

State Registration Number
G5067

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-G5067-2019b

William Beaumont Hospital

State Registration Number (SRN): G5067

Located at

3601 West 13 Mile Road, Royal Oak, Oakland County, Michigan 48073

Permit Number: MI-ROP-G5067-2019b

Staff Report Date: July 15, 2019

Amended Date: July 14, 2020
February 16, 2023

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) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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

State Registration Number
G5067

RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-G5067-2019

JULY 15, 2019 - STAFF REPORT

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; and Michigan's Administrative Rules for Air Pollution Control promulgated under 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:	William Beaumont Hospital 3601 West 13 Mile Road Royal Oak, Michigan 48073
Source Registration Number (SRN):	G5067
North American Industry Classification System (NAICS) Code:	622110
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201900002
Responsible Official:	Matthew George, Director, Facilities Management Services 248-898-1352
AQD Contact:	Kerry Kelly, Environmental Quality Analyst 586-506-9817
Date Application Received:	January 3, 2019
Date Application Was Administratively Complete:	January 24, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	July 15, 2019
Deadline for Public Comment:	August 14, 2019

Source Description

William Beaumont Hospital's Royal Oak campus is located in southeastern Oakland County and occupies approximately 110 acres bounded on the north by 13 Mile Road, on the east by Coolidge Highway, and on the west and south by residential subdivisions. The Royal Oak campus consists of more than one million square feet of occupied space.

Regulated equipment at the facility includes boilers, emergency generators, chemical sterilizers, cold cleaners, and a paint booth.

The five permitted boilers at Beaumont Royal Oak are used to provide steam for equipment sterilization, cooking, and building heating. These boilers primarily fire natural gas, however, the Michigan Department of Community Health 2007 Minimum Design Standards for Health Care Facilities requires emergency fuel be provided for boilers when adequate supplies of the primary fuel are not available. As a result, these five permitted boilers are capable of combusting fuel oil No. 2.

The 2007 Minimum Design Standards for Health Care Facilities Hospitals also requires hospitals be capable of providing not less than 72 hours of service at full load in emergency situations. Eight of the 10 stationary engines at Beaumont are emergency generators that fire only No. 2 fuel oil. The remaining two engines are cogeneration engines capable of firing No. 2 fuel oil and natural gas. The cogeneration units generate electricity and useful heat simultaneously. The heat generated in the cogeneration units at Beaumont can be used in a heat recovery boiler capable of producing 2,000 lbs. of steam per hour.

Beaumont Royal Oak personnel use four ethylene oxide (EtO) sterilizers to sterilize temperature sensitive surgical tools such as scopes and lenses. Three Advanced Technology Safe-Cell System sulfuric acid scrubbers and dry bed chemical filters are used to control emissions from the EtO sterilizers.

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)	23.21
Lead (Pb)	0
Nitrogen Oxides (NO _x)	32.02
Particulate Matter (PM)	2.02
Sulfur Dioxide (SO ₂)	0.39
Volatile Organic Compounds (VOCs)	2.08

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2017 by William Beaumont Hospital:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Ethylene oxide	0.0006
Total Hazardous Air Pollutants (HAPs)	0.0006

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

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.

Oakland County is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the 8-hour ozone standard.

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

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

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451, because at the time of New Source Review permitting the potential to emit of all criteria pollutants was less than 250 tons per year.

EU-BOILER2, EU-BOILER3, EU-BOILER4, and EU-BOILER5 at the stationary source are subject to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc.

EU-BOILER1, EU-BOILER2, EU-BOILER3, EU-BOILER4, and EU-BOILER5 at the stationary source are not subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources promulgated in 40 CFR Part 63, Subparts A and JJJJJJ per 40 CFR 63.11195(e). 40 CFR 63.11195(e) states that gas-fired boilers, as defined in 40 CFR 63 Subpart JJJJJJ, are not subject to the subpart and to any requirements in the subpart. Enforceable restrictions contained in the ROP that limit the amount of hours EU-BOILER1, EU-BOILER2, EU-BOILER3, EU-BOILER4, and EU-BOILER5 may be operated on liquid fuel during periodic testing, maintenance, or operator training, to a total of 48 hours during any calendar year, qualifies these boilers as gas-fired boilers as defined in 40 CFR 63 Subpart JJJJJJ.

EU-ELECGEN1R and EU-ELECGEN2R at the stationary source are subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and IIII.

EU-COGEN1, EU-COGEN2, EU-ELECGEN3, EU-ELECGEN4, EU-ELECGEN5, EU-ELECGEN6, EU-ELECGEN7, EU-ELECGEN8, EU-ELECGEN9, EU-RESGEN1, EU-RESGEN2 at the stationary source are not subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR, Part 63, Subparts A and ZZZZ per 40 CFR 63.6585(f)(3) because they are existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii).

EU-ETOSTERILIZER1, EU-ETOSTERILIZER2, EU-ETOSTERILIZER3, and EU-ETOSTERILIZER4 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Hospital Ethylene Oxide Sterilizers promulgated in 40 CFR, Part 63, Subparts A and WWWW. The ROP contains special conditions provided by William Beaumont in their application for applicable requirements from 40 CFR Part 63, Subparts A and WWWW. The AQD is not delegated the regulatory authority for this area source MACT.

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables.

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 pursuant to 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-G5067-2014 are identified in Appendix 6 of the ROP.

PTI Number			
180-12A	180-12	205-02C	205-02B
205-02A*	205-02*	33-01	247-97B
281-94*	10-94*	874-90C	14-78C
13-78			

* Based on information in the facility's ROP renewal applications and in AQD inspection reports, the AMSCO sterilizers permitted in PTI Numbers 10-94, 281-94, 285-02, and 285-02A were all removed from the facility prior to September 30, 2013 or were never installed.

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
EU-XYLENEREC	Batch xylene recycling unit with a capacity of less than 55 gallons	Rule 212(4)(e)	Rule 285(2)(u)
EU-RESBOILER1	6.3 MMBtu/hr Cleaver Brooks boiler located in the research building	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-RESBOILER2	6.3 MMBtu/hr Cleaver Brooks boiler located in the research building	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-RESBOILERHH	Eight identical Lochinvar domestic hot water boilers, B1-B8, 2.1 MMBtu/hr each	Rule 212(4)(c)	Rule 282(2)(b)(i)
EU-RESBOILERDH	Two identical Lochinvar domestic hot water boilers, 0.3 MMBtu/hr each	Rule 212(4)(c)	Rule 282(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 EGLE, 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 Joyce Zhu, Southeast Michigan 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.

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RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-G5067-
2019

AUGUST 26, 2019 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated July 15, 2019, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. 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 Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Matthew George, Director, Facilities Management 248-898-1352
AQD Contact:	Kerry Kelly, Environmental Quality Analyst 586-506-9817

Summary of Pertinent Comments

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

State Registration Number

G5067

RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-G5067-2019a

JULY 14, 2020 - STAFF REPORT FOR RULE 216(2) MINOR MODIFICATION

Purpose

On October 16, 2019, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-G5067-2019 to William Beaumont Hospital pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

General Information

Responsible Official:	Matthew George, Director, Facilities Management 248-898-1352
AQD Contact:	Caryn E. Owens, Environmental Engineer 231-878-6688
Application Number:	202000085
Date Application for Minor Modification was Submitted:	May 12, 2020

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

Description of Changes to the ROP

Minor Modification number 202000085 was to incorporate PTI 95-19 into the ROP, which was to modify the monitoring/recordkeeping frequency for fuel usage from daily to monthly. The underlying applicability (UAR) for this condition was 40 CFR Part 60.48c(g) (Subpart Dc). At the time the boilers were initially permitted Subpart DC required daily fuel records; however, it has been amended to allow for records to be maintained on a monthly basis when using a fuel certification in 60.48c(f).

The change in recordkeeping impacts the requirement for daily calculations of SO₂ and NO_x for FG-BOILERS2&3 and FG-BOILERS3&4. The facility requested for monthly calculations instead of daily. Additionally, during permitting, it was determined that EU-REGEN1 and EU-REGEN2 could be included in Flexible Groups FG-FUELOIL and FG-EMERGENCY, and therefore, FG-REGENS was removed.

No new equipment was proposed to be installed nor any existing equipment proposed to be physically modified. The only changes requested are related to recordkeeping. This PTI was not required to go through the public participation process.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

Action Taken by EGLE

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-G5067-2019, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.

State Registration Number
G5067

RENEWABLE OPERATING PERMIT
FEBRUARY 16, 2023 - STAFF REPORT FOR RULE
216(2) MINOR MODIFICATION

ROP Number
MI-ROP-G5067-2019b

Purpose

On September 1, 2020, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-G5067-2019a to William Beaumont Hospital pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

General Information

Responsible Official:	Matthew George, Director, Facilities Management 248-898-1352
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202300007
Date Application for Minor Modification was Submitted:	January 20, 2023

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

Description of Changes to the ROP

Incorporate PTI No. 95-19A which was to install two emergency reciprocating internal combustion engines, and to remove two existing emergency RICE gensets. The two existing gensets removed were EU-COGEN1 and EU-COGEN2. The two new emergency RICE gensets are EU-ELECGEN3R and EU-ELECGEN4R and are fueled with No. 2 fuel oil.

Additionally, EU-RESGEN1 and EU-RESGEN2 are exempt emission units that were kept in the ROP and renamed the associated flexible group as FG-MACTZZZZ-EMER and just carried forward the federal requirements for the emission units. Emission units EU-ELECGEN6, EU-ELECGEN7, EU-ELECGEN8, EU-ELECGEN9 were also carried forward in as FG-MACTZZZZ-EMER. The flexible group FG-EMERGENCY was added to the ROP from PTI No. 95-19A permitted Conditions.

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

Action Taken by EGLE

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-G5067-2019a, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.