

State Registration Number  
A4043

Michigan Department of Environmental Quality  
Air Quality Division  
**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-A4043-2019b

**Dow Silicones Corporation**

State Registration Number (SRN): A4043

Located at

3901 South Saginaw Road, Midland, Michigan 48640

Permit Number: MI-ROP-A4043-2019b

Staff Report Date: December 3, 2018

Amended Dates: April 26, 2022  
March 3, 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) 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

<b>DECEMBER 3, 2018- STAFF REPORT</b>	<b>3</b>
<b>JANUARY 4, 2019 - STAFF REPORT ADDENDUM</b>	<b>17</b>
<b>APRIL 26, 2022 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT</b>	<b>18</b>
<b>APRIL 26, 2022 - STAFF REPORT FOR RULE 216(2) MINOR MODIFICATION</b>	<b>20</b>
<b>MARCH 3, 2023 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT</b>	<b>30</b>
<b>MARCH 3, 2023 - STAFF REPORT FOR RULE 216(2) MINOR MODIFICATION</b>	<b>31</b>

State Registration Number

A4043

**RENEWABLE OPERATING PERMIT**

**DECEMBER 3, 2018- STAFF REPORT**

ROP Number

MI-ROP-A4043-2019

**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:	Dow Silicones Corporation 3901 South Saginaw Road Midland, Michigan 48640
Source Registration Number (SRN):	A4043
North American Industry Classification System (NAICS) Code:	325998
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201300042
Responsible Official:	Karen Mann, EH&S Site Leader 989-633-2076
AQD Contact:	Kathy Brewer, Senior Environmental Quality Analyst 989-439-2100
Date Application Received:	March 1, 2013
Date Application Was Administratively Complete:	March 1, 2013
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	December 3, 2018
Deadline for Public Comment:	January 2, 2019

## **Source Description**

Dow Silicones Corporation (formerly Dow Corning Corporation) is a chemical manufacturer located at 3901 South Saginaw Road, Midland, Michigan. Dow Silicones Corporation manufactures a variety of silicone chemicals. The plant uses a variety of process equipment in the manufacturing of products including reactors, distillation columns, evaporators, fractionators, condensers, scrubbers, etc. This facility is located in a relatively flat area with the nearest residence being approximately one quarter mile from the facility.

Due to a recent merger/acquisition, the facility is part of a single stationary source with an adjacent facility, State Registration Number (SRN) A4033, The Dow Chemical Company. The Dow Silicones Corporation became a wholly owned subsidiary of The Dow Chemical Company, effective June 1, 2016.

Dow Silicones Corporation, Midland facility and The Dow Chemical Company, Midland facility are now considered one stationary source for New Source Review, Prevention of Significant Deterioration (PSD), and Title V. Dow Silicones Corporation remains the legal entity owning and operating the Dow Silicones Corporation, Midland facility. The Dow Silicones Corporation will retain its current State Registration Number (SRN) of A4043 and separately issued ROP. Each facility will continue to separately report billable annual emissions.

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**

<b>Pollutant</b>	<b>Tons per Year</b>
Carbon Monoxide (CO)	6.39
Lead (Pb)	0
Nitrogen Oxides (NO <sub>x</sub> )	39.05
Particulate Matter (PM-10, PM-2.5)	17.29
Sulfur Dioxide (SO <sub>2</sub> )	0.43
Volatile Organic Compounds (VOCs)	155.15
Ammonia	83.43

The facility does not report individual calculated Hazardous Air Pollutant (HAPs)\*\* emissions for the year.

The potential to emit greenhouse gas (GHG) CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) reported in the ROP application is 327,314 tons CO<sub>2</sub>e. CO<sub>2</sub>e is a calculation of the combined global warming potentials of six Greenhouse Gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

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.

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

## **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 Midland 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, Part 70, because the potential to emit of NOx, PM, and VOC each exceed 100 tons and the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, 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 subject to Prevention of Significant Deterioration of Title 40 of the Code of Federal Regulations, Part 52.21 regulations because its potential to emit of NOx, PM, and VOC each is greater than 100 tons per year.

**Applicable NSPS, NESHAP, and MACT Standards**

Portions of the stationary source are subject to the following NSPS (New Source Performance Standards), NESHAP (National Emission Standards for Hazardous Air Pollutants), and MACT (Maximum Achievable Control Technology) standards. For the purpose of this staff report, 40 CFR Part 60, 61, and 63 regulations are referred to as NSPS, NESHAP, and MACT standards, respectively. The applicable standards are in each Emission Unit or Flexible Group’s Special Conditions. The 40 CFR Parts 60, 61, and 63 each have a Subpart A that contains requirements applicable to portions of the stationary source subject to one or more NSPS, NESHAP, or MACT standards below.

Federal Citation	NSPS, NESHAP, and MACT Standards	Subject Emission Units/Flexible Groups
40 CFR Part 63, Subpart FFFF	NESHAP for Miscellaneous Organic Chemical Manufacturing	EU108-01, EU207-01, EU207-02, EU207-03, EU212-01, EU212-03, EU212-12, EU2703-01, EU2703-03, EU2901-16, EU303-01, EU303-02, EU303-06, EU303-09, EU303-15, EU303-16, EU304-02, EU311-01, EU321-01, EU322-03, EU322-11, EU324-01, EU340-01, EU340-03, EU501-01, EU501-02, EU501-49, EU505-01, EU505-04, EU508-01, EU515-01, EU601-01, EU604-08, EURULE290, FG322-01, FGTHROX
40 CFR Part 61, Subpart J	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	EU303-01, EU303-06, EU303-11, EU340-01, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EURULE290, FG337SCRUBBER, FGSITESCRUBBERS, EU800-01, FGLEAKDETECTION
40 CFR Part 61, Subpart V	National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	EU303-01, EU303-06, EU303-11, EU340-01, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EURULE290, FG337SCRUBBER, FGSITESCRUBBERS, EU800-01, FGLEAKDETECTION

40 CFR Part 63, Subpart DDDDD	NESHAP for Major Sources for Industrial, Commercial, and Institutional Boilers and Process Heaters	EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10, FGBOILERS2701-01, FG432BOILERS
40 CFR Part 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	EU2703-03, EU304-02, EU311-01, EU340-03, EU502-01, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EURULE290
40 CFR Part 63, Subpart EEEE	NESHAP for Organic Liquids Distribution (Non-Gasoline)	EU2703-03, EU311-01, EU340-03, EU505-01, EU508-01, EU515-01, EURULE290, FGOLDFACILITY
40 CFR Part 63, Subpart NNNNN	NESHAP for Hydrochloric Acid Production	EU356-01, EU356-02, FGHCLMACT
40 CFR Part 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	FG432BOILERS, EUBOILER2515
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	FGTHROX
40 CFR Part 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	FGEMERGENCIRICE<500HP (EU101-01, EU123-01, EU2404-02, EU2404-03, EU2404-04, EU4701-01)

Pursuant to 40 CFR 63.10(a)(6), Dow Silicones Corporation is currently utilizing a common schedule on which periodic reports required shall be submitted throughout the year. The report date for applicable standards is March 15 (reporting period July 1 – December 31) and September 15 (January 1 – June 30) of each year. For future MACT standards, Dow Silicones Corporation has suggested that they will continue to request a common reporting schedule pursuant to the provisions of 40 CFR 63.10(a)(6).

Since issuance of MI-ROP-A4043-2008, Dow Silicones Corporation, Midland facility has been determined to be a major source of HAPs.

Some processes at Dow Silicones Corporation have emission limits associated with categories based on applicable AQD-established initial threshold screening levels or > 0.001 micrograms per cubic meter for any averaging time.

The Environmental Protection Agency (EPA) has pending civil action that includes air regulatory compliance status for Dow Silicones Corporation, Midland facility. The EPA Region 5 office should be contacted for additional information about the civil action.

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."

This table below lists all emission units subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM), at the Dow Silicones Corporation, Midland facility and contains CAM requirements in the ROP. An emission unit may have one or more pollutants subject to CAM requirements. An emission unit may also have one or more control devices, including one or more back up control devices, that meet CAM requirements for a specific pollutant.

Dow Silicones Corporation, Midland facility installed control devices that normally receive exhaust from several emission units through common header vents (FGTHROX, FG304VENTRECOVERY, FGSITESCRUBBERS, and others). The common control device may be the documented method used by an emission unit for compliance with CAM for a specific pollutant and also for compliance with 40 CFR Part 60 or 63 requirements (NSPS or MACT). If a common control device used to meet CAM or the NSPS or MACT requirements is not available, many of the emission units have their own dedicated control devices that also meet the CAM or NSPS or MACT requirements.

An emission unit subject to a NSPS or MACT requirement that does not contain requirements which meet the presumptively acceptable monitoring criteria must comply with requirements for a CAM subject device.

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
EU207-01	VOC	R 336.1702(a)	Glycol condenser (19251)	Exit gas temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	PM	R 336.1331	Baghouse (12912)	Pressure drop on a per shift basis	No
EU207-02	VOC	R 336.1702(a)	Packed column scrubber (19298)	Liquid flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methanol	R 336.1201	Packed column scrubber (19298)		No
	PM	R 336.1331, R 336.1224	Packed column scrubber (19298)		No
	VOC	R 336.1702(a)	Water condenser (19296)	Exit gas temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methanol	R 336.1201	Water condenser (19296)		No
EU207-03	VOC	R 337.1702(a)	Venturi scrubber (22426)	Recycle liquid flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	PM	R 336.1331			No

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
	VOC	R 337.1702(a)	Water scrubber (22412)	Water makeup rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Water scrubber (23828)	Water makeup rate; recycle liquid temperature and flow rate – all on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU2504-01	VOC	R 336.1702(a), R 336.1205(1)	Vent recovery system using shell and tube condensers (24608, 24609, 24610, 24611)	Coolant outlet temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU2703-01	VOC	R 336.1702(a), R 336.1227(2)	Shell and tube condensers (9214, 9228)	Coolant return temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methallyl Chloride	R 336.1201			No
	VOC	R 336.1702(a), R 336.1227(2)	Emergency spray tower scrubber (9163)	Liquid flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Spray tower scrubbers (9208, 9215)		No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU2703-03	VOC	R 336.1225, R 336.1702(a)	Vent compressor (22790)	Vapor outlet pressure on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF



Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
			Vent condenser (22795)	Exhaust gas temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Venturi scrubbers (9390 A, 9390 B)	Total water flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU303-01	VOC	R 336.1702(a)	Condenser (3469)	Outlet glycol temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Benzene, Toluene	R 336.1201			No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU303-02	VOC	R 336.1702(a)	Condenser (3400)	Coolant flow rate on a continuous basis	No Not a Group 1 control device under MON
	Benzene, Toluene	R 336.1201			No
EU303-06	VOC	R 336.1702(a)	Condensers (1637, 3458, 3475, 1623, 1645, 3303, 3307)	Exhaust gas temperature on a continuous basis	No Not a Group 1 control device under MON
	Benzene	R 336.1201(3)		Pound per hour benzene emission rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1702(a)	Adsorber (1655)	Resin bed regeneration and adsorption cycle.	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
	Benzene	R 336.1201(3)		Pound per hour benzene emission rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1702(a)	Carbon drum	Drum weight once every 8 hours	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Benzene	R 336.1201(3)			No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU303-09	VOC	R 336.1702(a)	Graphite block service water condenser (3335)	Coolant flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Toluene	R 336.1702(a)			No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1702(a)	Glycol condenser (DV24697)	Exhaust gas temperature on a continuous basis	No Not a Group 1 control device under MON
	Toluene	R 336.1702(a)			No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	PM	R 336.1331	Cyclone (3446)	Pressure drop indicator	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF

<b>Emission Unit ID</b>	<b>Pollutant/ Emission Limit</b>	<b>UAR(s)</b>	<b>Control Equipment+</b>	<b>Monitoring</b>	<b>Presumptively Acceptable Monitoring</b>
	PM	R 336.1331	Reverse jet fabric filter (22770)	Pressure drop at least once every 12-hour shift	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU303-15	VOC	R 336.1225, R 336.1702(a)	Service water condenser (DV1602)	Exit coolant temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
		R 336.1225, R 336.1702(a)	Glycol condenser (DV1637)		No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU303-16	VOC	R 336.1225, R 336.1702(a)	Service water condenser (DV3420)	Exit coolant temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1225, R 336.1702(a)	Glycol condenser (DV1637)		No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU304-02	VOC	R 336.1702(a)	Condensers (414, 1154)	Coolant inlet temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU311-01	Hydrogen Chloride	R 336.1201(3)	Absorbers (2810, 24101)	Liquid flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methyl Chloride	R 336.1201(3)			No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Hydrogen Chloride	R 336.1201(3)	Packed bed scrubber		Yes

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
	Methyl Chloride	R 336.1201(3)	(2812, 24102)	Liquid flow rate on a continuous basis	Yes
EU321-01	VOC	R 336.1702(a)	Condenser (24623)	Coolant return temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1702(a)	Venturi scrubber (11472)	Liquid flow rate on a continuous basis	Yes Vents to a Group 1 control device per 40 CFR Part 63, Subpart FFFF
EU322-06	VOC	R 336.1702(a)	Condenser (4507)	Coolant exit temperature on a per shift basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Condenser (7623)	Exhaust gas temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU322-11	VOC	R 336.1702(a)	Condenser (6384)	Coolant exit temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU324-01	VOC	R 336.1702(a)	Service water condenser (4818)	Coolant exit temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Chilled condensers (4804, 4807)		No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU324-08	VOC	R 336.1702(a)	Service water condenser (5618)	Coolant exit temperature on a continuous basis	No

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
			Chilled condensers (4804, 4807)		No
EU340-01	VOC	R 336.1702(a)	Absorber (8745A)	Scrubber low flow alarm	Yes Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methyl Chloride	R 336.1201			
	VOC	R 336.1702(a)	Scrubbers (8745B)	Scrubber low flow alarm	Yes Vents to a Group 1 control device per 40 CFR Part 63, Subpart FFFF
	Methyl Chloride	R 336.1201			
EU501-02	VOC	R 336.1702(a)	Venturi scrubber (4109)	Liquid flow rate on a per shift basis during startup, shutdown, and emergency conditions	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC	R 336.1702(a)	Venturi scrubber (7585)	Liquid flow rate on a per shift basis	Yes Vents to a Group 1 control device per 40 CFR Part 63, Subpart FFFF
EU501-49	VOC	R 336.1702(a)	Condenser (15091)	Service water inlet temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Condenser (4358)	Service water return temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU505-01	VOC	R 336.1702(a)	Chilled condensers (16092, 25094, 6553)	Coolant exit temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
			Chilled condenser (5-510)	Coolant return temperature on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU515-01	VOC	R 336.1702(a)	Packed tower scrubber (10530)	Exit air temperature on a continuous basis while the scrubber is operating, and the exhaust is not routed to the THROX	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Glycol condensers (10453, 10541)	Main coolant supply temperature on a continuous basis while the condensers are operating, and the exhaust is not routed to the THROX	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Service water condenser (HX-10657)	Liquid flow rate on a continuous basis while the THROX is shutdown or experiencing a malfunction	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU601-01	VOC	R 336.1702(a)	Venturi scrubber (24683)	Liquid flow rate on a continuous basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	Methyl Chloride				No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
	VOC		Emergency vent scrubber (5309)	Liquid flow rate at least once during an emergency shutdown episode, startup,	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF

Emission Unit ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment+	Monitoring	Presumptively Acceptable Monitoring
	Methyl Chloride			or normal shutdown	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
EU604-08	VOC	R 336.1702(a)	Freon-cooled condenser (7791)	Condensate temperature on a continuous basis during railcar unloading	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
			Service water condenser (22713)	Service water return temperature on a per shift basis	No Not a Group 1 control device under 40 CFR Part 63, Subpart FFFF
<p>+ ROP lists equipment as CAM control but EU/FG may be exhausting to common control device or alternative control that meets 40 CFR Part 60 or 63 requirements, which may or may not contain adequate requirements to meet the presumptively acceptable monitoring criteria such as when an emission unit is venting to a non-Group 1 control device under MON MACT (40 CFR Part 63, Subpart FFFF).</p>					

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-A4043-2008 are identified in Appendix 6 of the ROP.

PTI Number			
206-00	126-03	155-80G	44-06B
232-89E	930-78O	726-78B	146-16
437-90A	316-74	296-07	147-16
209-70J	616-92A	1-08	338-99B
34-04A	308-94	84-08B	175-09A
731-92C	420-84E	131-15	209-73A
812-91A	158-87B	132-15	112-06
29-07	336-88B	180-15A	242-07
370-97A	334-88C	185-07B	175-09A
534-77F	804-92B	126-03A	
156-06	466-73E	200-15	
1045-80	920-84B	44-06	

### **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.

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>PTI Exemption Rule Citation</b>	<b>Rule 212(4) Citation</b>
EULPGTANKS	LPG Storage Tanks, each with a capacity <40,000 gals	Rule 284(b)	Rule 212(4)(c)
EURULE285(g)	Portable steam deicers	Rule 285(q)	Rule 212(4)(d)
EURULE284(i)	Storage tanks containing VOCs with true vapor pressure < 1.5 psia. Each tank with a capacity <40,000 gals	Rule 284(i)	Rule 212(4)(c)
EURULE282(b)(i)	Natural gas fired space and process heaters. All heaters <10 mmBTU/hr	Rule 282(b)(i)	Rule 212(4)(b)
EU508-03	30 mmBTU/hr Dow Therm boiler	Rule 282(b)(i)	Rule 212(4)(b)
EURULE281(j)	Portable blast cleaning equipment	Rule 281(j)	Rule 212(4)(a)

### **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 Environmental Protection Agency (EPA) has pending civil action that includes air regulatory compliance status for the Dow Silicones Corporation, Midland facility. The EPA Region 5 office should be contacted for additional information about the civil action. 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 except for requirements included in the EPA civil action.

### **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 Chris Hare, Saginaw Bay 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.



State Registration Number

A4043

**RENEWABLE OPERATING PERMIT**

ROP Number

MI-ROP-A4043-2019

**JANUARY 4, 2019 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated December 3, 2018, 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:	Karen Mann, EH&S Site Leader 989-633-2076
AQD Contact:	Kathy Brewer, Senior Environmental Quality Analyst 989-439-2100

**Summary of Pertinent Comments**

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

**Changes to the December 3, 2018 Draft ROP**

No changes were made to the draft ROP.

State Registration Number  
A4043

## RENEWABLE OPERATING PERMIT

ROP Number  
MI-ROP-A4043-2019a

### APRIL 26, 2022 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT

#### Purpose

On February 20, 2019, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019 to Dow Silicones Corporation (DSC) 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(1)(a)(i-iv).

#### General Information

Responsible Official:	Kristan Soto, EH&S Responsible Care Leader 989-633-1809
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	201900186 and 202000142
Date Application for Administrative Amendment was Submitted:	November 8, 2019 and September 17, 2020

#### Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(i) and Rule 216(1)(a)(iii).

#### Description of Changes to the ROP

Administrative Amendment Number 201900186: This Administrative Amendment was to correct a typographical error in EU515-01, SC III.6, which indicates that condensers have a liquid flow rate indicator, but this was an error. Condensers 10453 and 10541 do not have liquid flow rates only temperature gauges. Therefore, the portion of the condition that referenced liquid flow indicator for condensers 10453 and 10541 has been removed.

Administrative Amendment Number 202000142: The stationary source consists of DDP Specialty Electronic Materials US, Inc. (SRN P1027), The Dow Chemical Company (SRN: A4033), Dow Silicones (SRN: A4043), SK Saran Americas, LLC (SRN: P1026), Dow AgroSciences, LLC (SRN: P1028), and Trinseo, LLC (SRN: P1025). This Administrative Amendment is to add the condition that Dow Silicones Corporation is subject to the Site Remediation (SR) MACT of 40 CFR Part 63, Subpart GGGGG and include the condition in the Source-Wide Conditions of the ROP, as included in the other Stationary Sources ROPs.

### **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 Administrative Amendment to the ROP.

### **Action Taken by EGLE**

The AQD approved an Administrative Amendment to ROP No. MI-ROP-A4043-2019, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.

State Registration Number

A4043

**RENEWABLE OPERATING PERMIT**

**APRIL 26, 2022 - STAFF REPORT FOR RULE 216(2)  
MINOR MODIFICATION**

ROP Number

MI-ROP-A4043-2019a

**Purpose**

On February 20, 2019, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019 to Dow Silicones Corporation (DSC) 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:	Kristan Soto, EH&S Responsible Care Leader 989-633-1809
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	201900164, 202000056, 202000162, 202100085, 202100090, 202100111, 202100114, 202100115, 202100116, 202100117, 202100118, 202100119, 202100120, 202100121, 202100129, 202100130, 202100133, 202100134, 202100136, 202100139, 202100140, 202100141, 202100142, 202100143, 202100144, 202100145, 202100146, 202100147, 202100148, 202100149, 202100154, 202100155, 202100056, 202100057
Date Application for Minor Modification was Submitted:	September 24, 2019, March 16, 2020, November 4, 2020, May 20, 2021, May 25, 2021, July 9, 2021, July 16, 2021, July 20, 2021, July 30, 2021, August 2, 2021, August 9, 2021, August 16, 2021, August 19, 2021, August 26, 2021, August 27, 2021, August 31, 2021

**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 201900164: This Minor Modification is to incorporate PTI No. 29-07C, which was for the hydrochloric acid production process to correct the stack orientation specified in the permit conditions for emission unit EU356-01. Stack EU356-01 to discharge unobstructed vertically upward was corrected to allow the stack to discharge horizontally. The stack was erroneously required to discharge unobstructed vertically upward in PTI No. 29-07B, even though the stack has always discharged horizontally. Additionally, some erroneous underlying applicable requirement citations were corrected for emission units EU356-02 and EU356-03 and conditions were slightly updated to FGHCLMACT to reflect ongoing operation. This PTI was not required to go through the public participation process.

Minor Modification Number 202000056: This Minor Modification is to incorporate PTI No. 616-92B, which was for alkylsilane process (EU304-02) in response to a violation notice to address: the removal of condenser 414 and the 337 scrubbers; HAP emissions; and emissions from equipment that were not identified in the previous permit application. EU304-02, the alkylsilane process, includes reactors, distillation columns, condensers, storage tanks, tanker station, and related equipment. The emissions were previously controlled by condenser 414 and the 337 scrubbers; however, Dow Silicones revised the emission control system without updating the permit. This PTI was not required to go through the public participation process

Minor Modification Number 202000162: This Minor Modification is to incorporate PTI No. 29-07D, which is to add a second packed bed absorber to EU356-01. The additional absorber would allow for increased production of aqueous hydrogen chloride (HCl). Emission unit EU356-01 covers existing absorber 24387 and future absorber 26018, columns 24370 and 24350, and auxiliary equipment. This is a continuous process which operates 356 days per year, 24 hours per day. Process can produce anhydrous HCl from rail cars of aqueous HCl or railcars of aqueous HCl from anhydrous HCl. Absorbers 24387 and 26018 are used to produce aqueous HCl by absorbing anhydrous HCl into water. The columns 24370 and 24350 use distillation to produce anhydrous HCl. The process operates in one of three ways.

1. The process is producing anhydrous HCl. In this scenario aqueous HCl is sent to the process where the water is separated and anhydrous is produced. This scenario is not subject to the HCl MACT because no aqueous HCl is being produced: only consumed.
2. The process is producing aqueous HCl below 2,500 pph of anhydrous to the absorber. In this scenario the process takes anhydrous HCl and produces aqueous HCl. This scenario is subject to the HCl MACT. During this scenario the venturi scrubber will need to be operated at 9 gallons per minute to keep the exit concentration of HCl below 12 ppmv and Cl<sub>2</sub> below 20 ppmv, which are the emission limits of the HCl MACT.
3. The process is producing aqueous HCl above 2,500 pph of anhydrous to the absorber. In this scenario the process takes anhydrous HCl and produces aqueous HCl. This is the scenario that produces the worst-case hourly emissions. This scenario is subject to the HCl MACT. During this scenario the venturi scrubber will need to be operated at 11 gallons per minute to keep the exit HCl and Cl<sub>2</sub> compliant with HCl MACT removal efficiencies.

In all cases equipment vents to either 24386 venturi and 24388 packed bed scrubber or just 24388 packed bed scrubber. The 24388 scrubber will be operated at 1,012 pph of water during all scenarios or a water flow rate set by subsequent HCl MACT stack testing. 24386 is a two-stage venturi scrubber (750 gal). It has fiberglass reinforced plastic construction and operates at ambient pressure. 24388 packed bed scrubber has a graphite shell with polypropylene packing. This PTI was not required to go through the public participation process.

Minor Modification Number 202100085: This Minor Modification is to incorporate PTI No. 156-06E into the ROP, which is to update the requirements consistent with a US Environmental Protection Agency (USEPA) consent decree, and to support process changes at the 207 Building facility, specifically EU207-03. The PTI addresses hazardous air pollutant emissions that were not identified in the previous PTI. The PTI was evaluated as a full evaluation of the emission unit as if it was a "new source," addressing toxics, Rule 702, and other requirements as if the emission unit were new, albeit recognizing the "existing" status of the emission control devices. CAM will be addressed during the next ROP Renewal. This PTI was not required to go through the public participation process.

Minor Modification Number 202100090: This Minor Modification is to incorporate PTI No. 154-20, which is to incorporate previously exempt equipment in EU501-12 into the ROP. As part of the USEPA Consent Decree, the PTI revised emission limits for the EP process, located in Building 1790 (EU501-12). The PTI was not required to go through the public participation process as the project is not subject to PSD review and allowed emissions are less than 90% of the Significant Emission Rates.

Minor Modification Number 202100111: This Minor Modification is to incorporate PTI No. 48-14C, which is to update emission calculations and to support process changes at the 212 building facility for reaction kettle 20400 in EU212-12. The EU212-12 process is a condensation reaction mixing kettle that vents through SV212-023. There are a few products that are cold blended. This mixing kettle heats by steam and cools with service water. This kettle uses xylene and toluene as solvents. Once heated to temperatures around 120-140 C, water is formed and boiled and along with xylene, sent through the overhead condenser. Water condenses and flows to DV20405, a water trap, which holds the water and allows the solvent back to the kettle. Emissions from this process come from two sources: a high nitrogen sweep during manway loading through SV212-003, and a moderate nitrogen flow sweep maintained throughout the batch that flows through a glycol-cooled control condenser and then through SV212-023. Local ventilation is used while drumming off product and routed to SV212-018. Kettle washout streams and liquids from Condenser No. HX-20407 are transferred to storage tank DV6057. The DV6057 waste tank operates as a separate emission unit under a Rule 284(i) exemption. The PTI was not required to go through the public participation process as the project is not subject to PSD review and allowed emissions are less than 90% of the Significant Emission Rates. CAM will be addressed during the next ROP Renewal.

Minor Modification Number 202100114: This Minor Modification is to incorporate PTI No. 108-18A, which revises emission limits to allow for operational flexibility and incorporate the impact of the trace chemicals into the state air toxics evaluations. Specifically for the 6009 kettle, which is a cold blend mixing kettle that vents directly through SV212-004 in Emission Unit EU212-05. There are no heating or cooling capabilities on the process or process vents. All products contain xylene or toluene as solvents. Kettle temperature climbs slightly above room temperature during mixing portions of the process when process fluid is heating by mechanical working parts. Emissions from this process come from two sources: a high nitrogen sweep during man-way loading through SV212-003, and a moderate nitrogen flow sweep maintained throughout the batch through SV212-004. Local ventilation is used while drumming off product and routed to SV212-018. The PTI was not required to go through the public participation process.

Minor Modification Number 202100115: This Minor Modification is to incorporate PTI No. 169-20, which is for the batch mixer/reactor process, mixer 3, (EU207-13) due to the updating of emission calculations from the USEPA Consent Decree and to support process changes at Mixer 3, formerly in EU207-01 and now included in EU207-13. EU207-13 process is for the silicone-based polymer and other additives manually added to the mixer (300 gal and 500 gal). The mixer is then closed and purged with nitrogen prior to the batch beginning. Then the process is mixed using two sigma style blades. At this point silica, plasticizer, and other additives are added automatically which react to form the basis of the silicone rubber product. This is then heated up, the vent path for the stripped material goes through a water heat exchanger, vacuum pump/air move, and then a glycol heat exchanger. Once the product is adequately stripped and all reactions/additives are complete the process will cool down via cooling water inside the blades and the jacket wall. Once cool, the mixer tilts and dumps the product into a pan. The process then starts over. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100116: This Minor Modification is to incorporate PTI No. 177-20, which is to revise emission estimates for Mixer 4, now identified as EU207-14 and removing this equipment from EU207-01 and making it its own emission unit. DSC also submitted applications for the other emission units that result from splitting up EU207-01. The following emission units are all part of the same project: EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, and EU207-19 because they result

from the break-up of EU207-01. This was to update emission calculations from the EPA Consent Decree. There are no physical or operational changes associated with the PTI, but the updated emission calculations make it subject to NSR. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100117: This Minor Modification is to incorporate PTI No. 172-20, which is to revise emission estimates for Mixer 5, now identified as EU207-15 and removing this equipment from EU207-01 and making it its own emission unit. DSC also submitted applications for the other emission units that result from splitting up EU207-01. The following emission units are all part of the same project: EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, and EU207-19 because they result from the break-up of EU207-01. This was to update emission calculations from the EPA Consent Decree. There are no physical or operational changes associated with the PTI, but the updated emission calculations make it subject to NSR. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100118: This Minor Modification is to incorporate PTI No. 171-20, which is part of the EU207-01 breakup and is for updating emission calculations and to support process changes at Mixer 6, now identified as EU207-16. The PTI also revised emission estimates for Mixer 6 and removing this equipment from EU207-01 and making it its own emission unit due to the updating of emission calculations from the EPA Consent Decree. There are no physical or operational changes associated with this application. The process covers the silicone-based polymer and other additives manually added to the mixer (300 gal and 500 gal). The mixer is then closed and purged with nitrogen prior to the batch beginning. Then the process is mixed using two sigma style blades. At this point silica, plasticizer, and other additives are added automatically which react to form the basis of the silicone rubber product. This is then heated up, the vent path for the stripped material goes through a water heat exchanger, vacuum pump/air move, and then a glycol heat exchanger. Once the product is adequately stripped and all reactions/additives are complete the process will cool down via cooling water inside the blades and the jacket wall. Once cool, the mixer tilts and dumps the product into a pan. The process then starts over. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100119: This Minor Modification is to incorporate PTI No. 173-20, which is for the silicone rubber manufacturing process conducted in mixer 7 (EU207-17). This EU also includes equipment that is currently identified as EU207-02. The PTI revised emission estimates for Mixer 7, removing this equipment from EU207-01 and EU207-02 and making it its own emission unit. The PTI is due to the updating of emission calculations from the EPA Consent Decree. The emission unit covers Silicone based polymer and other additives are manually added to the mixer (300 gal and 500 gal). The mixer is closed and purged with nitrogen prior to the batch beginning. The process is mixed using two sigma style blades. At this point silica, plasticizer, and other additives are added automatically which react to form the basis of the silicone rubber product. Vents are routed to the baghouse during filler addition. The base is then heated up, the vent path during stripping goes through a water heat exchanger, vacuum pump/air move, and then a glycol heat exchanger. Once the product is adequately stripped and all reactions/additives are complete the process will cool down via cooling water inside the blades and the jacket wall. Once cool, the mixer tilts and dumps the product into a pan. The process then starts over. When this mixer manufactures methoxy-treated products, emissions are routed through IPA scrubber DV19298 and condenser DV19296 during stripping and cool down. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100120: This Minor Modification is to incorporate PTI No. 170-20, which is to revise emission estimates for Mixer 8 (EU207-18) and removing the equipment from EU207-01 and making it its own emission unit. DSC also received PTIs for the other emission units that result from splitting up EU207-01. The following emission units are all part of the same project: EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, and EU207-19 because they result from the break-up of EU207-01. This PTI was to the update emission calculations from the EPA Consent Decree. There were

no physical or operational changes associated with the PTI, but the updated emission calculations make the PTI subject to NSR. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100121: This Minor Modification is to incorporate PTI No. 180-20, which is to revise emission estimates for Mixer 9 (EU207-19), removing this equipment from EU207-01, and making it its own emission unit. DSC also has PTIs for the other emission units that result from splitting up EU207-01. The following emission units are all part of the same project: EU207-13, EU207-14, EU207-15, EU207-16, EU207-17, EU207-18, and EU207-19 because they result from the break-up of EU207-01. This PTI was to update emission calculations from the EPA Consent Decree. There were no physical or operational changes associated with this PTI, but the updated emission calculations make the PTI subject to NSR.

The process description reads: Silicone based polymer and other additives are manually added to the mixer (300 gal and 500 gal). The mixer is then closed and purged with nitrogen prior to the batch beginning. Then the process is mixed using two sigma style blades. At this point silica, plasticizer, and other additives are added automatically which react to form the basis of the silicone rubber product. This is then heated up, the vent path for the stripped material goes through a water heat exchanger, vacuum pump/air move, and then a glycol heat exchanger. Once the product is adequately stripped and all reactions/additives are complete the process will cool down via cooling water inside the blades and the jacket wall. Once cool, the mixer tilts and dumps the product into a pan. The process then starts over. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100129: This Minor Modification is to incorporate PTI No. 437-90C, which is to modify the low viscosity fluids and 3-component fluids process (EU501-49). The process description is as follows: EU501-49 houses two processes, LV and CS. LV is a continuous process that produces 200 fluid process of varying viscosities 1.5-7cst. A variety of feeds are reacted in an advanced polymer reactor (APR), the reactions products are purified through distillation. CS is a batch process in which siloxane intermediates and heptane are added to a heated reactor. After the product reaches equilibrium, the mixture is neutralized and cooled. Once product is cooled it is stripped under vacuum then discharged and packaged. The following emission units are all part of the same project: EU501-12 and EU501-49. CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100130: This Minor Modification is to incorporate PTI No. 151-20, which is for the 63 Unit Silicone Gum Process (EU602-07). The purpose of this PTI is update emission calculations from the Consent Decree at the current EU602-07 facility. This emission unit was previously authorized under a Rule 290 exemption. Here is the “general summary of the EU602-07 process.” EU602-07 includes continuous process to make silicone gum, commonly referred to as 63 Unit. The reactor and vacuum stripped products vent to control device DV6186. Products without vacuum during stripping vent to DV6168. Both control devices are monitored at 36°C per the emission models. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100133: This Minor Modification is to incorporate PTI No. 176-20, which is for the Capped Resin Manufacturing Process (EU321-02). This process is made up of a jacketed reactor, process condenser, receiver and auxiliary equipment. Process creates capped resins. Process can vent to THROX or the site scrubbers. During THROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or vent to site scrubbers. The process does not release emissions through SV321-021, SV321-024, SV321-031, or SV321-069 during normal operations. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.



Minor Modification Number 202100134: This Minor Modification is to incorporate PTI No. 19-14C, which is to update the 25256 batch kettle process in emission unit EU324-18 due to the updating of emission calculations from the EPA Consent Decree. The process description reads: 25156 is a batch hydrosilylation kettle at 324 building in OSS. The system mainly consists of 25156 kettle, 25158 temperature control heat exchanger, 25159 overhead condenser, and 25162 overhead receiver. The associated vacuum system includes 25160 vacuum pump and 4804/4807 condensers. The system runs batch hydrosilylations of 1107 Fluid and AMS to produce 230 Fluid, 2-5471, 2-2728, and 2-5471. Raw material is loaded to 25156 kettle for processing. After a reaction hold, the kettle is pressurized/depressurized one or more times with ethylene to remove SiH sites on the product. Low boilers and soluble ethylene are then sent to 4812 receiver through distillation under vacuum. Overhead vapors are condensed by 25159 heat exchanger. If pulling vacuum, any remaining vapors are condensed through 4804/4807 heat exchanger. The PTI was not required to go through the public participation process.

Minor Modification Number 202100136: This Minor Modification is to incorporate PTI No. 174-20, which is for the mixing process in 2207 batch kettle process located in building 109 (EU109-02). The PTI was submitted due to the updating of emission calculations from the EPA Consent Decree. There were no physical or operational changes associated with the PTI, but the updated emission calculations made the PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100139: This Minor Modification is to incorporate PTI No. 169-12B, which is to revise emission estimates for EU505-01 and to remove some equipment from the current EU505-01 and put it in other permitted and exempt emission units. The PTI was to update emission calculations from the EPA Consent Decree. There are no physical or operational changes associated with the PTI, but the updated emission calculations made it subject to NSR review. The process description reads: the 6520 batch reactor and manufacturing process containing blend kettles, a receiver, water traps, condensers, and other associated equipment. 16050 batch reactor and manufacturing process containing a shared blend kettle, receiver, water trap, condensers, vacuum pumps, and other associated equipment. The process vents through 6553 condenser and 16092/25094 condensers before venting to throx or the throx bypass (SV505-032). Throx controls are not necessitated for EU505-01 under the MON since no vents in this EU are Group 1, however this EU may still vent to these locations. The PTI was not required to go through the public participation process.

Minor Modification Number 202100140: This Minor Modification is to incorporate PTI No. 162-20, which is for the batch resin process (EU505-11) due to the updating of emission calculations from the EPA Consent Decree and to support process changes, formerly in EU505-01, and now included in EU505-11. The project revised emission estimates for EU505-01. In addition, DSC removed some equipment from EU505-01 and putting it into separately permitted (PTI No. 169-12B) and exempt emission units. The PTI associated with EU505-11 is for EU505-01; these two PTIs are considered a single project since they are related. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100141: This Minor Modification is to incorporate PTI No. 155-80H, which is due to the updating of emission calculations from the EPA Consent Decree and to support process changes in emission unit EU2703-01. The process description reads the following:

**Alkoxylation:**

Chlorosilanes or hydrosilylation products are reacted with methanol or ethanol. A by-product of this reaction is hydrogen chloride. The HCl stream passes through a methyl chloride (MeCl) contact condenser to condense any methanol, ethanol, or silanes present. During normal operation, the resulting MeCl/HCl gas stream is compressed and sent to building recovery. During a startup/shutdown, the HCl used for

purging is directed through the emergency water scrubber. In case of an emergency shutdown, the MeCl/HCl in the column is directed through the emergency water scrubber.

**Hydrosilylation:**

The reactants are loaded into feed tanks from which they are pumped to a CSTR and reacted. The products are then pumped to a distillation column that separates the unreacted compounds from the product.

**Distillation:**

Low and high boiling impurities are removed from the crude product streams produced by the alkoxylation or hydrosilylation operations. Crude methoxysilanes are also stripped of high and low boilers. The vents from the distillation process pass through a refrigerated condenser and water scrubber prior to venting to the atmosphere.

In 2013, 2703 building constructed a vent line to FGTHROX as the primary control device for process emissions. Scrubber 9208, also in service at this time, was improved and scrubber 9215 was removed with all its vents being rerouted to 9208. 9208 is only used when making product that do not emit methallyl chloride (MAC). Additionally, several vents are exhausted through scrubbers 9254, 9255, and 9390A/B which are covered under separate emission units.

For the manufacture of products that do emit MAC, FGTHROX became the primary control device, and the existing CDCARBONTOTES was used as the backup control device. When the process is venting to FGTHROX, the vents bypass the carbon totes.

The operation of condensers 9214 and 9228 and emergency scrubber 9163 has not changed. There were no physical or operational changes identified in the PTI. The PTI was not required to go through the public participation process.

Minor Modification Number 202100142: This Minor Modification is to incorporate PTI No. 153-20, which is for the siloxane kettles process in emission unit EU2504-13. The PTI updates emission calculations from the Consent Decree and to support process changes for DV8230, DV19826, and DV23050, formerly in EU2504-01, and now included in EU2504-13. EU2504-13 consists of 3 jacketed batch kettles that share a receiver and vacuum system. These vent to SV2504-007 and -031 via condensers DV24609 and/or DV24611. The finished product is filtered and sent to storage tanks or packaged directly from the kettle. Any byproduct is sent to a rework tank, and that material is filtered and re-used to make finished product in any of the 3 kettles. Liquid catalyst and liquid neutralizer are loaded from small vendor supplied containers, and emissions from changing those containers periodically are emitted through vents SV2504-004 and SV2504-001 respectively. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100143: This Minor Modification is to incorporate PTI No. 137-20, which is for the batch reaction process in DV19840 kettle in emission unit EU2504-14. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19840 and associated equipment, now identified as EU2504-14. The process description reads: Emission unit EU2504-14 consists of a jacketed batch kettle, receiver, and vacuum system that vent to SV2504-007 and -031 via condensers DV24609 and/or DV24611. The product is filtered and sent to storage, to tankers, or packaged directly. Catalyst is prepared in a hood and added to the kettle via a funnel; solids are also added via a funnel. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100144: This Minor Modification is to incorporate PTI No. 138-20, which is for the batch reaction process in DV19860 kettle in emission unit EU2504-15. The PTI is part of the EU2504-01 breakup and is for updating emission calculations and to support process changes in the jacketed batch kettle DV19860 and associated equipment, now identified as EU2504-15. The process description reads: Emission unit EU2504-15 consists of a jacketed batch kettle, receiver, and vacuum system that vent to SV2504-007 and -031 via condensers DV24609 and/or DV24611. The product is filtered and sent to storage, to tankers, or packaged directly. Catalyst is prepared in a hood and added to the kettle via a funnel; solids are also added via a funnel. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100145: This Minor Modification is to incorporate PTI No. 139-20, which is for the mixing process in 8200 kettle in emission unit EU2504-16. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8200, and making it its own emission unit. The process description reads: Emission unit EU2504-16 consists of a jacketed batch kettle, receiver, flash still, and vacuum system that vent to SV2504-007 and -031 via condensers DV24609 and/or DV24611. The product is sent to storage or directly to blend tanks. The material is filtered and packaged from the storage tanks or blend tanks. Catalyst is prepared in a hood and added to the kettle via a funnel; solids are also added via a funnel. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100146: This Minor Modification is to incorporate PTI No. 140-20, which is for the mixing process in 8210 kettle in emission unit EU2504-17. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8210, and making it its own emission unit. The process description reads: Emission unit EU2504-17 consists of a jacketed batch kettle, receiver, and vacuum system that vent to SV2504-007 and -031 via condensers DV24609 and/or DV24611. The product is filtered and sent to storage or packaged directly. Catalyst is prepared in a hood and added to the kettle via a funnel; solids are also added via a funnel. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100147: This Minor Modification is to incorporate PTI No. 141-20, which is for the mixing process in 8220 kettle in emission unit EU2504-18. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8220, and making it its own emission unit. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100148: This Minor Modification is to incorporate PTI No. 142-20, which is for the mixing process in 8240 kettle in emission unit EU2504-19. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240, and making it its own emission unit. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100149: This Minor Modification is to incorporate PTI No. 143-20, which is for the Bis H Process in emission unit EU2504-20. The PTI is part of the EU2504-01 breakup and is for updating emission estimates for the mixing process for kettle 8240 and making it its own emission unit. There were no physical or operational changes associated with this PTI, but the updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100154: This Minor Modification is to incorporate PTI No. 146-20, which is for the Methylvinylchlorosilane Crude Distillation Process in emission unit EU322-11. EU322-11 is not part of FG322-01 which is a significant source of VOC emissions. The PTI is due to the updating of emission calculations from the EPA Consent Decree and to support process changes at the 322 Building. The process description reads: The process covered under the PTI is used to distill crude methylvinylchlorosilane. Crude material is collected into a feed tank until enough is available for a batch. It is then transferred to the batch distillation process where it is distilled. Product is taken overhead and sent to a storage tank. The pot residue is sent to a scrap tank. DV16731E waste tank is managed as a separate emission unit under a Rule 291 exemption, but is included in the block flow and process description for completeness. Emissions from process equipment are routed through a chilled vent condenser and water scrubber. Condensate from this condenser drains into the crude feed tank. The stack to SV322-004 was updated during this PTI. Note other emission units in the 322 Building also use this stack, and the updated emission calculations make this PTI subject to NSR review. The PTI was not required to go through the public participation process.

Minor Modification Number 202100155: This Minor Modification is to incorporate PTI No. 174-12B, which is for the 40x Resin Process for emission unit EU321-01 due to updating of emission calculations from the Consent Decree, to support process changes for EU321-01, to add operating limits for Scrubber 7170 and 4776, and to remove the hexamethyldisiloxane emission limit. The PTI updates emission calculations from the EPA Consent Decree. The process description reads: The EU321-01 process consists of a reaction loop, capping reactor, 3 separators, 2 columns, and ancillary equipment. DC 40X resin is the final product. Emissions from neutralization activities can vent to THROX or the site scrubbers. During THROX downtime, Scrubbers 7170, 4776, and 11472 will continue to achieve Group 1 control for HCl. The process does not release emissions through SV321-001, SV321-019, SV321-021, or SV321-069 during normal operations. DSC claims several tanks are covered under a Rule 284(i) exemption. The updated emission calculations make this PTI subject to NSR review. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100156: This Minor Modification is to incorporate PTI No. 175-20, which is made up of a jacketed reactor, process condenser, receiver and auxiliary equipment in emission unit EU321-11. Process creates capped resins. Process can vent to THROX or the site scrubbers. During THROX downtime, Group 1 MON processes are shut down. Non-Group 1 processes may continue to operate and either vent locally or vent to site scrubbers. The process does not release emissions through SV321-021, SV321-024, SV321-031, SV321-039, or SV321-069 during normal operations. The applicability of CAM will be addressed during the next ROP Renewal. The PTI was not required to go through the public participation process.

Minor Modification Number 202100157: This Minor Modification is to incorporate PTI No. 18-18A, which is for the High Volume Silanes Container Maintenance and Wash production facility for emission unit 502-04. The 502-04 container maintenance purge/wash process generates emissions from 12G rail/trailer station, 13G rail/trailer station, 504 trailer station 1 and 504 trailer station 2. The emission unit purges railcars and trailers to the THROX burner. If the THROX burner is offline, vessel purges will not occur. The emission unit also washes railcars and trailers which generates emissions to the atmosphere via SV502-009 a/b/c. This operation occurs in building 502 and consists of purge/wash process of portable containers (e.g. drums, totes, tank trucks, rail cars, and intermodal containers). The applicability of CAM

will be addressed during the next ROP Renewal. The 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-A4043-2019, 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  
A4043

## RENEWABLE OPERATING PERMIT

ROP Number  
MI-ROP-A4043-2019b

### MARCH 3, 2023 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT

#### Purpose

On June 13, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019a to Dow Silicones Corporation (DSC) 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(1)(a)(i-iv).

#### General Information

Responsible Official:	Kristan Soto, EH&S Responsible Care Leader 989-633-1809
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202200118
Date Application for Administrative Amendment was Submitted:	May 26, 2022

#### Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(i).

#### Description of Changes to the ROP

Administrative Amendment Number 202200118: This Administrative Amendment was to correct a typographical error in emission unit EU 321-11 when PTI No. 175-20 was incorporated into the ROP. The typographical error in EU321-11, SC IV.4, incorrectly identifies the condenser as "condenser 4171", but the correct condenser should be identified as "condenser 5141" as it correctly states it in PTI No. 175-20.

#### 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 Administrative Amendment to the ROP.

#### Action Taken by EGLE

The AQD approved an Administrative Amendment to ROP No. MI-ROP-A4043-2019a, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.

State Registration Number  
A4043

**RENEWABLE OPERATING PERMIT**  
**MARCH 3, 2023 - STAFF REPORT FOR RULE 216(2)**  
**MINOR MODIFICATION**

ROP Number  
MI-ROP-A4043-2019b

**Purpose**

On June 13, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019a to Dow Silicones Corporation (DSC) 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:	Kristan Soto, EH&S Responsible Care Leader 989-633-1809
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202100158, 202100168, 202100169, 202100172, 202100175, 202100189, 202100190, 202100191, 202100208, 202100217, 202100218, 202100226, 202100228, 202100243, 202100244, 202200008, 202200009, 202200023, 202200038, 202200061, 202200062, 202200064, 202200089, 202200097, 202200104, 202200105, 202200120, 202200153, 202200167, 202200207, 202200208, 202200228, 202200229, 202300004, 202300005
Date Application for Minor Modification was Submitted:	September 1, 2021; September 13, 2021 (2 apps); September 16, 2021 (4 apps); September 28, 2021 (3 apps); October 18, 2021; October 29, 2021 (2 apps); November 17, 2021 (2 apps); December 15, 2021 (2 apps); January 10, 2022 (2 apps); January 13, 2022; February 4, 2022; March 3, 2022 (3 apps); April 8, 2022; April 26, 2022; May 12, 2022 (2 apps); May 31, 2022; August 8, 2022; September 7, 2022; October 25, 2022 (2 apps); December 14, 2022 (2 apps); January 13, 2023 (2 apps)

**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 202100158: This Minor Modification is to remove Flexible Group FGBOILERS2701-01, which is for boilers 8 and 9. These boilers have been rendered inoperable and are proposed to be removed from the area source.

Minor Modification Number 202100168: This Minor Modification is to incorporate PTI No. 308-94B into the ROP, which to revise emission limits for EU322-06, the Siloxane Catalyst Process where Octomethylcyclotetrasiloxane is reacted with potassium hydroxide in the presence of cyclohexane. An atmospheric strip removes the solvent from the product after the reaction. The vent is sent through a glycol condenser then to the atmosphere. The recovered solvent is reused in the next batch. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.

Minor Modification Number 202100169: This Minor Modification is to incorporate PTI No. 152-20 into the ROP, which is the permitting of EU324-11 which was previously operated under the Rule 290 exemption, due to the updating of emission calculations from the EPA Consent Decree. EU324-11 mainly consists of the batch distillation kettle 4895, including 4896 distillation column, and 24924/24925/4898 overhead receivers.

Minor Modification Number 202100172: This Minor Modification is to incorporate PTI No. 134-20 into the ROP, which is to separate the LP-1 process (EU322-01) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree. PTI No. 134-20 also removes the operating limits for Condenser 6379 given that this unit is a process condenser and is not a control device. DSC submitted similar separate applications for the other two emission units in FG322-01.

Minor Modification Number 202100175: This Minor Modification is to incorporate PTI No. 15-13A into the ROP, which was to revise emission limits for the 4820 batch kettle process, located in Building 324 (EU324-01) due to the updating of emission calculations from the EPA Consent Decree. The condensers were formerly subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.

Minor Modification Number 202100189: This Minor Modification is to incorporate PTI No. 63-14B into the ROP, which was to update emission calculations and to support process changes for the 6054 batch kettle and associated equipment in the 212 building facility (EU212-01) due to the updating of emission calculations from the EPA Consent Decree.

Minor Modification Number 202100190: This Minor Modification is to incorporate PTI No. 144-20 into the ROP, which was to update emission calculations and to support the 20500 polymer process changes in the 212 building facility (EU212-02) due to the updating of emission calculations from the EPA Consent Decree. This emission unit was previously authorized under a Rule 290 exemption.

Minor Modification Number 202100191: This Minor Modification is to incorporate PTI No. 145-20 into the ROP, which was to update emission limits for the cold blend mixing process in 6019 batch kettle (EU212-03), located in Building 212. There were no physical or operational changes associated with this PTI, but the updated emission calculations were subject to New Source Review (NSR).

Minor Modification Number 202100208: This Minor Modification is to incorporate PTI No. 156-20 into the ROP, which was to revise emission limits for the 2262 process, located in Building 109 (EU109-04), due to the updating of emission calculations from the EPA Consent Decree. This emission unit was previously authorized under a Rule 290 exemption.

Minor Modification Number 202100217: This Minor Modification is to incorporate PTI No. 161-20 into the ROP, which was to update emission estimates for the 200-gallon Myers change can mixer (EU2505-06) and permitting this previously Rule 290 exempt emission unit, due to the updating of emission calculations from the EPA Consent Decree.



Minor Modification Number 202100218: This Minor Modification is to incorporate PTI No. 159-20 into the ROP, which was to provide information supporting permit updates due to the updating of emission calculations from the Consent Decree at the current 200-gallon Myers change can mixer (EU2505-07). This emission unit was previously authorized under a Rule 290 exemption.

Minor Modification Number 202100226: This Minor Modification is to incorporate PTI No. 14-13A into the ROP, which was modified to reflect updated emission calculations for the 5617 batch kettle process in EU324-08, due to the updating of emission calculations from the EPA Consent Decree. The condensers were formerly subject to CAM. The CAM Conditions were carried forward and will be addressed during the next ROP Renewal.

Minor Modification Number 202100228: This Minor Modification is to incorporate PTI No. 92-21 into the ROP, which was include requirements from US EPA Consent Decree associated with the 432 boilers (FG432BOILERS) and thermal heat recovery oxidation unit (FGTHROX). In addition, the CO emission testing requirement for the boilers was removed. The CO testing data shows the CO emissions are very low (less than 1 tpy per boiler) and, therefore, future testing is not necessary.

Minor Modification Number 202100243: This Minor Modification is to incorporate PTI No. 155-20 into the ROP, which was to incorporate previously exempt (under Rule 290) 9140 batch kettle and associated equipment in emission unit EU2703-08, to reflect updated emission calculations, due to the EPA Consent Decree.

Minor Modification Number 202100244: This Minor Modification is to incorporate PTI No. 920-84C into the ROP, which was to modify the permit requirements for the Chloropropyl Trichlorosilane Process in emission unit EU2703-03. This PTI updates emission calculations from the Consent Decree and to support process changes at the current 2703 Building facility. The venturi scrubbers were subject to CAM. CAM Conditions were carried forward and will addressed during the next ROP Renewal.

Minor Modification Number 202200008: This Minor Modification is to incorporate PTI No. 157-20 into the ROP, which was to incorporate previously exempt (under Rule 290) the 9250 Batch Kettle in emission unit EU2703-09, to reflect updated emission calculations, due to the EPA Consent Decree.

Minor Modification Number 202200009: This Minor Modification is to incorporate PTI No. 190-20 into the ROP, which was for the 22270 Batch Kettle in EU2703-13, to incorporate previously exempt (under Rule 290), due to the discovery of 1,3-butadiene in this process.

Minor Modification Number 202200023: This Minor Modification is to incorporate PTI No. 534-77H into the ROP, which was to update EU601-01 as a result of the USEPA Consent Order and to reflect the process as currently operating in the 601 building. The applicability of CAM will be addressed during the next ROP Renewal.

Minor Modification Number 202200038: This Minor Modification was to incorporate PTI No. 179-20 into the ROP ,which was to update emission limits as a result of the USEPA Consent Order for the mixing process in the 5132 batch kettle, located in Building 321 (EU321-07).

Minor Modification Number 202200061: This Minor Modification was to incorporate PTI No. 158-20 into the ROP ,which was for the phenyl methyl fluids and resin hydrolysis and polymerization process in emission unit EU303-01 to update emission limits as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit and will be addressed during the next ROP Renewal.

Minor Modification Number 202200062: This Minor Modification was to incorporate PTI No. 726-78C into the ROP, which was for the flake resin hydrolysis process in emission unit EU303-09 located in Building 303, to update emission limits as a result of the USEPA Consent Order. The cyclone and reverse jet fabric filter are subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.

Minor Modification Number 202200064: This Minor Modification was to incorporate PTI No. 15-22 into the ROP, which to revise emission limits for the Polymer and resin surge, mixing, filtration, and blending process, located in Building 303 (EU303-02) to update emission limits as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit and will be addressed during the next ROP Renewal.

Minor Modification Number 202200089: This Minor Modification was to incorporate PTI No. 1-08A into the ROP to revise emission limits for the HCl/MeCl recovery process, which include scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment located in Building 311 (EU311-01). Several processes on-site vent to this recovery process. Emissions are controlled by two sets of control device trains, each operating in series, that vent through an absorber (2810/24101) and then a vent scrubber (2812/24102). EU311-01 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. The absorber and vent scrubber are subject to CAM. CAM Conditions were carried forward and will be addressed during the next ROP Renewal.

Minor Modification Number 202200097: This Minor Modification was to incorporate PTI No. 334-88E into the ROP to revise conditions in EU800-01, the 800-block tank farm, consisting of storage and transfer operations for on-site waste liquids. The PTI added a minimum pressure of the nitrogen blanket itself, as opposed to pressure drop across the nitrogen blanket.

Minor Modification Number 202200104: This Minor Modification was to incorporate PTI No. 84-08D into the ROP to revise emission limits for the Phenyltrichlorosilane (PhSiCl<sub>3</sub>) and Diphenyldichlorosilane (Ph<sub>2</sub>SiCl<sub>2</sub>) processes, which include production, storage, and transfer activities, located in Building 508 (EU508-01). EU508-01 was updated as a result of the USEPA Consent Order.

Minor Modification Number 202200105: This Minor Modification was to incorporate PTI No. 812-91D into the ROP to revise emission limits that involves all activities associated with production, storage and transfer of Phenylmethyldichlorosilane (PhMeSiCl<sub>2</sub>) and Diphenylmethylchlorosilane (Ph<sub>2</sub>MeSiCl) in Building 515 (EU515-01). EU515-01 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.

Minor Modification Number 202200120: This Minor Modification was to incorporate PTI No. 200-15A into the ROP to revise emission limits in emission unit EU505-04 that involves batch reactor 23390 and the manufacturing process containing a receiver, filters, carbon beds, vacuum pump, condensers, storage tanks, and other associated equipment. The processes are controlled by condensers DVS-510 and DV23414 and scrubber DV23401 and then vents to the atmosphere. EU505-04 was updated as a result of the USEPA Consent Order.

Minor Modification Number 202200153: This Minor Modification was to incorporate PTI No. 38-22 into the ROP for changes to a previously exempt cosmetic wax manufacturing process, consisting of a reactor, process condenser, receiver, and auxiliary equipment which vents through one of two scrubbers operating in parallel prior to the exhaust going through two polishing scrubbers before going to FGTHROX, FGSITESCRUBBERS, or 321 Carbon Beds. This is designated EU321-12 and was newly permitted.

Minor Modification Number 202200167: This Minor Modification was to incorporate PTI No. 26-14A into the ROP for changes to emission unit EU2703-17, the 9025C waste tank, due to updating of emission calculations. EU2703-17 was updated as a result of the USEPA Consent Order.

Minor Modification Number 202200207: This Minor Modification was to incorporate PTI No. 146-16A into the ROP to revise emission limits for the 1600 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-15). EU303-15 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.

Minor Modification Number 202200208: This Minor Modification was to incorporate PTI No. 147-16A into the ROP to revise emission limits for the 1650 batch kettle manufacturing process consisting of an agitated, jacketed kettle, water trap, receiver, blending and filtration, and product packaging, located in Building 303 (EU303-16). EU303-16 was updated as a result of the USEPA Consent Order. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.

Minor Modification Number 202200228: This Minor Modification was to incorporate PTI No. 160-20 into the ROP, which was for the batch and semi-continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters in emission unit EU303-06. There are several different ways in which emissions are vented from this emission unit. EU303-06 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating. CAM was formerly associated with this emission unit, and the CAM related Conditions were carried forward. CAM will be addressed during the next Renewal.

Minor Modification Number 202200229: This Minor Modification was to incorporate PTI No. 166-20 into the ROP, which was for the phenyl methyl polymerization semi-continuous process consisting of an agitated kettle, water trap, storage tanks, distillation column, receivers, filters, vacuum pumps, and related equipment in emission unit EU303-19. There are several different ways in which emissions are vented from this emission unit. EU303-19 was updated as a result of the USEPA Consent Order and to reflect the process as currently operating.

Minor Modification Number 202300004: This Minor Modification is to incorporate PTI No. 132-20A into the ROP, which was to revise emission limits for the HP-7 process, located in Building 322 (EU322-02) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree and to allow for the connection of EU322-01 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.

Minor Modification Number 202300005: This Minor Modification is to incorporate PTI No. 133-20A into the ROP, which was to revise emission limits for the HP-6 process, located in Building 322 (EU322-04) from the other emission units comprising FG322-01, due to the updating of emission calculations from the EPA Consent Decree and to allow for the connection of EU322-04 to the THROX (in FGTHROX). DSC submitted similar separate applications for the other two emission units in FG322-01.

### **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-A4043-2019a, 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.