

State Registration Number  
N6874

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N6874-2022

**Quantum Composites Inc.**

State Registration Number (SRN): N6874

Located at

1310 South Valley Center Drive, Bay City, Bay County, Michigan 48706

Permit Number: MI-ROP-N6874-2022

Staff Report Date: October 18, 2021

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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**RENEWABLE OPERATING PERMIT**

**OCTOBER 18, 2021 - STAFF REPORT**

ROP Number

MI-ROP-N6874-2022

**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:	Quantum Composites Inc. 1310 South Valley Center Drive Bay City, Michigan 48706
Source Registration Number (SRN):	N6874
North American Industry Classification System (NAICS) Code:	325199
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202000136
Responsible Official:	Duane D. Gohr, Site Manager 989-922-3863 ext. 125
AQD Contact:	Ben Witkopp, Environmental Engineer 989-295-1612
Date Application Received:	September 3, 2020
Date Application Was Administratively Complete:	September 3, 2020
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	October 18, 2021
Deadline for Public Comment:	November 17, 2021

## Source Description

Quantum Composites Inc. is an existing sheet molding compound and bulk molding compound manufacturing facility located at 1310 South Valley Center Drive in Bay City, Michigan. Resinous paste, fillers, and product enhancers are mixed. The paste is transferred to one of the sheet molding compound machines. Reinforcement materials may be added to the paste which is spread between layers of carrier film. Two dust control devices are used for particulate control. Solvents are used for cleaning of equipment.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2020**.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	
Lead (Pb)	
Nitrogen Oxides (NO <sub>x</sub> )	
Particulate Matter (PM)	
Sulfur Dioxide (SO <sub>2</sub> )	
Volatile Organic Compounds (VOCs)	3.33

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2020 by Quantum Composites Inc.:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Formaldehyde	0.03
Maleic Anhydride	0
Methanol	1.27
Phenol	0
Strene	0.34
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>1.64</b>

\*\*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.

The stationary source is in Bay County, which is currently designated by the United States 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 any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

The stationary source is considered a "synthetic minor" source in regard 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 volatile organic compounds to less than 100 tons per year. Operational limits per the requirements of Rule 205 restrict the VOC potential to emit. The restrictions vary among the emission units and include operating hours, material usage, and styrene content limits.

EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, EUBMCMIXER, EUSOLVENT, and EUPRESS at the stationary source are subject to the Maximum Achievable Control Technology (MACT) Standards for Reinforced Plastics Composites Production promulgated in 40 CFR Part 63, Subparts A and WWWW. The permit includes a FGMACT portion that specifies the MACT requirements applicable to the facility under Subpart WWWW. The primary requirements of the MACT that apply include maintaining the facility below 100 ton per year of organic HAP emissions, meeting work practice standards listed in Table 4 of the MACT, and associated recordkeeping and reporting.

EULOCHINVAR#1, EULOCHINVAR#2, and EUSTEAMBOILER at the stationary source are subject to the Maximum Achievable Control Technology (MACT) Standards for existing Boilers and Process Heaters at a major source of Hazardous Air Pollutants promulgated in 40 CFR Part 63, Subparts A and DDDDD. The permit includes a FGBOILERMACT portion that specifies the MACT requirements applicable to the facility under Subpart DDDDD. The primary requirements of the MACT that apply include meeting the tune-up and energy assessment work practice standards for each applicable boiler, completing the one-time energy assessment no later than January 31, 2016, and associated recordkeeping and reporting. Under the previous permit renewal, EUSTEAMBOILER should have been identified as new with the other EU's being existing. A unit is classified as new if it was installed or reconstructed after June 4, 2010.

EULOCHINVAR#1, EULOCHINVAR#2, and EUSTEAMBOILER are exempt from obtaining a Permit to Install (PTI) under R 336.1282(b)(i), which applies to fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which burns only the following fuels: sweet natural gas, synthetic gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 20,000,000 BTU per hour.

EURICE at the stationary source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), located at a major source of HAP emissions, existing emergency, spark ignition RICE less than or equal to 500 brake horsepower, promulgated under 40 CFR Part 63, Subparts A and ZZZZ. This engine was installed after June 12, 2006. This engine is required under 40 CFR 63.6590(c)(6) to show compliance with the RICE MACT by meeting applicable requirements under 40 CFR Part 60, Subpart JJJJ New Source Performance Standards for Spark Ignition RICE. The permit includes a portion that specifies the NESHAP requirements applicable to the facility under Subpart JJJJ. Under the previous permit renewal, the engine was inaccurately listed as existing versus new. The previous ROP therefore included incorrect requirements.

EURICE is exempt from obtaining a Permit to Install (PTI) under R 336.285(g), which does not require internal combustion engines that have less than 10,000,000 Btu per hour maximum heat input to obtain a permit to install.

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."

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-N6874-2016 are identified in Appendix 6 of the ROP.

PTI Number			
303-00	303-00A	303-00B	

### **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. The previous ROP incorrectly listed EULOCHINVAR#1, EULOCHINVAR#2, EUSTEAMBOILER, and EURICE as not being subject to any process-specific emission limits or standards in any applicable requirement. However, the units are subject to federal standards.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUWATERHEATER	0.25 MMBTU/hr hot water heater	212(4)(b)	282(b)(i)
EUERU	2.8 MMBTU/hr energy recovery unit	212(4)(b)	282(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 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 Chris Hare, Bay City 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**  
**NOVEMBER 23, 2021 - STAFF REPORT ADDENDUM**

ROP Number  
MI-ROP-N6874-2022

**Purpose**

A Staff Report dated October 18, 2021, 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:	Duane D. Gohr, Site Manager 989-922-3863 ext. 125
AQD Contact:	Ben Witkopp, Environmental Engineer 989-295-1612

**Summary of Pertinent Comments**

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

**Changes to the October 18, 2021 Draft ROP**

No changes were made to the draft ROP.