60.4205(b), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)

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 all required records and calculations in a format acceptable to the AQD District Supervisor by the 30th last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(1)(a) & (3), 40 CFR Part 60 Subpart IIII)

Commented [MM17]: Propose to specify records and calculations completed by the last day rather than the 30th day.

2. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUEMRGEN01 meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If EUEMRGEN01 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. (40 CFR 60.4211(a), (b), (g))

3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUEMRGEN01, on a monthly and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUEMRGEN01, including what classified the operation as emergency and how many hours are spent for non-emergency operation. (R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214)
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 EUEMRGEN01, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b) of ultra-low sulfur diesel and meets requirements of SC II.1. 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. (R 336.1205(1)(a) & (3), 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)(iii))
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. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUEMRGEN01. (R 336.1201(7)(a))
5. The permittee shall submit a notification specifying whether EUEMRGEN01 will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days of switching the manner of operation. (40 CFR Part 60 Subpart IIII)

Commented [MM18]: Added reporting requirements consistent with the ROP.

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:

<u>Stack & Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
1. <u>SVEMRGEN01</u>	<u>8</u>	<u>9.5</u>	<u>R 336.1225, 40 CFR 52.21 (c) & (d)</u>

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A and Subpart IIII for Stationary Compression Ignition Internal Combustion Engines. (40 CFR Part 60 Subparts A and IIII)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

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
FGENGINES	Two natural gas-fired 930 HP Caterpillar 399 TA rich burn engines equipped with 3-way catalysts	EUENGINE1 EUENGINE2
FGMACTZZZZ	Two natural gas-fired 930 HP Caterpillar 399 TA rich burn engines equipped with 3-way catalysts and four natural gas-fired 1,150 HP Caterpillar 3516 lean burn generator engines	EUENGINE1 EUENGINE2 EUGEN06 EUGEN07 EUGEN08 EUGEN09
FGTURB1AND2	Two natural gas fired Centaur 40-T4700 turbines; each turbine has a 3.5 MW name plate capacity	EUTUR01 EUTUR02
FGGEN6789	Four 1,150 hp natural gas fired Caterpillar 3516 lean burn generator engines	EUGEN06 EUGEN07 EUGEN08 EUGEN09
FGPLANTRA	Five MDEA processes for removing CO ₂ from natural gas	EUPLANT1AMINE EUPLANT2AMINE EUPLANT3AMINE EUPLANT4AMINE EUPLANT5AMINE
FGPLANTPH	Four natural gas fired heat media heaters, each with a rated capacity of 51,231 MMBTU/hr heat input; one natural gas fired heat media heater with a rated capacity of 40 MMBTU/hr heat input; one natural gas fired heat media heater with a rated capacity of 27 MMBTU/hr heat input	EUPLANT1HEATER EUPLANT2HEATER EUPLANT3HEATER EUPLANT4HEATER EUPLANT5HEATER EUPLANT6HEATER
FGGD01	Six triethylene glycol dehydrators	EUP1DEHY EUP2DEHY EUP3DEHY EUP4DEHY EUP5DEHY EUP6DEHY

Commented [MM19]: DCP proposes to remove EUENGINE1 and EUENGINE2 from the ROP as these units were permanently shutdown on September 4, 2019 and have been decommissioned. The units will be removed from the facility.

Commented [MM20]: This flexible group is no longer applicable as each associated emission unit has been shutdown and decommissioned. The units will be removed from the facility.

Commented [MM21]: DCP proposes to remove EUGEN06, EUGEN07, EUGEN08 and EUGEN09 from the ROP as these units were permanently shutdown on August 9, 2019 and have been decommissioned. The units will be removed from the facility.

FGENGINES
FLEXIBLE GROUP CONDITIONS

Commented [MM22]: DCP proposes to remove EUENGINE1 and EUENGINE2 from the ROP as these units were permanently shutdown on September 4, 2019 and have been decommissioned. The units will be removed from the facility

DESCRIPTION

Two natural gas-fired 930-HP Caterpillar 399 TA rich burn engines equipped with 3-way catalyts.

Emission Units: EUENGINE1, EUENGINE2

POLLUTION CONTROL EQUIPMENT

3-way catalyst

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	18 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGENGINES	SC VI.1	R-336.1205(3) 40-CFR 52.21(c) and (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUENGINE1 and EUENGINE2 unless the 3-way catalyts are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes performing the manufacturer's recommended maintenance on the catalyst.² (R-336.1205(3), R-336.1910, 40 CFR 52.21(c) and (d))
2. The permittee shall not operate FGENGINES unless a malfunction abatement plan, approved by the AQD District Supervisor, is implemented and maintained. (R-336.1910, R-336.1911, R-336.1912)
3. The permittee shall calibrate, maintain, and operate a temperature gauge or thermocouple to monitor the operation of each catalyst. The appropriate temperature range defining proper operation of the catalyst shall be identified in the MAP. (R-336.1213(3)(a)(i))
4. The permittee shall calibrate, maintain, and operate a differential pressure gauge or manometer to monitor operation of each catalyst. The appropriate differential pressure range defining proper operation of the catalyst shall be identified in the MAP. (R-336.1213(3)(a)(ii))
5. The permittee shall calibrate, maintain and operate in a satisfactory manner a device to continuously monitor and record the flow rate of natural gas burned in FGENGINES.² (R-336.1205(3), 40 CFR 52.21(c) and (d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 perform testing to establish emission factors for demonstrating compliance with the limit in SC 1.1. The testing shall be completed every five years. ~~(R 336.2001, R 336.2003, R 336.2004, R 336.1213(3)(a))~~~~

VI. MONITORING/RECORDKEEPING

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

- ~~1. The permittee shall calculate and record, in a satisfactory manner, monthly and 12-month rolling time period NO_x emissions using emission factors derived from the most recent stack test. ~~(R 336.1213(3)(b))~~~~
- ~~2. The permittee shall continuously monitor and record the natural gas usage of FG ENGINES.² ~~(R 336.1205(3), 40 CFR 52.21(c) and (d))~~~~
- ~~3. The permittee shall perform maintenance and keep maintenance records for each 3-way catalyst.² ~~(R 336.1205(3), 40 CFR 52.21(c) and (d))~~~~
- ~~4. The permittee shall monitor and record the differential pressure across each 3-way catalyst on a monthly basis. ~~(R 336.1213(3)(b))~~~~
- ~~5. The permittee shall monitor and record the inlet and outlet temperatures of each 3-way catalyst on a daily basis. ~~(R 336.1213(3)(b))~~~~

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. ~~(R 336.1213(3)(e)(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)(e)(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)(e))~~~~
- ~~4. The permittee shall submit two test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. ~~(R 336.1213(3), R 336.2001(3))~~~~
- ~~5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than seven days prior to the anticipated test date. ~~(R 336.2001(4))~~~~
- ~~6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. ~~(R 336.2001(5))~~~~

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. ~~The MAP shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum, the MAP shall include:
 - a. Identification of the equipment and air cleaning device.
 - b. Supervisory personnel responsible for overseeing the inspection, maintenance and repair.
 - c. Description of the items or conditions to be inspected and frequency of the inspections or repairs.
 - d. Description of the equipment and air cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
 - e. Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - f. 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.If the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the permittee shall revise the MAP within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the MAP to be inadequate, the District Supervisor may request modification of the plan to address those inadequacies. (R 336.1910, R 336.1911, R 336.1912)~~

Footnotes:

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

~~FGMACTZZZZ~~
FLEXIBLE GROUP CONDITIONS

Commented [MM23]: This flexible group is no longer applicable as each associated emission unit has been shutdown and decommissioned. The units will be removed from the facility.

DESCRIPTION

Two natural gas-fired four-stroke, rich-burn 930 HP Caterpillar 399 TA engines and four natural gas-fired four-stroke, lean-burn Caterpillar 1,150 HP generator engines located in a remote area subject to the requirements of 40 CFR, Part 63, Subpart ZZZZ.

Emission Units: EUENGINE1, EUENGINE2, EUGEN06, EUGEN07, EUGEN08, EUGEN09

POLLUTION CONTROL EQUIPMENT

Three-way catalyst (installed on EUENGINE1 and EUENGINE2)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall perform the following work practice standards on each engine in FGMACTZZZZ every 2,160 hours of operation or annually, whichever comes first: **(40 CFR 63.6603(a))**
 - a. Change oil and filter (or utilize oil analysis program as outline in 40 CFR 63.6625(i));
 - b. Inspect spark plugs, and replace as necessary;
 - c. Inspect all hoses and belts, and replace as necessary.
2. At all times the permittee must operate and maintain each engine in FGMACTZZZZ, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.6605(b))**
3. The permittee shall operate and maintain each engine in FGMACTZZZZ according to the manufacturer's emission-related operation and maintenance instructions; or develop and follow their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions. **(40 CFR 63.6640(a))**
4. The permittee shall minimize each engine's time spent at idle during start-up and minimize each engine's start-up time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. **(40 CFR 63.6625(h))**

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), 40 CFR 63.6660(b))

1. In order to be considered a remote stationary engine, as defined in 40 CFR 63.6675, each engine in FGMACTZZZZ must meet the definition of remote stationary engine on the initial compliance date for the engine, October 19, 2013. The permittee must evaluate the status of FGMACTZZZZ engines every 12 months thereafter. (40 CFR 63.6603(f))
2. The permittee shall keep records of the initial and annual evaluation of the remote status of each engine in FGMACTZZZZ, based on the definition of remote stationary engines in 40 CFR 63.6675. If the evaluation indicates that any engine in FGMACTZZZZ no longer meets the definition of remote stationary engine, the permittee shall comply with all the requirements for non-emergency spark ignition four-stroke lean-burn and rich-burn engines that are not remote within one year of evaluation. (40 CFR 63.6603(f))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(iii))
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)(e))
4. The permittee shall meet the applicable notification requirements in 40 CFR 63.6645 and in 40 CFR, Part 63, Subpart A. (40 CFR 63.6595(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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR, Part 63, Subparts A and ZZZZ for Stationary Reciprocating Internal Combustion Engines. (40 CFR, Part 63, Subparts A and ZZZZ)

**FGTURB1AND2
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two natural gas fired Centaur 40-T4700 turbines; each turbine has a 3.5 MW name plate capacity.

Emission Units: EUTUR01, EUTUR02

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	167 ppm _v , corrected to 15 % O ₂ on a dry gas basis ²	Test protocol*	EUTUR01 EUTUR02	SC V.1	40 CFR 60.332(a)(2) 40 CFR 60.332(c) 40 CFR 60.332(d)
2. NO _x	17.1 pph ²	Test protocol*	EUTUR01 EUTUR02	SC V.1	R 336.1205(1)(a)
3. CO	50 ppm _v , corrected to 15 % O ₂ on a dry gas basis ²	Test protocol*	EUTUR01 EUTUR02	SC V.1	R 336.1205(1)(a)
4. CO	5.3 pph ²	Test protocol*	EUTUR01 EUTUR02	SC V.1	R 336.1205(1)(a)

*Test protocol shall specify averaging time

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	0.8 % by weight total sulfur	NA	FGTURB1AND2	SC VI.1	40 CFR 60.633(b)

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall use only sweet natural gas as fuel in FGTURB1and2.² (R 336.1205(1)(a), 40 CFR 52.21(c) and (d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 NO_x and CO emission rates from each turbine in FGTURB1AND2, by testing at owner's expense, in accordance with Department requirements. The testing shall be completed at least once every five years.² (R 336.2001, R 336.2003, R 336.2004, R 336.1213(3)(a))

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 maintain a record of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for gaseous fuel, which specifies the maximum total sulfur content.² (40 CFR 60.634(h)(3)(i), R 336.1213(3)(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 two test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (R 336.2001(3))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the AQD District Supervisor no less than seven days prior to the anticipated test date. (R 336.2001(4))
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (R 336.2001(5))

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVTUR01	48 ²	34 ²	R 336.1205(1)(a)
2. SVTUR02	48 ²	34 ²	R 336.1205(1)(a)

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IX. OTHER REQUIREMENT(S)

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 Subpart GG, as they apply to each turbine of FGTURB1AND2.² (40 CFR, Part 60, Subparts A & GG)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGGEN6789
FLEXIBLE GROUP CONDITIONS

Commented [MM24]: DCP proposes to remove EUGEN06, EUGEN07, EUGEN08 and EUGEN09 from the ROP as these units were permanently shutdown on August 9, 2019 and have been decommissioned. The units will be removed from the facility.

DESCRIPTION

Four 1,150-hp natural gas fired Caterpillar 3516 lean-burn generator engines.

Emission Units: EUGEN06, EUGEN07, EUGEN08, EUGEN09

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	5.5 pph ²	Test protocol ¹	EUGEN06 EUGEN07 EUGEN08 EUGEN09	SC-V.1 and SC-V.2	R-336.1205(1)(a)
2. NO _x	2.0 tons per month ²	NA	EUGEN06 EUGEN07 EUGEN08 EUGEN09	SC-VI.1	R-336.1205(1)(a)
3. CO	4.0 pph ²	Test protocol ¹	EUGEN06 EUGEN07 EUGEN08 EUGEN09	SC-V.1 and SC-V.2	R-336.1205(1)(a)
4. CO	1.5 tons per month ²	NA	EUGEN06 EUGEN07 EUGEN08 EUGEN09	SC-VI.1	R-336.1205(1)(a)

¹Test protocol shall specify averaging time.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. ~~The permittee shall verify NO_x and CO emission rates from each engine in FGGEN6789, by testing at owner's expense, in accordance with Department requirements. The testing shall be completed at least once every five years. (R 336.2004, R 336.2003, R 336.2004, R 336.1213(3)(a))~~
2. ~~Within 180 days after restarting EUGEN07, the permittee shall verify NO_x and CO emission rates from EUGEN07, by testing at owner's expense, in accordance with Department requirements. (R 336.2004, R 336.2003, R 336.2004, R 336.1213(3)(a))~~

VI. MONITORING/RECORDKEEPING

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

1. ~~The permittee shall calculate and record NO_x and CO emissions from EUGEN06, EUGEN07, EUGEN08, and EUGEN09, in tons per month, using emission factors based on the most recent testing. The calculations shall be completed within 30 days following the end each the calendar month. (R 336.1213(3)(b))~~
2. ~~The permittee shall maintain records of the daily hours of operation and the daily average generator output, in kilowatts, for each engine in FGGEN6789. (R 336.1213(3)(b))~~

VII. REPORTING

1. ~~Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(iii))~~
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)(e))~~
4. ~~The permittee shall submit two test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (R 336.1213(3), R 336.2004(3))~~
5. ~~The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than seven days prior to the anticipated test date. (R 336.2004(4))~~
6. ~~The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (R 336.2004(5))~~

See Appendix 8

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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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVGEN06	40²	35²	R-336.1205(1)(a)
2. SVGEN07	40²	35²	R-336.1205(1)(a)
3. SVGEN08	40²	35²	R-336.1205(1)(a)
4. SVGEN09	40²	35²	R-336.1205(1)(a)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

~~¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).~~

~~²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).~~

**FGPLANTRA
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Five MDEA processes for removing CO₂ from natural gas.

Emission Units: EUPLANT1AMINE, EUPLANT2AMINE, EUPLANT3AMINE, EUPLANT4AMINE, EUPLANT5AMINE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO ₂	73,343 tons per calendar month ¹	NA	FGPLANTRA	SC VI.3	R 336.1901
2. Visible emissions	0 % opacity ²	Six minute average	EUPLANT3AMINE EUPLANT4AMINE	SC V.1	R 336.1301(1)(c)

Commented [MM25]: R 336.1901 for nuisance prevention is not an applicable UAR.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the CO₂ content of the natural gas entering EUPLANT1AMINE, EUPLANT2AMINE, EUPLANT3AMINE, EUPLANT4AMINE, and EUPLANT5AMINE. (R 336.1213(3)(a))

V. TESTING/SAMPLING

- The permittee shall perform and record the results of 6-minute non-certified visible emission observations from EUPLANT3AMINE and EUPLANT4AMINE on a daily basis. The visible emission observation shall simply verify the presence of visible emissions and need not follow the procedures specified in USEPA Test Method 9. If visible emissions are observed, the permittee shall immediately initiate and document corrective actions. (R 336.1213(3)(a))

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 monitor and record the CO₂ content of the natural gas entering EUPLANT1AMINE, EUPLANT2AMINE, EUPLANT3AMINE, EUPLANT4AMINE, and EUPLANT5AMINE on a continuous basis.¹ (~~R 336.1904~~)
2. The permittee shall monitor and record the daily gas processing rate of EUPLANT1AMINE, EUPLANT2AMINE, EUPLANT3AMINE, EUPLANT4AMINE, EUPLANT5AMINE on a continuous basis.¹ (~~R 336.1904~~)
3. The permittee shall calculate and record the CO₂ emission rate from FGPLANTRA, in tons per calendar month, at the end of every calendar month.¹ (~~R 336.1904~~)

Commented [MM26]: R 336.1901 for nuisance prevention is not an applicable UAR.

Commented [MM27]: R 336.1901 for nuisance prevention is not an applicable UAR.

Commented [MM28]: R 336.1901 for nuisance prevention is not an applicable UAR.

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))

See Appendix 8

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRA01	16 ¹	75 ¹	R 336.1904
2. SVRA02	16 ¹	75 ¹	R 336.1904
3. SVRA03	16 ¹	75 ¹	R 336.1904
4. SVRA04	16 ¹	75 ¹	R 336.1904
5. SVRA05	16 ¹	75 ¹	R 336.1904

Commented [MM29]: R 336.1901 for nuisance prevention is not an applicable UAR.

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGPLANTPH
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Four natural gas fired heat media heaters, each with a rated capacity of 51.231 MMBTU/hr heat input; one natural gas fired heat media heater with a rated capacity of 40 MMBTU/hr heat input; one natural gas fired heat media heater with a rated capacity of 27 MMBTU/hr heat input.

Emission Units: EUPLANT1HEATER, EUPLANT2HEATER, EUPLANT3HEATER, EUPLANT4HEATER, EUPLANT5HEATER, EUPLANT6HEATER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	5.6 pph ²	Test protocol*	EUPLANT1HEATER	SC V.1	R 336.1205(1)(a)
2. NO _x	5.2 pph ²	Test protocol*	EUPLANT2HEATER EUPLANT3HEATER EUPLANT4HEATER EUPLANT5HEATER	SC V.1	R 336.1205(1)(a)
3. NO _x	1.9 tons per month ²	NA Monthly	EUPLANT2HEATER EUPLANT3HEATER EUPLANT4HEATER EUPLANT5HEATER	SC VI.2	R 336.1205(1)(a)
4. CO	3.0 pph ²	Test protocol*	EUPLANT3HEATER EUPLANT4HEATER EUPLANT5HEATER	SC V.2	R 336.1205(1)(a)
5. CO	1.1 tons per month ²	NA Monthly	EUPLANT3HEATER EUPLANT4HEATER EUPLANT5HEATER	SC VI.3	R 336.1205(1)(a)

*Test protocol shall specify averaging time

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and operate a device to monitor and record the natural gas combusted by EUPLANT1HEATER, EUPLANT2HEATER, EUPLANT3HEATER, EUPLANT4HEATER, EUPLANT5, and EUPLANT6HEATER. (R 336.1213(3)(a))

V. TESTING/SAMPLING

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

1. The permittee shall verify NO_x emission rates from EUPLANT1HEATER, EUPLANT2HEATER, EUPLANT3HEATER, EUPLANT4HEATER, and EUPLANT5HEATER, by testing at owner's expense, in accordance with Department requirements. The testing shall be completed at least once every five years. (R 336.2001, R 336.2003, R 336.2004, R 336.1213(3)(a))
2. The permittee shall verify CO emission rates from EUPLANT3HEATER, EUPLANT4HEATER, and EUPLANT5HEATER, by testing at owner's expense, in accordance with Department requirements. The testing shall be completed at least once every five years. (R 336.2001, R 336.2003, R 336.2004, R 336.1213(3)(a))

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 record and maintain records of the amount of natural gas combusted by EUPLANT1HEATER, EUPLANT2HEATER, EUPLANT3HEATER, EUPLANT4HEATER, EUPLANT5HEATER, and EUPLANT6HEATER during each calendar month. (40 CFR 60.48c(g)(2), R 336.1213(3)(b))
2. The permittee shall calculate and record NO_x emission rates, in tons per month, from EUPLANT2HEATER, EUPLANT3HEATER, EUPLANT4HEATER, and EUPLANT5HEATER. The calculations shall be completed ~~within 30 days following the end by the last day of each the calendar month, for the previous calendar month.~~ (R 336.1213(3)(b))
3. The permittee shall calculate and record CO emission rates, in tons per month, from EUPLANT3HEATER, EUPLANT4HEATER, and EUPLANT5HEATER. The calculations shall be completed ~~within 30 days following the end by the last day of each the calendar month, for the previous calendar month.~~ (R 336.1213(3)(b))

Commented [MM30]: Propose to specify calculations completed by the last day rather than the 30th day.

Commented [MM31]: Propose to specify for the previous calendar month to be clear.

Commented [MM32]: Propose to specify calculations completed by the last day rather than the 30th day.

Commented [MM33]: Propose to specify for the previous calendar month to be clear.

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 two test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (R 336.1213(3), R 336.2001(3))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the AQD District Supervisor no less than seven days prior to the anticipated test date. (R 336.2001(4))

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- The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (R 336.2001(5))

See Appendix 8

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVPH01	72 ²	100 ²	R 336.1205(1)(a)
2. SVPH02	72 ²	95 ²	R 336.1205(1)(a)
3. SVPH03	72 ²	95 ²	R 336.1205(1)(a)
4. SVPH04	72 ²	95 ²	R 336.1205(1)(a)
5. SVPH05	72 ²	95 ²	R 336.1205(1)(a)

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with the applicable requirements of 40 CFR, Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. (40 CFR, Part 60, Subpart Dc)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGGD01
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Six triethylene glycol dehydrators

Emission Units: EUP1DEHY, EUP2DEHY, EUP3DEHY, EUP4DEHY, EUP5DEHY, EUP6DEHY

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUP3DEHY and EUP4DEHY unless the flash and processed water tanks are installed and operating properly. A properly operating flash tank will volatilize organic compounds out of the rich glycol stream and route them to the process heater for use as fuel. A properly operating processed water tank will condense VOCs from the glycol reboiler vent stream by reducing the temperature.² (R 336.1702(a))
2. The permittee shall not operate EUP1DEHY, EUP2DEHY, EUP5DEHY, and EUP6DEHY unless the flash and processed water tanks are installed and operating properly. A properly operating flash tank will volatilize organic compounds out of the rich glycol stream and route them to the process heater for use as fuel. A properly operating processed water tank will condense VOCs from the glycol reboiler vent stream by reducing the temperature. (R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip EUP1DEHY, EUP2DEHY, EUP3DEHY, EUP4DEHY, EUP5DEHY, and EUP6DEHY with a flash tank and processed water tank. (R 336.1702(a))

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

1. If each triethylene glycol dehydrator in FGGD01 meets the exception criteria in 40 CFR 63.764(e)(1)(i) for glycol dehydrators with actual annual average flow rate of natural gas less than 85,000 cubic meters (3,001,746 cubic feet) per day, the actual flow rate of natural gas shall be determined using either of the procedures below:
 - a. The permittee shall install and operate a monitoring instrument that directly measures natural gas flow rate to the glycol dehydration unit with an accuracy of plus or minus 2 % or better. The permittee shall convert annual natural gas flow rate to a daily average by dividing the annual flow rate by the number of days per year the glycol dehydration unit processed natural gas. (40 CFR 63.772(b)(1)(i))
 - b. The permittee shall document, to the AQD District Supervisor's satisfaction, the actual annual average natural gas flow rate to the glycol dehydration unit is less than 85,000 cubic meters per day. (40 CFR 63.772(b)(1)(iii))
2. As an alternative, if each triethylene glycol dehydrator in FGGD01 meets the exemption criteria in 40 CFR 63.764(e)(1)(ii) for glycol dehydrators with actual average benzene emissions less than 0.90 megagram (0.99 ton) per year, the emissions shall be determined either uncontrolled, or with federally enforceable controls in place and using either of the procedures below:
 - a. The permittee shall determine actual average benzene emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit, and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1). (40 CFR 63.772(b)(2)(i))
 - b. The permittee shall determine an average mass rate of benzene emissions in kilograms per hour through direct measurement using the methods in 40 CFR 63.772(a)(1)(i) or (ii), or an alternative method according to 40 CFR 63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated by year. This result shall be converted to megagrams per year. (40 CFR 63.772(b)(2)(ii))
3. If each triethylene glycol dehydrator in FGGD01 complies with the exemption criteria in 40 CFR 63.764(e)(1)(i) for glycol dehydrators with actual annual average flow rate of natural gas less than 85,000 cubic meters (3,001,746 cubic feet) per day, the permittee shall keep records of the actual annual average natural gas throughput (in terms natural gas flow rate to the glycol dehydration unit per day) as determined in accordance with SC VI.1. The permittee shall keep records on file at a location approved by the AQD District Supervisor for a period of at least five years and make it available to the Department upon request. (40 CFR 63.774(d)(1)(i))
4. As an alternative to SC VI.1, if each triethylene glycol dehydrator in FGGD01 complies with the exemption criteria in 40CFR 63.764(e)(1)(ii) for glycol dehydrators with the actual average benzene emissions less than 0.90 megagram per year, the permittee shall keep records of the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with SC VI.2. The permittee shall keep all records on file at a location approved by the AQD District Supervisor for a period of at least five years and make it available to the Department upon request. (40 CFR 63.774(d)(1)(ii))

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))

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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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR, Part 63, Subpart HH, as they apply to FGGD01. (40 CFR, Part 63, Subpart HH)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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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. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
*F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H ₂ S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO ₂	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
MDEQ	Michigan Department of Environmental Quality	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter	%	Percent

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

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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 PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N2940-2009. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N2940-2009a is being reissued as Source-Wide PTI No. MI-PTI-N2940-2015

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
535-95D	201100103	EUCHESTER10: Amine plant for removing carbon dioxide from Antrim shale gas. The plant has a glycol dehydration system, a reboiler, and a heater, which appear to be exempt from R 336.1201, and the carbon dioxide removal plant. EUENGINE1: 930 horsepower Caterpillar 399 TA engine equipped with a catalytic converter to reduce emissions. EUENGINE2: 930 horsepower Caterpillar 399 TA engine equipped with a catalytic converter to reduce emissions.	FGENGINES, EUPLANT6AMINE
569-96A	201500049*	Increase the CO emission limits of EUTUR01 and EUTUR02 from 2.2 pph to 5.3 pph.	FGTURB1AND2
<u>162-18</u>	<u>TBD</u>	<u>EUTUR03: Natural gas-fired Centaur 50 turbine with a 4.0MW nameplate capacity</u>	<u>EUTUR03, EUEMRGEN01,</u>

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		<u>with SoLoNOx configuration (Heat input 53.5 MMBtu/hr).</u>	<u>EUPLANT6AMINE</u>
		<u>EUEMRGEN01: Diesel fired emergency engine.</u>	
		<u>EUPLANT6AMINE: Revised CO₂ limit from a daily limit to a monthly limit.</u>	

Appendix 7. Emission Calculations

Commented [MM34]: Incorporating conditions from Appendix A of PTI No. 162-18.

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible group Special Conditions. Therefore, this appendix is not applicable.

For EUTUR03:

NO_x Emission calculation for temperatures above 0°F:

#

$$\begin{aligned} \text{NO}_x \text{ emissions } \left(\frac{\text{tons}}{\text{month}} \right) &= \left[\text{Fuel Usage } \left(\frac{\text{MMscf}}{\text{month}} \right) \cdot \text{Higher Heating Value } \left(\frac{\text{MMBtu}}{\text{MMscf}} \right) \right] \\ &\cdot \left[\text{NO}_x \text{ Emission Factor } \left(\frac{\text{lbs}}{\text{MMBtu}} \right) \right] \cdot \left[\text{Conversion factor } \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right) \right] \end{aligned}$$

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Where:

Fuel Usage (MMscf/month) = actual monthly fuel usage data

Heat Content (MMBtu/MMscf) = Standard value in AP-42 for natural gas or supplier data, if available

NO_x EF (lbs/MMBtu) = 0.100, based on manufacturer data, may use updated test data if available, upon request

NO_x emission calculations for temperatures below 0°F:

$$\begin{aligned} \text{NO}_x \text{ emissions } \left(\frac{\text{lbs}}{\text{hour}} \right) &= \left[\text{NO}_x \text{ Emission Factor (ppm)} \cdot \text{Conversion factor } \left(\frac{1}{1,000,000} \right) \right] \\ &\cdot \text{Molecular Weight } \left(\frac{\text{lb}}{\text{lbmol}} \right) \cdot \text{Ideal Gas Law Conversion Factor } \left(\frac{\text{lbmol}}{386.7 \text{ ft}^3} \right) \\ &\cdot \text{Stack Exhaust Flow Rate } \left(\frac{\text{scf}}{\text{hr}} \right) \end{aligned}$$

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Where:

Emission Factor (ppm) = Solar Turbines Product Information Letter 167 Revision 6 (1 December 2016)

Molecular Weight (lb/lb-mol) = NO_x=46.1, CO=28.01, VOC=49.04 as NG

Ideal Gas Law Conversion Factor = lb-mol/386.7 ft³

stack Exhaust Flow Rate (scf/hr) = based on manufacturer data, may use updated test data if available, upon request

Commented [MM35]: Propose to remove as there are no VOC calculations in this appendix.

Use the same methodology for CO as for NO_x.

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

ROP No: MI-ROP-N2940-2015
Expiration Date: July 6, 2020
PTI No: MI-PTI-N2940-2015

B. Other 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



// COPY OF PTI NO. 162-18

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

March 25, 2019

PERMIT TO INSTALL
162-18

ISSUED TO
DCP Antrim Gas, LLC

LOCATED AT
6250 Old State Road
Johannesburg, Michigan

IN THE COUNTY OF
Otsego

STATE REGISTRATION NUMBER
N2940

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: March 22, 2019	
DATE PERMIT TO INSTALL APPROVED: March 25, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department	Michigan Department of Environmental Quality
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MDEQ	Michigan Department of Environmental Quality
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install 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 this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit 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 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. 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 Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department 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 condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. 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). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

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
EUTUR03	Natural Gas fired Centaur 50 turbine with a 4.0MW nameplate capacity with SoLoNox configuration (Heat input 53.5 MMBtu/hr)	TBD	NA
EUPLANT6AMINE	Plant 6 MDEA process for removing CO ₂ from natural gas at a rate of 35 MMSCFD.	06/01/1996	NA
EUEMRGEN01	Diesel fired emergency engine	TBD	NA

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EUTUR03
EMISSION UNIT CONDITIONS**

DESCRIPTION

Natural Gas fired Centaur 50 turbine with a 4.0MW nameplate capacity with SoLoNO_x configuration (Heat input 53.5 MMBtu/hr)

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. NO _x	42 ppm on a dry basis at 15% O ₂ ^A	30-day rolling average as determined each operating day	EUTUR03	SC V.2, V.3	40 CFR 60.4320(a)(1) – Table 1
2. NO _x	150 ppm on a dry basis at 15% O ₂ ^B	30-day rolling average as determined each operating day	EUTUR03	SC VI.2	40 CFR 60.4320(a)(1) – Table 1
3. NO _x	5.35 pph ^A	Hourly	EUTUR03	SC V.2, V.3	R 336.1205(1)(a) & (3)
4. NO _x	38.7 tpy	12-month rolling time period as determined at the end of each calendar month	EUTUR03	SC VI.3	R 336.1205(1)(a) & (3)
5. CO	6.47 pph ^A	Hourly	EUTUR03	SC V.1	R 336.1205(1)(a) & (3)
6. CO	165 ppm on a dry basis at 15% O ₂ ^B	30-day rolling average as determined each operating day	EUTUR03	SC VI.2	R 336.1205(1)(a)
7. CO	43.4 tpy	12-month rolling time period as determined at the end of each calendar month	EUTUR03	SC VI.3	R 336.1205(1)(a) & (3)

^A Limit is for temperature above 0°F
^B Limit is for temperatures below 0°F

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	total sulfur 0.060lb/MMBtu	NA	EUTUR03	SC VI.1	40 CFR 60.4330(a)(2)

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall use only natural gas as fuel in EUTUR03. **(R 336.1205(1)(a) & (3))**
- The permittee shall not operate EUTUR03 at temperatures below 0°F for more than 650 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a))**
- The total startup events for EUTUR03 shall not exceed 100 startups per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

4. The total shutdown events for EUTUR03 shall not exceed 100 shutdowns per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum rated capacity of EUTUR03 shall not exceed 4.0MW. **(R 336.1205(1)(a) & (3))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage rate for EUTUR03 on a continuous basis. The device shall be operated in accordance with 40 CFR 60.4345(c). **(R 336.1205(1)(a) & (3), 40 CFR 60.4345)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after commencement of initial startup, the permittee shall verify CO emission rates from EUTUR03 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 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. After the initial test, testing shall be completed at least once every five years. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. The permittee must submit 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. **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004)**
2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify NO_x emission rates from each unit in EUTUR03, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)**
3. To demonstrate continuous compliance, the permittee shall perform subsequent performance tests to verify NO_x emission rates from each unit in EUTUR03, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK:
 - a. If the previous performance test exceeded 75 percent of the NO_x emission limit, SC I.1, then the permittee shall perform annual performance tests which are no more than 14 calendar months apart.
 - b. If the previous performance test was less than or equal to 75 percent of the NO_x emission limit, SC I.1, then the permittee shall perform subsequent performance tests once every two years which are no more than 26 calendar months apart.

No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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. **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4340(a), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall maintain a record of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for gaseous fuel, which specifies the maximum total sulfur content. **(40 CFR 60.4365)**

2. The permittee shall record the hours of operation at temperatures below 0°F to show compliance with SC III.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total NOx and CO emissions for EUTUR03, as required by SC I.4 and SC I.7. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using the method outlined in Appendix A or a new method as approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (3))**
4. The permittee shall keep, in a satisfactory manner, records of the monthly total and 12-month rolling total of startup events and shutdown events for EUTUR03 to show compliance with SC III.3, and SC III.4. Records must be kept in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
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 for EUTUR03. 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 the capacity rating;
 - e. Identification, type, and amount of fuel combusted on a calendar month basis;
 - f. All records required by 40 CFR 60.7, including the initial startup notification and performance tests;
 - g. Records of the number of all startup and shutdown events per turbine;
 - 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 AQD District Supervisor and shall be consistent with the requirements of 40 CFR 60.7. **(R 336.1205(1)(a) & (3), 40 CFR 60.7, 40 CFR 60.4365(a), 40 CFR Part 60 Subpart KKKK)**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

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. SVTUR03	53	60	R 336.1205(1)(a)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and KKKK, as they apply to EUTUR03. **(40 CFR Part 60 Subparts A & KKKK)**
2. Within 180 days after the initial startup and commissioning of EUTUR03, engines (EUENGINE1 and EUENGINE2) shall be permanently shut down. Generator engines (EUGEN06, EUGEN07, EUGEN08 and EUGEN09) shall be shut down before installation of EUTUR03. Notification of the shutdowns shall be submitted to the AQD District supervisor with 30 days after the shutdown. **(R 336.1205(1)(a) & (3))**

EUPLANT6AMINE EMISSION UNIT CONDITIONS

DESCRIPTION

Plant 6 MDEA process for removing CO₂ from natural gas at a rate of 35 MMSCFD

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. CO ₂	8,614 tons per calendar month ¹	Monthly	EUPLANT6AMINE	SC VI.3	R 336.1901(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not process more than 4,950,000 cubic feet of CO₂ in EUPLANT6AMINE per day.¹ (R 336.1901(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the flow rate of natural gas entering EUPLANT6AMINE.¹ (R 336.1901(a))
2. The permittee shall install, calibrate, maintain, and operate a device to monitor and record the CO₂ content of the gas entering EUPLANT6AMINE on a daily basis.¹ (R 336.1901(a))

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall monitor and record the flow rate of natural gas entering the plant on a continuous basis in a manner and with instrumentation acceptable to the AQD District Supervisor.¹ (R 336.1901(a))
2. The permittee shall monitor and record the CO₂ content of the gas entering the EUPLANT6AMINE on a daily basis.¹ (R 336.1901(a))
3. The permittee shall calculate and record the CO₂ emission rate from EUPLANT6AMINE in tons per month for each calendar monthly using a method acceptable to the AQD District Supervisor.¹ (R 336.1901(a))

VII. REPORTING

NA

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. SVCO2	12 ¹	50 ¹	R 336.1901(a)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EUEMRGEN01
EMISSION UNIT CONDITIONS**

DESCRIPTION

Diesel fired emergency engine

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	6.4 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112
2. CO	3.5 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112
3. PM	0.20 g/kW-hr	Hourly	EUEMRGEN01	SC VI.2	40 CFR 60.4205(b), Table 1 of 40 CFR 89.112

II. MATERIAL LIMIT(S)

1. The permittee shall burn only ultra-low sulfur diesel fuel in EUEMRGEN01 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (3), R 336.1401, 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMRGEN01 for more than 300 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**
2. The permittee may operate EUEMRGEN01 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. The 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. **(40 CFR 60.4211(f)(2))**
3. Each engine in EUEMRGEN01 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 as provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), 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 the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f)(3))**

4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year, the permittee shall meet the following requirements for each engine of EUEMRGEN01:
 - 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 89, 94, and/or 1068, as it applies to you.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a))**

5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for each engine of EUEMRGEN01 and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each EUEMRGEN01 with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), 40 CFR 60.4209(a))**

V. TESTING/SAMPLING

1. The permittee shall conduct an initial performance test for EUEMRGEN01 within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engines have been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60 Subpart IIII. If a performance test is required, the performance tests 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 the AQD. 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 within 60 days following the last date of the test. Subsequent performance testing shall be conducted every 8,760 hours of engine operation or 3 years, whichever comes first. **(40 CFR 60.4205(b), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep all required records and 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. **(R 336.1205(1)(a) & (3), 40 CFR Part 60 Subpart IIII)**
2. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUEMRGEN01 meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If EUEMRGEN01 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. **(40 CFR 60.4211(a), (b), (g))**
3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUEMRGEN01, on a monthly and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUEMRGEN01, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214)**

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 EUEMRGEN01, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b) of ultra-low sulfur diesel and meets requirements of SC II.1. 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. **(R 336.1205(1)(a) & (3), 40 CFR 80.510(b))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUEMRGEN01. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUEMRGEN01 will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days of switching the manner of operation. **(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. SVEMRGEN01	8	9.5	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A and Subpart IIII for Stationary Compression Ignition Internal Combustion Engines. **(40 CFR Part 60 Subparts A and IIII)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A NOx and CO Emission Calculations

For EUTUR03:

NOx Emission calculation for temperatures above 0°F:

$$\begin{aligned} NO_x \text{ emissions } \left(\frac{\text{tons}}{\text{month}} \right) &= \left[\text{Fuel Usage } \left(\frac{\text{MMscf}}{\text{month}} \right) * \text{Higher Heating Value } \left(\frac{\text{MMBtu}}{\text{MMscf}} \right) \right] \\ &* \left[NO_x \text{ Emission Factor } \left(\frac{\text{lbs}}{\text{MMBtu}} \right) \right] * \left[\text{Conversion factor } \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right) \right] \end{aligned}$$

Where:

Fuel Usage (MMscf/month) = actual monthly fuel usage data

Heat Content (MMBtu/MMscf) = Standard value in AP-42 for natural gas or supplier data, if available

NO_x EF (lbs/MMBtu) = 0.100, based on manufacturer data, May use updated test data if available, upon request

NOx emission calculations for temperatures below 0°F:

$$\begin{aligned} NO_x \text{ emissions } \left(\frac{\text{lbs}}{\text{hour}} \right) &= \left[NO_x \text{ Emission Factor (ppm)} * \text{Conversion factor } \left(\frac{1}{1,000,000} \right) \right] \\ &* \text{Molecular Weight } \left(\frac{\text{lb}}{\text{lbmol}} \right) * \text{Ideal Gas Law Conversion Factor } \left(\frac{\text{lbmol}}{386.7 \text{ ft}^3} \right) \\ &* \text{Stack Exhaust Flow Rate } \left(\frac{\text{scf}}{\text{hr}} \right) \end{aligned}$$

Where:

Emission Factor (ppm) = Solar Turbines Product Information Letter 167 Revision 6 (1 December 2016)

Molecular Weight (lb/lb-mol) = NO_x=46.1, CO=28.01, VOC=19.04 as NG

Ideal Gas Law Conversion Factor = lb-mol/386.7 ft³

stack Exhaust Flow Rate (scf/hr) = based on manufacturer data, based on manufacturer data, May use updated test data if available, upon request

Use the same methodology for CO as for NO_x.

APPENDIX



// MARK-UP OF ROP No. MI-ROP-N2940-2015