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

EGLE

RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

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

PART A: GENERAL INFORMATION

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

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
B7222	1311	211111	MI-ROP-B7222-2013	

Source Name: Jaguar Energy LLC- Frederic 15 Gas Sweetening Plant

Street Address: 9308 Deward Road

City	State	ZIP Code	County
Frederic	MI	49733	Crawford

Section/Town/Range (if address not available):

Source Description: Natural Gas Sweetening Plant

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

OWNER INFORMATION

Owner Name	Section Number (if applicable)
Jaguar Energy, LLC (Hound Resources,LLC)	

Mailing address (☐ check if same as source address)
PO Box 352

City	State	ZIP Code	County	Country
West Branch	MI	48661	Ogemaw	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: B7222	Section Number (if applicable):

PART A: GENERAL INFORMATION (continued)

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

CONTACT INFORMATION

Contact 1 Name			Title	
John Ward			Contract Plant Operator	
Company Name & Mailing address (☐ check if same as source address)				
PO Box 46				
City	State	ZIP Code	County	Country
Kaleva	MI	49645	Manistee	USA
Phone number		E-mail address		
231-342-8789		northstaropcon@aol.com		

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

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Jon Ptashnik			President	
Company Name & Mailing address (☐ check if same as source address)				
PO Box 352				
City	State	ZIP Code	County	Country
West Branch	MI	48661	Ogemaw	USA
Phone number		E-mail address		
989-701-2034		info@houndresources.com		

Responsible Official 2 Name (optional)			Title	
Julie Johnston			Vice President	
Company Name & Mailing address (☐ check if same as source address)				
PO Box 352				
City	State	ZIP Code	County	Country
West Branch	MI	48661	Ogemaw	USA
Phone number		E-mail address		
989-701-2034		jjohnston@houndresources.com		

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

SRN: B7222	Section Number (if applicable):

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

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

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

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

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

Jon Ptashnik

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.

Signature of Responsible Official — **Date** 1/11/2022

SRN: B7222	Section Number (if applicable):

PART C: SOURCE REQUIREMENT INFORMATION

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

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

SRN: B7222	Section Number (if applicable):

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

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

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

If No, go to Part E.

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

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]
EUTANK	18,000 GALLON CAPACITY CONDENSATE STOCK TANK	R336.1284(f)	R 366.1212(4)(c)
EUHEATERS	HEATERS AND BURNERS NATURAL GAS FIRED TOTAL 2900 MBUTH	R336.1282(b)(i)	R336.1212(4)(b)

Comments:

☒ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**D1

SRN: B7222	Section Number (if applicable):

PART E: EXISTING ROP INFORMATION

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

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

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

SRN: B7222	Section Number (if applicable):

PART F: PERMIT TO INSTALL (PTI) INFORMATION

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

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

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

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

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

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

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

Comments:

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

SRN: B7222	Section Number (if applicable):

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

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

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

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

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

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

Comments:

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

SRN: B7222	Section Number (if applicable):

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

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

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

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

SRN: B7222	Section Number (if applicable):

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

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No

SRN: B7222	Section Number (if applicable):

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

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
☐ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**	

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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

	SRN: B7222	Section Number (if applicable):

1. Additional Information ID
AI-C10

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

See attached PREVENTATIVE MAINTENANCE & MALFUNCTION ABATEMENT PLAN

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PM MAP Jaguar Energy, LLC B7222 Revised: 12/01/2022

Preventative Maintenance and Malfunction Abatement Plan

The purpose of this plan is to describe preventative maintenance activities of equipment at the Frederic 15 Gas Sweetening Plant. If a malfunction occurs, this plan also describes actions to be taken to maximize safety, minimize environmental impacts, and to ensure the facility operations do not lead to a violation of permit conditions. A spare parts list is included.

In this document, the term "shut-in the facility" means to automatically close the inlet valve to the sweetening plant thereby shutting-off the flow of gas into the sweetening plant from the pipeline.

1. H2S Detection System

1. Maintenance Procedures
   a. Calibrate H2S sensors
   b. Walk through facility
   c. Patrol ground in vehicle

2. Maintenance Schedules
   a. Quarterly
   b. Daily
   c. Daily

3. Maintenance Record Method
   a. Check list
   b. Check list
   c. Check list

Spare parts available for repairs:

1. Calibration gas

A malfunction of the H2S detection system means that either the system

1. inadvertently shuts in the facility when there has been no release of hydrogen sulfide, or
2. fails to shut in the facility when there has been a release of hydrogen sulfide in the buildings.

If the H2S detection system malfunctions, then all inflow streams to the facility shall be shut off immediately. Operation of the facility may be resumed only after successful corrective measures have been applied, and the H2S system is once again operating properly.

2. Gasket or seal (including flange gaskets, pump seals, valve stem seals)

1. Maintenance Procedures

a. Walk through plant
b. Clean or replace faulty seals

2. Maintenance Schedules
   a. Daily
   b. As needed

3. Maintenance Record Method
   a. Check list
   b. Check list

Spare parts available for repairs:

1. Misc. 2 inch through 4 inch ANSI 150 and ANSI 600 flange gaskets
2. Valve stem packing material
3. Pump seals
4. Misc. ¼ inch through ½ inch size valves

Malfunction of gasket or seal means gas is leaking from the system.

A malfunction of a gasket or seal that results in sour gas leaking to the atmosphere requires immediate attention as described below:

1. The leaking device shall be immediately isolated by closing the appropriate valves and depressurizing the appropriate piping section.
2. If a pump seal is leaking, switch operation over to the spare pump while the faulty seal is replaced.
3. If a flange gasket or valve packing is leaking, repair or replace the defective part. Depending upon the location of the leak, it may be necessary to shut-in the plant.

3. Pipe or vessel

1. Maintenance/Inspection Procedures
   a. Examine external surface of all pipes and vessels
   b. Replace any steel pipe that is badly pitted
   c. Clean, prime, and paint any mildly corroded areas of pipe
   d. Perform cathodic protection survey of all underground flowline from wells to facility
   e. Add sacrificial anodes and isolating insulators to correct any deficiencies in cathode protection system
   f. Conduct a thickness survey of above ground piping and vessels
   g. Replace significantly corroded steel
   h. Examine any steel removed from service for signs of corrosion

2. Maintenance Schedules
   a. Annually
   b. As needed

c. As needed
d. Annually
e. As needed
f. Every three years
g. As needed
h. Ongoing

3. Maintenance Record Method
   a. Checklist
   b. Checklist
   c. Checklist
   d. Checklist
   e. Checklist
   f. Checklist
   g. Checklist
   h. Checklist

Spare parts available for repairs:
1. Inventory of small diameter pipe and pipe nipples

Malfunction of pipe or vessel means a pipe or vessel is leaking, as determined by sensors, or by sense of smell, sight or hearing.

If a pipe or vessel malfunctions, then that particular pipe or vessel shall be isolated by closing the appropriate valves, depressurized, and replaced or repaired promptly. Depending upon the location of the leak, it may be necessary to shut-in the facility while the repair is being made. The shut-in of the facility shall commence immediately if the malfunction results in an H2S leak to atmosphere.

4. Pilot flame at incinerator

1. Maintenance Procedures
   a. Inspect incinerator pilot
   b. Clean or replace incinerator pilot
   c. Adjust pilot wind shields as applicable

2. Maintenance Schedules
   a. Quarterly
   b. As necessary
   c. As necessary

2. Maintenance Record Method
   a. Check list
   b. Check list

c. Check list

Spare parts available for repairs:
1. Pilot igniter

Malfunction of pilot flame at incinerator means the flame fails to light or remain lit.

If the pilot flame at incinerator malfunctions, then shut-in of all wells feeding the facility shall commence automatically within one second. The flow of gas from the wells feeding the facility shall not be restarted unless the malfunction is corrected.

5. Back pressure on vent system

1. Maintenance/Inspection Procedures
   a. check pressure on the vent system gauge
   b. clean if pressure is higher than 1 psig
2. Maintenance/Inspection Schedules
   a. Daily
   b. As needed

3. Maintenance/Inspection Record Method
   a. Check list
   b. Check list

Spare parts available for repairs:
1. Spare pressure gauge

Malfunction of back pressure on vent system means a plugged or backed-up vent system. The gas dehydrator reboiler pressure would increase in the event of a plugged vent line. This would indicate a back up in the system.

If a vent system malfunction is observed, then the facility shall be shut-in and the vent line cleaned and/or repaired as necessary.

6. Release

1. Maintenance Procedures
   a. Do not deliberately blow down or otherwise release sour gas to the atmosphere without flaring or other equivalent control.

2. Maintenance Schedules
   a. On going

3. Maintenance Record Method

a. Check list

7. H2S detection monitoring system

1. Maintenance/Inspection Procedures
   a. Calibrate H2S sensor to signal an audible and visual alarm if the H2S concentration in the atmosphere reaches 10 PPM, and trigger a shut-in of the facility if the concentration reaches 50 PPM
   b. Test controller for proper set points and proper operation of the alarm/shut down feature

2. Maintenance/Inspection Schedules
   a. Inspection
   b. Every four months (Feb, June, Oct)
   c. Every four months (Feb, June, Oct)

3. Maintenance Record Method
   a. Check list
   b. Check list

Spare parts available for repairs:
1. One bottle of calibration gas

Malfunction of H2S detection system means the system fails to accurately read H2S in the atmosphere, and fails to trigger a shut-in of the facility if the concentration of H2S reaches 50PPM in the plant.

If the H2S detection system malfunctions, to the shut-in of the facility shall commence immediately. Restarting the facility may be resumed only after successful corrective measures have been applied, and the H2S detection system is once again operating properly.

8. Flare pilot flame failure sensor

1. Maintenance/Inspection Procedures
   a. Check for proper operation of thermocouple (thermocouple measures the temperature at a point near the pilot)
   b. Check alarm/shutdown function of the controller
   c. Re-calibrate alarm/shut down function of the controller

2. Maintenance/Inspection Schedules
   a. Quarterly
   b. Quarterly
   c. As required

3. Maintenance/Inspection Record Method

a. Check list
b. Check list
c. Check list

Spare parts available for repairs:
1. Spare thermo couple

Malfunction of flare pilot flame sensor means the thermocouple fails to measure the temperature at a point near the pilot. Odors may be detected during daily walk through.

If the flare pilot flame sensor malfunctions or detects a flare pilot outage, then an alarm and call-out system will activate. Shut-in of all wells feeding the facility shall commence automatically if the sensor is not repaired and/or the pilot flame is not re-established within 60 minutes.

9. Incinerator temperature

1. Maintenance/Inspection Procedures
   a. Inspect thermocouple to assure continuous temperature monitoring and recording. A thermocouple is used to measure temperature and is connected electrically to a controller/recorder. The controller will alarm if the temperature falls to 1400 degrees Fahrenheit (F) and trigger a shutdown if temperature falls to 1300 degrees F or stays below 1400 degrees F for 15 minutes.
   b. Test controller for proper alarm/shutdown function
   c. Recalibrate controller

2. Maintenance/Inspection Schedules
   a. Quarterly
   b. Quarterly
   c. As necessary

3. Maintenance/Inspection Record Method
   a. Check list
   b. Check list
   c. Check list

Spare parts available for repairs:
1. One thermocouple
2. One box of recording charts

Malfunction means: 1. the thermocouple fails to measure the temperature of the incinerator; 2. the electronic recording system fails to record temperature.

If the thermocouple monitoring system malfunctions then the facility shall be shut-in immediately. If the recording system malfunctions then the recording system will be repaired within 8 hours or the plant will be shut-in.

10. Incinerator exhaust oxygen content

1. Maintenance/Inspection Procedures
   a. Check oxygen sensor for proper operation. Proper operation consists of the oxygen sensor continuously sending a signal to a controller that displays and records the oxygen concentration. The controller will trigger a shutdown if the oxygen content falls below 5%.
   b. Replace oxygen sensor
   c. Calibrate oxygen sensor
   d. Check alarm/shutdown function of the controller for proper operation
   e. Write date on recording chart

2. Maintenance/Inspection Schedules
   a. Monthly
   b. As necessary
   c. Monthly
   d. Monthly
   e. Daily

3. Maintenance/Inspection Record Method
   a. Check list
   b. Check list
   c. Check list
   d. Checklist
   e. Recording chart

Spare parts available for repairs:
1. Spare oxygen sensor
2. Extra box of recording charts
3. Oxygen calibration gas

Malfunction of incinerator exhaust oxygen content means the oxygen sensor fails to continuously send a signal to the controller/recorder that displays and continuously records the oxygen concentration.
If incinerator exhaust oxygen content system malfunctions, then shut-in of the facility shall commence immediately and corrective action taken.

11. Gas piping hi-lo pressure

1. Maintenance Procedures
   a. Test pressure switch for proper test points. A pressure switch triggers an alarm if the pressure on the plant high pressure gas piping is too high or too low.

2. Maintenance Schedules
   a. Quarterly

3. Maintenance Record Method
   a. Check list

Spare parts available for repairs:
1. Switch

Malfunction of gas piping hi-lo pressure system means the system fails to trigger an alarm if the pressure on the plant high pressure gas piping is too high or too low.

If the gas piping hi-lo pressure system malfunctions, then the cause of the high or low pressure condition will be determined within 2 hours of the malfunction and the necessary repairs will be made to those components first. Then the pressure switch will be tested for proper operation and replaced if necessary utilizing the spare switch that is kept in inventory. If there is nothing wrong except a defective pressure switch, then it may not be necessary to shutdown the plant while the switch replacement work is taking place.

12. Amine Reboiler high pressure

1. Maintenance Procedures
   a. Test pressure switch. A pressure switch triggers an alarm if the pressure on the amine reboiler is either too high or too low.

2. Maintenance Schedules
   a. Quarterly

3. Maintenance Record Method
   a. Check list

Spare parts available for repairs:
1. Switch

Malfunction of reboiler high pressure means system fails to trigger an alarm if the pressure on the amine reboiler is too high. An alarm will sound.

If the reboiler high pressure system malfunctions, then the cause of the high pressure condition will be determined within 2 hours of the malfunction and the necessary repairs will be made to those components first. Then the pressure switch will be tested for proper operation and replaced if necessary utilizing the spare switch that is kept in inventory. If there is nothing wrong except a defective pressure switch, then it may not be necessary to shutdown the plant while the switch replacement work is taking place.

13. Safety shut down valves

1. Maintenance Procedures
   a. Test safety shutdown valves. There are safety shutdown valves at the well-head, and at the inlet to the sweetening plant. These are air to open, spring to close valves (actually, sweet gas is used in lieu of instrument air). Monitoring devices within the plant can trigger a shutdown by tripping a solenoid that vents the instrument gas from the valve actuator thereby allowing the spring to close the valve.

2. Maintenance Schedules
   a. Quarterly

3. Maintenance Record Method
   a. Check list

Spare parts available for repairs:
1. Solenoid

Malfunction of the safety shut down valve system means the system fails to properly shut-in the facility. If the safety shutdown valve system malfunctions, then the plant will be shutdown manually immediately. It will then be necessary to determine the cause of the attempted shutdown and make whatever repairs are necessary to those components first. Then the safety valve system will be repaired and/or replaced as required.

14. H2S Concentration Check
1. Maintenance Procedures
   a. Determine the hydrogen sulfide concentration using a colorimetric detector tube or equivalent.

2. Maintenance Schedules
   a. Monthly

3. Maintenance Record Method
   a. Check list

15. Spare Parts List
    1. Maintenance Procedures
       a. Develop and keep a spare parts list, and keep spare parts available on site

    2. Maintenance Schedules
       a. When changes are needed

    3. Maintenance Record Method
       a. List

All records shall be maintained by the Permittee for a period of five (5) years and made available to the MDEQ-AQD upon request.

This Preventative Maintenance and Malfunction Abatement Plan shall be evaluated and updated, then submitted for Air Quality Division District Supervisor for review and approval as required in the Permittee's Renewable Operating Permit.

Malfunctions of the equipment shall be reported to AQD in accordance to Rule 912

If a Rule 901 violation is confirmed this Preventative Maintenance, and Malfunction Abatement Plan shall be evaluated and updated by the permittee as requested by Air Quality Division.

20230000 0

KEEP ALL CONDITIONS-NO CHANGES, ADDITIONS, OR DELETIONS

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

EFFECTIVE DATE: July 17, 2018

ISSUED TO:

Jaguar Energy LLC - Frederic 15 Gas Sweetening Plant
(Section 15,T28N,R04W)
State Registration Number (SRN): B7222

LOCATED AT:

9038 Deward Road, Frederic, Crawford County, Michigan 49733

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B7222-2018

Expiration Date: July 17, 2023

Administratively Complete ROP Renewal Application Due Between:
January 17, 2022 and January 17, 2023

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-B7222 -2018

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.

Shane Nixon, Cadillac/Gaylord District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of 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 is state-only enforceable will be noted as such.

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

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

A. GENERAL CONDITIONS

Permit Enforceability

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

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

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

General Provisions

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

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

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

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

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

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

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

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

Equipment & Design

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

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

Emission Limits

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

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

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

Testing/Sampling

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

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

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

Monitoring/Recordkeeping

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

e. The results of the analyses.
f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

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

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which 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 60604-3507. **(R 336.1213(4)(c))**

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

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

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

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

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

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

Permit Shield

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

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

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

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

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

Revisions

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

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

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

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

Reopenings

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

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(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):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

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

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

Emission Trading

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

Permit to Install (PTI)

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

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

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, 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:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

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

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

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
EUSWEETENING	Amine gas sweetening process to remove hydrogen sulfide from natural gas. The hydrogen sulfide is burned to form sulfur dioxide using an incinerator. There is a flare as a backup control device.	07/01/1982	NA
EUGLYCOLDEHYDRAT	Glycol dehydrator to remove water vapor from natural gas.	07/01/1982	NA
EUNATGASENGINE	Ajax DP-60 spark ignited reciprocating internal combustion engine, 60 hp.	07/01/1982	NA

EUSWEETENING
EMISSION UNIT CONDITIONS

DESCRIPTION

Amine gas sweetening process to remove hydrogen sulfide from natural gas. The hydrogen sulfide is burned to form sulfur dioxide using an incinerator.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Incinerator, flare as backup

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Sulfur Dioxide	1332 lbs/day[2]	24-hour average	EUSWEETENING	SC VI.6	**R 336.1205(1)(a)**
2. Sulfur Dioxide	55.5 lbs/hr[2]	24-hour average	EUSWEETENING	SC VI.6	**R 336.1205(1)(a)**

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 maintain a continuously burning pilot flame at the emergency flare.[2] **(R 336.1403(2))**

2. In the event that the pilot flame at the emergency flare is extinguished, a system shall immediately activate an alarm and callout system to notify company operating personnel of the pilot flame outage. Shut-in of all wells feeding EUSWEETENING shall commence automatically if the pilot flame is not reignited and maintained within 60 minutes of extinguishment. If the pilot flame is reignited and maintained within 60 minutes, shut-in of the wells feeding EUSWEETENING will not be required.[2] **(R 336.1403(1), R 336.1403(2), R 366.1403(5)(f))**

3. Fuel for the emergency flare pilot shall be only sweet natural gas.[2] **(R 336.1403(2))**

4. The permittee shall not burn sour gas in any of the process heaters or the incinerator pilot burner unless written approval to burn sour gas has been received from the AQD District Supervisor.[2] **(R 336.1403(2))**

5. The permittee shall not operate EUSWEETENING unless a vapor return system is employed in the load-out of the pressurized storage tanks.[2] **(R 336.1403(5)(c), R 336.1403(1))**

6. The permittee shall not operate EUSWEETENING unless all emergency relief valves, the heater treater, and all storage tanks are vented to the incinerator or flare.[2] **(R 336.1403(5)(c), R 336.1403(1))**

7. Except in the event of an emergency or malfunction, the permittee shall not send untreated sour gas to the flare directly from the wells or the amine unit.[2] **(R 336.1901, R 336.1403(1))**

8. In the event of an emergency, the permittee shall automatically commence shut-in of EUSWEETENING within one second and shall flare off all sour gas.[2] **(R 336.1403(5)(f), R 336.1403(1))**

9. The permittee shall notify the AQD, in advance, of the name of any well from which they will process gas in EUSWEETENING.[2] **(R 336.1205(1)(a)(ii))**

10. The permittee shall conduct a continuous in-shed monitoring program for hydrogen sulfide.[2] **(R 336.1403(5)(d))**

11. All inflow streams to EUSWEETENING shall be shut off if the concentration of hydrogen sulfide in the building is greater than 100 ppm. Operation of EUSWEETENING may be resumed only after successful corrective measures have been applied.[2] **(R 336.1403(5)(e))**

12. During startup, acid gas feed to the incinerator shall not commence until the oxygen content at the outlet of the combustion chamber exceeds 5.0 percent and the temperature at the outlet of the combustion chamber exceeds 1400 °F.[2] **(R 336.1910, R 336.1403(4))**

13. If the oxygen content at the outlet of the incinerator combustion chamber falls below 5.0 %, the permittee must bring the oxygen content at the outlet of the incinerator combustion chamber back up to 5.0 % within 15 minutes or shut-in EUSWEETENING and determine the problem. **(R 336.1403(4), R 336.1910)**

14. The permittee shall not operate EUSWEETENING unless the required oxygen monitoring and recording devices, the air pollution control devices, and warning devices are installed and in proper operating condition.[2] **(R 336.1910, R 336.1403(4))**

15. If the incinerator temperature falls below 1400 °F, the permittee must bring the incinerator temperature back to 1400 °F within 15 minutes or shut-in EUSWEETENING and determine the problem.[2] **(R 336.1910)**

16. When the incinerator temperature falls below 1300 °F, the permittee shall immediately shut-in EUSWEETENING.[2] **(R 336.1910, R 336.1403(4))**

17. The permittee shall not operate EUSWEETENING unless the required temperature monitoring and recording devices, the air pollution control devices, and warning devices are installed and in proper operating condition.[2] **(R 336.1910, R 336.1403(4))**

18. The permittee shall not operate EUSWEETENING unless acid gas from the amine regenerator is vented to the incinerator; or vented to the emergency flare in the event of an emergency or malfunction.[2] **(R 336.1403(1))**

19. The permittee shall properly calibrate the incinerator oxygen monitoring and recording devices on a monthly basis and in accordance with the Leak Detection, Preventative Maintenance and Malfunction Abatement Plan approved by the AQD District Supervisor.[2] **(R 336.1911)**

20. The permittee shall properly calibrate the incinerator temperature monitoring and recording devices on a quarterly basis and in accordance with the Leak Detection, Preventative Maintenance and Malfunction Abatement Plan approved by the AQD District Supervisor. **(R 336.1911)**

21. The permittee shall not operate EUSWEETENING unless the approved preventative maintenance and malfunction abatement plan is implemented and maintained. Changes to the plan may be made upon approval by the AQD District Supervisor. **(R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Retention time of exhaust gasses in the incinerator combustion chamber shall be at least 1.25 seconds.[2] **(R 336.1910)**

2. The incinerator shall be equipped with a monitor to measure oxygen content at the outlet of the incinerator combustion chamber.[2] **(R 336.1403(4), R 336.1910)**

3. The incinerator shall be equipped with a monitor to measure temperature, in degrees Fahrenheit, at the outlet of the incinerator combustion chamber.[2] **(R 336.1403(4))**

4. The incinerator oxygen monitor shall sound an audio alarm when the oxygen content at the outlet of the incinerator combustion chamber falls below 5.0 % by volume.[2] **(R 336.1403(4), R 336.1910)**

5. The incinerator temperature monitor shall sound an audio alarm when the temperature at the outlet of the incinerator combustion chamber falls below 1400 °F.[2] **(R 336.1403(4), R 336.1910)**

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 determine hydrogen sulfide concentration in the natural gas, either entering the plant or going to the incinerator, on a monthly basis utilizing colormetric tubes or equivalent testing technology.[2] **(R 336.1403(5)(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 continuously monitor, record, and retain records of the temperature (in °F) of the exhaust gasses at the outlet of the combustion chamber of the incinerator.[2] **(R 336.1403(4))**

2. The permittee shall continuously monitor, record, and retain records of the oxygen content, in percent, of the exhaust gasses at the outlet of the combustion chamber of the incinerator.[2] **(R 336.1403(4))**

3. The permittee shall continuously monitor, record, and retain records of the volumetric flow rate of sour gas entering the gas sweetening plant.[2] **(R 336.1403(5)(a))**

4. The permittee shall use the volumetric flow rate of sour gas entering the sweetening plant, as specified in SC VI.5 of this table and the concentration of hydrogen sulfide in the sour gas, as specified in SC V.1 of this table to calculate hourly and daily sulfur dioxide emissions from the gas sweetening plant according to calculations in Appendix 7.[2] **(R 336.1403(5)(a))**

See Appendix 7

VII. REPORTING

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

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

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

4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

5. Monthly reporting of the daily mass flow rate of sour gas, the monthly hydrogen sulfide concentration, and the hourly (based on a 24-hour average) and daily sulfur dioxide emissions from the gas sweetening plant. This data shall be submitted in an acceptable format to the AQD District Supervisor, within 30 days following the end of the month in which it was collected.[2] **(R 336.1403(5)(a))**

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. SVFLARE	NA	NA	**NA**
2. SVINCINERATOR	10[2]	100[2]	**R 336.1205(1)(a)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall maintain fencing, warning signs, or other measures as necessary to prevent unauthorized individuals from entering the plant property and buildings.[2] **(R 336.1403(5)(b))**

2. The AQD will revise the temperature requirement of the incinerator if it is adequately demonstrated by the permittee that a lower temperature provides complete oxidation, with an adequate margin of safety. The permittee may operate the incinerator at a lower temperature for testing purposes with written approval from the AQD District Supervisor.[2] **(R 336.1910)**

3. The AQD will revise the oxygen content requirement of the incinerator if it is adequately demonstrated by the permittee that a lower oxygen content provides complete oxidation, with an adequate margin of safety. The permittee may operate the incinerator at a lower oxygen content for testing purposes with written approval from the AQD District Supervisor.[2] **(R 336.1910)**

4. The AQD will revise the retention time requirement of the exhaust gases in the incinerator combustion chamber if it is adequately demonstrated by the permittee that a lower retention time provides complete oxidation, with an adequate margin of safety. The permittee may operate the incinerator at a lower retention time for testing purposes with written approval from the AQD District Supervisor.[2] **(R 336.1910)**

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

EUGLYCOLDEHYDRAT
EMISSION UNIT CONDITIONS

DESCRIPTION

Glycol dehydrator to remove water vapor from natural gas.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Flare or equivalent

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 the glycol dehydrator unless it vents to the incinerator or emergency flare.[2] **(R 336.1403(5)(c))**

2. The permittee shall not operate the glycol dehydrator unless the emergency flare is installed and operating properly. **(R 336.1901)**

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))**

NA

VI. MONITORING/RECORDKEEPING

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

NA

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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the glycol dehydrator unless the approved Preventative Maintenance Plan and Malfunction Abatement Plan is implemented and maintained. Changes to the plan may be made with written approval of the AQD District Supervisor.[2] **(R 336.1911(2), R 336.1201)**

2. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart HH, as they apply to EUGLYCOLDEHYDRAT. **(40 CFR Part 63, Subpart HH)**

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

EUNATGASENGINE
EMISSION UNIT CONDITIONS

DESCRIPTION

Ajax DP-60 spark ignited reciprocating internal combustion engine, 60 hp.

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
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 must comply, to the extent applicable, with the maintenance requirements set forth in 40 CFR Part 63, Subpart ZZZZ, Table 2d. **(40 CFR 63.6603(a))**

2. The permittee must operate and maintain the stationary RICE according to the manufacturer's emission related written instructions or develop its own maintenance plan which must provide for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e)(8))**

3. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for a safe loading of the engine, not to exceed 30 minutes. **(40 CFR 63.6625(h))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

1. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in 40 CFR Part 63, Subpart ZZZZ, Table 2d. The oil analysis must be performed at the same frequency specified for changing the oil. The oil analysis program must analyze the parameters and keep records as required in 40 CFR Part 63. **(40 CFR 63.6625(j))**

VI. MONITORING/RECORDKEEPING

1. The permittee must keep engine maintenance records. **(40 CFR 63.6655(e)(3))**

2. Records must be in a form suitable, readily available for expeditious review, and kept for five years. **(40 CFR 63.6660)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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 the applicable requirements of 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for Area Sources. **(40 CFR Part 63, Subpart ZZZZ)**

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

D. FLEXIBLE GROUP CONDITIONS

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

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

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
EUTANKBATTERY	40 CFR 60.110, NSPS Subpart Kb – Standards for New Stationary Sources, Volatile Organic Compound Storage Vessels	Tanks are "prior to custody transfer." See 40 CFR 60.110b(d)(4)

APPENDICES

Appendix 1. Acronyms and Abbreviations

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

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

Appendix 2. Schedule of Compliance

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

Appendix 3. Monitoring Requirements

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

Appendix 4. Recordkeeping

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

Appendix 5. Testing Procedures

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

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B7222-2013. 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-B7222-2013 is being reissued as Source-Wide PTI No. MI-PTI-B7222-2018.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	NA	NA	NA

Appendix 7. Emission Calculations

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

$$\frac{\text{PPM(V) } H_2S}{\text{1,000,000 PPM(V) Total}} \times \frac{\text{MCF Gas Produced}}{\text{Day}} \times \frac{\text{1,000 CuFt}}{\text{MCF}} = \frac{\text{CuFt } H_2S}{\text{Day}}$$

$$\frac{\text{CuFt } H_2S}{\text{Day}} \times \frac{\text{1 Lb Mol}}{\text{379.4 Cu Ft}} \times \frac{\text{34 Lb } H_2S}{\text{Lb Mol } H_2S} = \frac{\text{Lb } H_2S}{\text{Day}}$$

$$\frac{\text{Lb } H_2S}{\text{Day}} \times \frac{\text{1 Day}}{\text{24 Hr}} \times \frac{\text{1.88 Lb SO2}}{\text{Lb H2S}} = \frac{\text{Lb SO2}}{\text{Hr}}$$

Note: $\frac{\text{379.4 Cu Ft}}{\text{Lb Mol}}$ is equal to the volume of 1 mole of any gas at 60°F and one atmosphere (where one atmosphere is 14.7 pounds per square inch)

34 represents the molecular weight of H_2S.

1.88 represents $\frac{\text{Molecular weight } SO_2}{\text{Molecular weight } H_2S}$

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.

B. Other Reporting

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in EUSWEETENING. Alternative formats must be approved by the AQD District Supervisor.

Month:	**Plant Name:**				
Date:	**Gas Rate (MMCF/d)**	**H_2S Content (PPM)**	**Mass Flow Rate H_2S (lb/24 hr period)**	**SO_2 Emissions lb/hr (24 hr average)**	**SO_2 Emissions (lb/24 hr period)**
1.					
2.					