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

State Registration Number		ROP Number
N0544	**RENEWABLE OPERATING PERMIT STAFF REPORT**	MI-ROP-N0544-2019

WarmRain Corporation

State Registration Number (SRN): N0544

Located at

51675 North Industiral Drive, Calumet, Houghton County, Michigan 49913

Permit Number: MI-ROP-N0544-2019

Staff Report Date: April 29, 2019

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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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:	WarmRain Corporation 51675 North Industrial Drive Calumet, Michigan 49913
Source Registration Number (SRN):	N0544
North American Industry Classification System (NAICS) Code:	326199
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201800056
Responsible Official:	Brian Lane, Environmental Health and Safety Mgr. 906-482-3754
AQD Contact:	Michael Conklin, Environmental Engineer 906-202-0013
Date Application Received:	April 25, 2018
Date Application Was Administratively Complete:	April 25, 2018
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 29, 2019
Deadline for Public Comment:	May 29, 2019

Source Description

WarmRain Corporation (WarmRain), is a plastic composite company that produces bathroom fixtures. The production facility is located in Calumet, Houghton County, Michigan, in an industrial park adjacent to the Houghton County Airport. The facility was originally constructed in 1976 and issued Permit to install (PTI) No. 212-16.

WarmRain uses an open molding process to produce fiberglass tub/shower units. Molds are received at the facility and enter one of four dry filter spray booths for gelcoat application. Gelcoat consists of resin and catalyst mixed together to provide a smooth clear or pigmented outer surface. A spray gun is utilized to mix the materials producing a non-atomized resin/catalyst stream. Next, the units move to one of the other three spray booths for the fiberglass process. The fiberglass spray lay-up uses a chop gun that combines a thermoset polyester resin, glass fibers, and catalyst to produce a reinforced plastic composite or fiberglass layer. Thermoset polyester resins are polymers formed by a cross-linking reaction of a liquid unsaturated polyester with a monomer. After the fiberglass lay-up process, the units dry and are released from their molds. The units are then sanded, quality checked, and packaged for shipping. Other processes at the facility include cleanup operations with acetone and/or other solvents.

Emissions from the facility consist of fugitive vapors from volatile organic compounds (VOCs), primarily styrene, that are emitted from the gelcoat and fiberglass fabrication processes. The cross-linking agent (monomer) contained in the resin and gelcoat evaporates during fiberglass lay-up and curing. Styrene, methyl methacrylate, and vinyl toluene are the most common monomers used as cross-linking agents in liquid resins. WarmRain uses forced ventilation units to circulate air inside the facility and ventilates emissions from the spray booths through dry exhaust filters to the atmosphere. Fugitive VOC emissions also result from the evaporation of cleanup solvents. Note, acetone is not considered a VOC.

Significant changes from the previous ROP (MI-ROP-N0544-2014) include the additions of EUCLEANUP and FGMACTWWWW. WarmRain uses acetone as a cleanup solvent for fiberglass and gelcoat application parts. Parts are placed in uncovered buckets containing acetone until cleaned. Waste acetone is recycled using a distillation system. EUCLEANUP was added as an emission unit because the use of acetone and other solvents causes the release of acetone and VOC emissions through evaporation. This was included in the new ROP to track solvent usage and emissions that will be reported in MAERS. The clean-up process is also subject to 40 CFR Part 63, Subpart WWWW.

FGMACTWWWW was added as a flexible group because WarmRain is subject to the MACT standard for composites manufacturing (40 CFR Part 63, Subpart WWWW) since the potential to emit (PTE) for a single HAP is greater than 10 tons per year. This flexible group includes the four spray booths and clean-up operations. FGMACTWWWW was added to clearly specify applicable requirements, including recordkeeping and reporting, for WarmRain so the source can ensure compliance with the federal regulation.

Additional changes include listing the four spray booths as separate emission units. Each spray booth has its own dry exhaust filter and emission point. The four spray booths were listed as separate emission units for emission reporting purposes in MAERS and for potential future permitting changes that would require modification to FGBOOTHS if an additional booth were to be installed.

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
Lead (Pb)	0
Nitrogen Oxides (NO_x)	0
Particulate Matter (PM)	0
Sulfur Dioxide (SO_2)	0
Volatile Organic Compounds (VOCs)	38

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

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Styrene	38
Total Hazardous Air Pollutants (HAPs)	**38**

**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 Houghton 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.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of The Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

EUCLEANUP and FGBOOTHS at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Reinforced Plastic Composites Production promulgated in 40 CFR Part 63, Subparts A and WWWW.

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."

The emission limitation(s) or standard(s) for VOCs at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 63, Subpart WWWW, from FGBOOTHS is exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because 40 CFR Part 63, Subpart WWWW meet(s) the CAM exemption for NSPS or MACT proposed after November 15, 1990.

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-N0544-2014 are identified in Appendix 6 of the ROP.

PTI Number			
212-76			

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

There were no processes listed in the ROP Application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

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 Ed Lancaster, Marquette 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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MAY 31, 2019 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated April 29, 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:	Brian Lane, Environmental Health and Safety Manager 906-482-3754
AQD Contact:	Michael Conklin, Environmental Engineer 906-202-0013

Summary of Pertinent Comments

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