

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
B7222

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B7222-2018

Jaguar Energy, LLC - Frederic 15 Gas Sweetening Plant

SRN: B7222

Located at:

9038 Deward Road, Frederic, Crawford County, Michigan 49733

Permit Number: MI-ROP-B7222-2018

Staff Report Date: April 30, 2018

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

TABLE OF CONTENTS

APRIL 30, 2018 - STAFF REPORT	3
MAY 31, 2018 - STAFF REPORT ADDENDUM	7

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

B7222

APRIL 30, 2018 - STAFF REPORT

MI-ROP-B7222-2018

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for Air Pollution Control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Jaguar Energy, LLC 3312 Twelfth Street Wayland, Michigan 49348
Source Registration Number (SRN):	B7222
North American Industry Classification System (NAICS) Code:	211111
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201700124
Responsible Official:	Louis Bartz President 269-792-0505
AQD Contact:	Rob Dickman, Senior Environmental Quality Analyst 231-876-4412
Date Application Received:	September 18, 2017
Date Application Was Administratively Complete:	September 18, 2017
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	April 30, 2018
Deadline for Public Comment:	May 30, 2018

Source Description

The Frederic 15 Gas Sweetening Plant is located on Deward Road in Section 15, Township 28 North, Range 4 West. It is approximately four miles northwest of Frederic, Michigan. This facility receives natural gas, condensate, crude oil, and brine from wells located in the area.

The natural gas taken in contains enough hydrogen sulfide in it to be considered "sour". The facility processes this gas through an amine process which strips out the hydrogen sulfide making it "sweet". The gas is then dried by a glycol dehydration system, making it saleable. This gas is then compressed in to a pipeline. The compressor engine used for this purpose is fueled by a portion of this sweet gas. The hydrogen sulfide collected is consumed in an incinerator resulting in sulfur dioxide emissions. Should the incinerator fail, collected hydrogen sulfide is routed to a backup flare. This flare is equipped with a continuous pilot that also burns sweet natural gas. Should this pilot fail, the facility will automatically shut down and the wells feeding it are shut in.

The condensate, crude oil, and brine collected at the facility is stored in tanks and trucked off site as needed.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	0.7
Lead (Pb)	0.0
Nitrogen Oxides (NO _x)	2.0
Particulate Matter (PM)	0.0
Sulfur Dioxide (SO ₂)	10.5
Volatile Organic Compounds (VOCs)	0.4

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Crawford County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of sulfur dioxide exceeds 100 tons per year.

The stationary source is considered to be a minor source of HAP emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

EUGLYCOLDEHYDRAT at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Oil and Natural Gas Production for Area Sources promulgated in 40 CFR Part 63, Subparts A and HH. The ROP contains special conditions provided by Jaguar Energy in their application for applicable requirements from 40 CFR Part 63, Subparts A and HH. The AQD is not delegated the regulatory authority for this area source MACT.

EUNATGASENGINE at the stationary source is subject to the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for Area Sources promulgated in 40 CFR Part 63, Subparts A and ZZZZZ (RICE Area Source MACT). The ROP contains special conditions provided by Jaguar Energy in their application for applicable requirements from 40 CFR Part 63, Subparts A and ZZZZZ. The AQD is not delegated the regulatory authority for this area source MACT.

The stationary source is considered a “synthetic minor” source in regards to the Prevention of Significant Deterioration regulations of 40 CFR 52.21 because the stationary source accepted legally enforceable permit conditions limiting the potential to emit of sulfur dioxide to less than 250 tons per year.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-B7222-2013 are identified in Appendix 6 of the ROP.

PTI Number	
295-81E	377-07

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUTANKBATTERY	Two 18,000-gallon capacity oil and brine stock tanks.	R 336.1212(4)(c)	R 336.1284(2)(f)
EUAMINEREBOILER	1.5 MMBtu/hr natural gas-fired amine reboiler	R 336.1212(4)(b)	R 336.1282(2)(b)(i)
EUPRODHEATER	500,000 btu/hr natural gas-fired indirect process heater	R 336.1212(4)(b)	R 336.1282(2)(b)(i)
EUGLYHEATER	100,000 btu/hr natural gas-fired glycol reboiler heater	R 336.1212(4)(b)	R 336.1282(2)(b)(i)

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by the MDEQ, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Shane Nixon, Cadillac District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

B7222

MAY 31, 2018 - STAFF REPORT ADDENDUM

MI-ROP-B7222-2018

Purpose

A Staff Report dated April 30, 2018, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Louis Bartz, President 269-792-0505
AQD Contact:	Rob Dickman, Senior Environmental Quality Analyst 231-878-4697

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the April 30, 2018 Draft ROP

No changes were made to the draft ROP.