



September 12th, 2024

CERTIFIED MAIL
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Michigan Department of EGLE
Air Quality Division
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DOW SILICONES CORPORATION RULE 216(2) CHANGE NOTIFICATION: EU212-12

Please find attached the notification forms required by Rule 216(2) for changes to Dow Silicones Corporation Renewable Operating Permit number MI-ROP-A4043-2019b.

On May 25, 2021, the Elastomers Production Plant (EU212-12) received special conditions associated with permit to install application no. 48-14C. The approved 48-14C PTI called out exit gas temperature to be monitored. When this PTI was rolled into the Dow Silicones Corporation ROP this was kept as coolant temperature and not changed to exit gas temperature. The Dow Silicones Corporation requests that these special conditions' changes shown in the attached PTI draft be included in the renewable operating permit.

Attached are the M-001 and C-001 forms. If you have questions regarding this submittal, please contact Jim Alger at (989) 615-1901.

A handwritten signature in black ink that reads "Shannon Huber".

Shannon Huber
Site Manufacturing Director
1790 Building, Washington Street
Midland, MI 48674
(989) 636-1163

Enclosures



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

RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN A4043
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Stationary Source Name Dow Silicones Corporation	
City Midland	County Midland

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI	

CONTACT INFORMATION	
Contact Name Jim Alger	Title Air Specialist
Phone number 989-615-1901	E-mail address james.s.alger@dow.com

This form must be signed and dated by a Responsible Official.				
Responsible Official Name Shannon Huber			Title Site Manufacturing Director	
Mailing address 1790 Building, Washington Street				
City Midland	State MI	ZIP Code 48674	County Midland	Country USA
As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.				
Signature of Responsible Official			Date	



RENEWABLE OPERATING PERMIT

M-001: RULE 215 CHANGE NOTIFICATION

RULE 216 AMENDMENT/MODIFICATION APPLICATION

This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment.

1. SRN A4043	2. ROP Number MI-ROP-A4043-2019b	3. County Midland
4. Stationary Source Name Dow Silicones Corporation		
5. Location Address 3901 S. Saginaw Road		6. City Midland
7. Submittal Type - <i>The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.</i> <input type="checkbox"/> Rule 215(1) Notification of change. Complete Items 8 – 10 and 14 <input type="checkbox"/> Rule 215(2) Notification of change. Complete Items 8 – 10 and 14 <input type="checkbox"/> Rule 215(3) Notification of change. Complete Items 8 – 11 and 14 <input type="checkbox"/> Rule 215(5) Notification of change. Complete Items 8 – 10 and 14 <input checked="" type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. Complete Items 8 – 10 and 14 <input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. Complete Items 8 – 14. Results of testing, monitoring & recordkeeping must be submitted. See detailed instructions. <input type="checkbox"/> Rule 216(2) Minor Modification. Complete Items 8 – 12 and 14 <input type="checkbox"/> Rule 216(3) Significant Modification. Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions. <input type="checkbox"/> Rule 216(4) State-Only Modification. Complete Items 8 – 12 and 14		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> 09/13/2024		9. Change in emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. Description of Change - <i>Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).</i> On May 25, 2021, the Dow Silicones Corporation (DSC) received special conditions associated with permit to install application no. 48-14C. Sections III. 1. and VI.2. called out exit gas temperature to be monitored. When this PTI was rolled into the ROP this was not changed to exit gas temperature. DSC requests that these special conditions' be updated in the ROP to match the PTI.		
11. New Source Review Permit(s) to Install (PTI) associated with this application? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, enter the PTI Number(s) - - - - -		
12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i> a. Is the change identified above in compliance with the associated applicable requirement(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No c. If the change includes a future applicable requirement(s), will timely compliance be achieved? <input type="checkbox"/> Yes <input type="checkbox"/> No		
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i> AI		
14. Contact Name Jim Alger	Telephone No. (989) 615-1901	E-mail Address james.s.alger@dow.com
15. This submittal also updates the ROP renewal application submitted on ____/____/____ <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A <i>(If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM ₁₀	Particulate Matter equal to or less than 10 microns in diameter
PM _{2.5}	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU212-12	Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF, UU, and HHHHH. The most recent PTI for this emission unit is PTI No. 48-14C.	2012	FGMONMACT, FGHAP2012A2A

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

EU212-12

EMISSION UNIT CONDITIONS

DESCRIPTION

Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subparts FFFF, UU, and HHHH.

The most recent PTI for this emission unit is PTI No. 48-14C.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

Chilled condenser HX20407

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy*	12-month rolling time period as determined at the end of each calendar month	EU212-12	SC V.1, VI.2, VI.3, VI.4	R 336.1702

* This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. While the EU212-12 is venting to chilled condenser HX20407, the permittee shall not operate EU212-12 unless the chilled condenser HX20407 ~~coolant exit gas~~ temperature is 33°C or less. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU212-12 unless the emissions are routed to chilled condenser HX20407 and the condenser is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor, which includes meeting the requirements of SC III.1, except as allowed by SC IV.2 and SC IV.3. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee may vent EU212-12 through SV212-003, while bypassing chilled condenser HX20407, for up to three hours per day. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee may vent EU212-12 through SV212-018, while bypassing chilled condenser HX20407, for drum off of final products. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain chilled condenser HX20407 with an exit gas temperature indicator. The permittee shall calibrate the exit gas temperature indicator in a satisfactory manner acceptable to the AQD District Supervisor (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EU212-12 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(3), R 336.1702(a))
2. While EU212-12 is venting to chilled condenser HX20407, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser HX20407 ~~coolant~~ exit gas temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU212-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request. (R 336.1205(3), R 336.1702(a))
4. The permittee shall keep, in a satisfactory manner, daily records of the time that EU212-12 vents through SV212-003 and SV212-018. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003 (Manway Vent)	24	32	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV212-018 (Drum off Vent)	24	42	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV212-023 ^A (Vent for Condenser HX-20407)	2.0	42	R 336.1225, 40 CFR 52.21 (c) & (d)

^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart HHHHH (Coatings MACT) as they apply to EU212-12. **(40 CFR Part 63 Subpart HHHHH)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).