MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

EFFECTIVE DATE: January 11, 2022

ISSUED TO

Quantum Composites Inc.

State Registration Number (SRN): N6874

LOCATED AT

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

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N6874-2022

Expiration Date: January 11, 2027

Administratively Complete ROP Renewal Application Due Between
July 11, 2025 and July 11, 2026

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Rule 210(1) of the administrative rules promulgated under Act 451, this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-N6874-2022

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTl terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Chris Hare, Bay City District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**

- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**

- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any 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).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"[2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. 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 appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor 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 conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI 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 the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI 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. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT SPECIAL CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

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
EUSMCI	Sheet molding compound (SMC) process that includes rollers with carrier film, doctor boxes that apply the paste to the carrier film, fiber chopper that chops and applies the fibers onto the paste, and a compaction section that compacts the SMC into a sheet, heat is applied, then the SMC is rolled or boxed for shipment, and finally stored prior to shipment. SMC can include epoxy, phenolic, polyimide, and polyester groups. Pollution Control Equipment: Torit dust collector system for control of carbon fiber materials addition vented to the general in-plant air; and VTI dust collector system for control of fiber chopper area which is then vented to the energy recovery unit. Exhaust Stacks: SV-14, SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EUSMCII	Sheet molding compound process (see EUSMCI description minus heat application). SMC will be polyester material. Pollution Control Equipment: VTI dust collector system for control of fiber chopper area which is then vented to the energy recovery unit. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EUSMCIII	Sheet molding compound process (see EUSMCI description minus heat application). SMC will be polyester material. Pollution Control Equipment: VTI dust collector system for control of fiber chopper area which is then vented to the energy recovery unit. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EUMIXERS	Six different mixers that blend the paste used in making the sheet molding compound (SMC). Mixer sizes: 2 - 5 gallon, 50 gallon, 75 gallon, 150 gallon, and 300 gallon. Pollution Control Equipment: VTI dust collector system which is then vented to the energy recovery unit. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUBMCMIXER	300 gallon Littleford bulk molding compound (BMC) mixer. BMC is composed of polyester resinous paste, fillers, and product enhancers. Pollution Control Equipment: VTI dust collector system which is then vented to the energy recovery unit. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EUSOLVENT	Solvents used for clean up. Pollution Control Equipment: None. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EUPRESS	150 ton press for compression molding of polyester SMC. Pollution Control Equipment: None. Exhaust Stacks: SV-15.	08-2001 / 05-2010	FGSMCBMC FGMACT
EULOCHINVAR#1	Natural gas fired boilers for space heat, 800,000 BTU/HR	09-2008	FGBOILERMACT
EULOCHINVAR#2	Natural gas fired boilers for space heat, 800,000 BTU/HR	09-2008	FGBOILERMACT
EUSTEAMBOILER	15 PSI Steam boiler (Well-McLain) used for process heat.	11-2014	FGBOILERMACT
EURICE	Cummins generator, natural gas fuel, spark ignited, 153 BHP, used for back-up power for 2-drive in freezers.	11-2012	

EURICE
EMISSION UNIT CONDITIONS

DESCRIPTION

This engine is a <500 HP, Spark Ignition (SI), Emergency Reciprocating Internal Combustion Engine (RICE) located at a Major source of HAPs and installed after June 12, 2006. This engine is required under 40 CFR 63.6590(c)(6) to show compliance with the RICE MACT by meeting applicable requirements under 40 CFR Part 60, Subpart JJJJ New Source Performance Standards for Spark Ignition RICE.

One natural gas fired, spark ignited 153 HP, emergency engine generator, EURICE, stated to have been installed November 2012. It is reported to be certified as an emergency engine under Subpart JJJJ for engines models 2009 and later.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1 NOx	2.0 grams/HP-Hr	Hourly*	EURICE	V.1, VI.2 and 3	**Table 1 of 40 CFR Part 60, Subpart JJJJ**
2. CO	4.0 grams/HP-Hr	Hourly*	EURICE	V.1, VI.2 and 3	**Table 1 of 40 CFR Part 60, Subpart JJJJ**
3. VOC	1.0 grams/HP-Hr	Hourly*	EUEICE	V.1, VI.2 and 3	**Table 1 of 40 CFR Part 60, Subpart JJJJ**

*If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the qualified test runs performed in accordance with the method requirements.

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas in EURICE. **(40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no time limit on the use of emergency stationary RICE in emergency situations. **(40 CFR 60.4243(d)(1))**

2. The permittee may operate EURICE for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4243(d)(2))**

3. EURICE may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing as provided in SC III (2). Except as provided in 40 CFR 60.4243(d)(3)(i), the 50 hours per calendar year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3))**

4. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: **(40 CFR 60.4243(d)(3)(i))**
   a. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
   b. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region;
   c. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines;
   d. The power is provided only to the facility itself or to support the local transmission and distribution system;
   e. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching.

5. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EURICE:
   a. Operate and maintain the certified engine and control device according to the manufacturer's emission related written instructions;
   b. May only adjust engine settings according to and consistent with the manufacturer's emission-related written instructions;
   c. Meet the requirements as specified in 40 CFR Part 1068, Subparts A through D, as they apply.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and subject to SC V.1. **(40 CFR 60.4243(b)(1). 40 CFR 60.4243(a)(1) and (a)(2))**

6. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EURICE, records of conducted maintenance to demonstrate compliance and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(a)(2))**

7. The permittee shall operate and maintain the engine so that it achieves the emission standards as required in 40 CFR 60.4233 over the entire life of the engine**. (40 CFR 60.4234)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EURICE with a non-resettable hour meter upon startup to track the operating hours. **(40 CFR 60.4237(c))**

2. Each engine shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure each engine according to the manufacturer’s specifications. **(40 CFR 60.4243)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. If RICE is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
   a. Conduct an initial performance test to demonstrate compliance with the applicable emission standards in 40 CFR 60.4233(e), within 1 year after EURICE is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer;

b. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4244

If a performance test is required, no less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of 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 336.1213(3), 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60, Subpart JJJJ)**

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep all required records and 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 336.1213(3))**

2. The permittee of EURICE must keep records of the following information: **(40 CFR.4245(a))**
   a. All notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ as well as all documentation supporting any notification;
   b. Maintenance conducted on the engine;
   c. If EURICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards, as well as information required in 40 CFR parts 90, 1048, 1054 and 1060, as applicable;
   d. If EURICE is not a certified engine or is a certified engine operating in a non-certified manner and is subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards.

3. The permittee shall monitor the emergency engines non-resettable hour meter and record the total hours of operation and the hours of operation during emergency and non-emergencies for EURICE, on a monthly and calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1213(3), 40 CFR 60.4245(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit a notification specifying whether EUEICE will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days of switching the manner of operation. **(40 CFR Part 60, Subpart JJJJ)**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A and Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines. **(40 CFR Part 60, Subparts A and JJJJ)**

2. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and ZZZZ for Stationary Reciprocating Internal Combustion Engines. **(40 CFR Part 63, Subparts A and ZZZZ)**

D. FLEXIBLE GROUP SPECIAL CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGSMCBMC	Production and cleanup solvent emission units associated with SMC and BMC production.	EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, EUBMCMIXER, EUSOLVENT, EUPRESS
FGMACT	Production and cleanup solvent emission units associated with SMC and BMC production that are subject to federal MACT requirements for the Reinforced Plastic Composites Production source category per 40 CFR Part 63, Subpart WWWW.	EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, EUBMCMIXER, EUSOLVENT, EUPRESS
FGBOILERMACT	Boilers subject to federal MACT requirements for the Industrial, Commercial, and Institutional Boilers and Process Heaters source category per 40 CFR Part 63, Subpart DDDDD.	EULOCHINVAR#1, EULOCHINVAR#2, EUSTEAMBOILER

FGSMCBMC
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Production and cleanup solvent emission units associated with SMC and BMC production. (PTI 303-00B)

Emission Units: EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, EUBMCMIXER, EUSOLVENT, EUPRESS

POLLUTION CONTROL EQUIPMENT

The Torit dust collector system is installed on EUSMCI for control of carbon fiber materials addition and is vented to the general in-plant air. The VTI dust collector controls fiber chopper areas for EUSMCI, EUSMCII, and EUSMCIII; and also controls dust emissions from EUMIXERS and EUBMCMIXER. The VTI dust collector is vented to the energy recovery unit.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOCs	37.2 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGSMCBMC	SC VI.3	**R 336.1205 R 336.1702(a)**
2. Methanol (CAS # 67-56-1)	59.0 pph[2*]	Hourly[a]	FGSMCBMC	SC V.1	**R 336.1205 R 336.1225 R 336.1702(a) R 336.1901**
3. Styrene (CAS # 100-42-5)	8.8 pph[1]	Calendar day average	FGSMCBMC	SC VI.3	**R 336.1225 R 336.1901**
4. Styrene (CAS # 100-42-5)	5.6 pph[2*]	Hourly[a]	SMCIII	SC V.1	**R 336.1205 R 336.1225 R 336.1702(a) R 336.1901**
5. PM	0.01 lbs per 1000 lbs of exhaust gases[2]	Hourly[a]	VTI dust collector system controlling fiber chopper areas for EUSMCI, EUSMCII, EUSMCIII, and PM emissions for EUMIXERS and EUBMCMIXER	SC VI.5	**R 336.1331**
6. PM10	0.054 pph[2]	Hourly[a]	VTI dust collector system controlling fiber chopper areas for EUSMCI, EUSMCII, EUSMCIII, and PM emissions for EUMIXERS and EUBMCMIXER	SC VI.5	**R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)**

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
7. PM	0.01 lbs per 1000 lbs of exhaust gases[2]	Hourly	Torit dust collector system controlling carbon fiber materials addition for EUSMCI	SC VI.6	**R 336.1331**
8. PM10	0.27 pph[2]	Hourly	Torit dust collector system controlling carbon fiber materials addition for EUSMCI	SC VI.6	**R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**

[a] If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the qualified test runs performed in accordance with the method requirements.

9. The actual VOC and styrene hourly and 12-month rolling emission rates for EUSMCI, EUSMCII, and EUSMCIII shall be determined by applying the emission formula provided in Appendix 7.A together with the actual hours of operation for any processing of polyester resins.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

10. The actual VOC and styrene hourly and 12-month rolling emission rates for EUMIXERS, EUBMCMIXER, and EUPRESS shall be determined by applying the emission factors listed in Appendix 7.B together with the actual material processed and styrene content information for any processing of polyester resins.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

11. The actual VOC annual emission rate for EUSMCI shall be determined based on the emission rate listed in Appendix 7.B and the actual hours of operation for any processing of polyimide resins.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

12. The actual formaldehyde and phenol hourly and 12-month rolling VOC emission rates for EUSMCI and EUMIXERS for any processing of phenolic resins shall be determined based on the emission rates listed below in Appendix 7.B with the actual hours of operation of each emission unit.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

13. The actual maleic anhydride and styrene hourly and 12-month rolling VOC emission rates for EUSMCI and EUMIXERS for any processing of epoxy resins shall be determined based on the emission rates listed in Appendix 7.B together with the actual hours of operation of each emission unit.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

See Appendix 7

II. MATERIAL LIMIT(S)

1. The permittee shall not exceed the processing rate limits applicable to combined polyester, epoxy, and phenolic resin usage and the styrene monomer content limits listed in the following table for FGSMCBMC in order to demonstrate compliance with FGSMCBMC Special Conditions I. Emission Limits.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

Equipment	Combined Polyester, Epoxy, and Phenolic Resins Processing Rate Limits (lbs/yr)	Time Period	Resin Styrene Monomer Content Limit (wt %)
a. EUMIXERS	64,600,000	12-month rolling time period as determined at the end of each calendar month	30

Equipment	Combined Polyester, Epoxy, and Phenolic Resins Processing Rate Limits (lbs/yr)	Time Period	Resin Styrene Monomer Content Limit (wt %)
b. EUBMCMIXER	180,000	12-month rolling time period as determined at the end of each calendar month	15
c. EUPRESS	1,000,000	12-month rolling time period as determined at the end of each calendar month	15

2. The permittee shall not exceed a net cleaning solvent usage rate of 100 gallons per month. Net usage means the quantity used for cleaning minus the quantity reclaimed.[2] **(R 336.1205, R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all waste resins, catalysts, accelerators, and cleaning solvents and shall store them in closed containers. The permittee shall reclaim or dispose of all waste resins, catalysts, accelerators, and cleaning solvents in an acceptable manner in compliance with all applicable state rules and federal regulations.[2] **(R 336.1224, R 336.1702(a))**

2. The permittee shall handle all VOC and/or HAP containing materials, including resins, catalysts, accelerators, and cleaning solvents, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)**

3. The permittee shall not operate the following FGSMCBMC emission units in excess of the operating hours limits specified while manufacturing the product groups listed below:

Equipment	Material ID	Limit (hrs per year)	Time Period / Operating Scenario	Testing / Monitoring Method	Underlying Applicable Requirements
a. EUSMCI	Polyimide Product Group	350[2]	12-month rolling time period as determined at the end of each calendar month	SC VI.3	**R 336.1205 R 336.1225 R 336.1702(a)**
b. EUSMCI	Polyester, Phenolic, and Epoxy Product Groups Combined	6,000[2]	12-month rolling time period as determined at the end of each calendar month	SC VI.3	**R 336.1205 R 336.1225 R 336.1702(a)**
c. EUSMCII	Polyester Product Group	6,000[2]	12-month rolling time period as determined at the end of each calendar month	SC VI.3	**R 336.1205 R 336.1225 R 336.1702(a)**
d. EUSMCIII	Polyester Product Group	4,000[2]	12-month rolling time period as determined at the end of each calendar month	SC VI.3	**R 336.1205 R 336.1225 R 336.1702(a)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, fiber chopper areas, or EUBMCMIXER unless the respective emission unit is vented to the VTI dust collector and the collector system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the dust collector includes but is not limited to following the manufacturer's specifications for pressure drop, monitoring pressure drop, and recording a reading of pressure drop once per shift.[2] **(R 336.1331)**

2. The permittee shall not operate the EUSMCI carbon fiber materials addition operation unless the Torit dust collector system is installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1331)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Upon notification from the AQD, the permittee shall verify methanol emission rates from FGSMCBMC and / or styrene emission rates from SMCIII by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 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. 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 336.1213(3), R 336.2001, R 336.2003, R 336.2004))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1225, R 336.1702)**

2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each raw material used, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both, as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1224, R 336.1225, R 336.1702, R 336.1901)**

3. The permittee shall keep the following information for FGSMCBMC:
   a. The identity and amount (in pounds) of each resin, catalyst, accelerator, and other additive used listed by emission unit;
   b. Identification of resin type (i.e., polyester, epoxy, phenolic, polyimide) listed by emission unit and the applicable VOC, styrene, phenol, maleic anhydride, and formaldehyde emission factor, emission rate, or emission formula for each material used as specified in SC I.9, I.10, I.11, I.12, I.13 and Appendix 7.B or based on emission test results or calculations;
   c. The area of bare paste uncovered by carrier film (Ao); and the area of chop-covered paste uncovered by carrier film (Ac) on the EUSMCI, EUSMCII, and EUSMCIII machines in sq. ft. for use in styrene and VOC emission calculations for any processing of polyester or epoxy resins as specified in Appendix 7.A;
   d. The styrene content of each polyester, epoxy, and phenolic resin processed in EUMIXERS, EUBMCMIXER, and EUPRESS listed by emission unit;
   e. Hours of operation for EUSMCI, EUSMCII, and EUSMCIII by resin product group on a calendar month and 12-month rolling time period basis as determined at the end of each calendar month to determine compliance with the operating hours limits of SC III.3;
   f. Records of the calendar day usage of each styrene emitting material listed by emission unit;

g. Styrene emission calculations determining the average hourly emission rate for FGSMCBMC, in pounds per hour, for each calendar day based on the calendar day actual hours of operation for each emission unit emitting styrene;[1]
h. VOC, styrene, and formaldehyde mass emission calculations based on the applicable VOC emission factor, emission rate, or emission formula for each material used as specified in SC I.9, I.10, I.11, I.12, I.13, and Appendix 7.B; or based on emission test results or calculations and determining the monthly emission rate for each contaminant by emission unit and for FGSMCBMC in pounds or tons per calendar month;
i. VOC, styrene, and formaldehyde mass emission calculations determining the annual emission rate for each contaminant by emission unit and for FGSMCBMC in pounds or tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205, R 336.1225, R 336.1702, R 336.1901)**

4. The permittee shall keep the following information on a calendar month basis for the use of cleaning solvents associated with FGSMCBMC:
   a. Gallons and identity of each solvent used and reclaimed;
   b. Net cleaning solvent usage rate for the calendar month. Net usage means the quantity used for cleaning minus the quantity reclaimed;
   c. VOC content, in pounds per gallon, of each solvent used;
   d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month;
   e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records on file in a format acceptable to the AQD District Supervisor and make them available to the Department upon request.[2] **(R 336.1205, R 336.1225, R 336.1702)**

5. The permittee shall monitor pressure drop at the VTI dust collector and record a reading of pressure drop once per shift. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1331)**

6. The permittee shall have implemented a written preventative maintenance plan (PMP) for the Torit dust collector system installed on EUSMCI for carbon fiber materials addition. At a minimum, the plan shall include a schedule of maintenance activities consistent with manufacturer's recommendations, and the operating variables that will be monitored to detect a malfunction or failure. A copy of the PMP shall be maintained on site and available upon request. **(R 336.1213(3))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

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. SV-14	14[2]	42[2]	**R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**
2. SV-15	48[2]	37[2]	**R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGMACT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Production and cleanup solvent emission units associated with SMC and BMC production that are subject to federal MACT requirements for the Reinforced Plastic Composites Production source category per 40 CFR Part 63, Subpart WWWW. (PTI 303-00B)

Emission Units: EUSMCI, EUSMCII, EUSMCIII, EUMIXERS, EUBMCMIXER, EUSOLVENT, EUPRESS

POLLUTION CONTROL EQUIPMENT

The Torit dust collector system is installed on EUSMCI for control of carbon fiber materials addition and is vented to the general in-plant air. The VTI dust collector controls fiber chopper areas for EUSMCI, EUSMCII, and EUSMCIII; and also controls dust emissions from EUMIXERS and EUBMCMIXER. The VTI dust collector is vented to the energy recovery unit.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Organic HAP	Less than 100 tons per year[2]	12-month rolling time period as determined at the end of each calendar month.	FGMACT	SC VI.2	**R 336.1205 40 CFR 63.5799(b) & (c)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. All waste cleanup solvent(s), catalyst(s), and resin(s) used in FGMACT shall be captured and stored in closed containers and disposed of in an acceptable manner in compliance with all applicable state rules and federal regulations.[2] **(R 336.1224, R 336.1702(a))**

2. The permittee shall not operate FGMACT except in compliance with the work practice standards of 40 CFR Part 63, Subpart WWWW, Table 4.[2] **(R 336.1205, R 336.1225, R 336.1702, R 336.1901, 40 CFR 63.5805(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The organic HAP content of any resin, catalyst, cleanup solvent, etc., shall be determined using Material Safety Data Sheets, manufacturer's formulation data, or both, as deemed acceptable by the AQD District Supervisor. Upon request of the AQD District Supervisor, the manufacturer's organic HAP formulation data shall be verified using EPA Test Method 311.[2] **(40 CFR 63.5797)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material (i.e. resin, catalyst, cleanup solvent, etc.), including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both, as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 63.5797)**

2. The permittee shall initially calculate organic HAP emissions per the provisions of 40 CFR 63.5799(b) and 63.5799(c) based on their 12 months of operation prior to April 21, 2003 and include this information with their initial notification report. After the initial compliance date, the permittee must recalculate organic HAP emissions over the 12-month period ending June 30 or December 31, whichever date is the first date following their compliance date specified in 40 CFR Part 63, Subpart WWWW, 40 CFR 63.5800. Subsequent calculations should cover the periods in the semiannual compliance reports.[2] **(R 336.1205, 40 CFR 63.5799(b) and (c))**

See Appendices 3 and 4

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit the applicable notifications and reports specified in Table 13 and Table 14 to Subpart WWWW of 40 CFR Part 63 to the Department in accordance with 40 CFR 63.5905 and 63.5910, respectively. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30.[2] **(40 CFR Part 63, Subparts A and WWWW)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and WWWW, as they apply to FGMACT.[2] **(40 CFR Part 63, Subparts A and WWWW)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGBOILERMACT
FLEXIBLE GROUP CONDITIONS
Major Source – Existing or New Boiler Process Heater Small Unit (Less than 10 MMBTU/hr)

DESCRIPTION

Requirements for new and existing units with a heat input capacity of <10 MMBTU/hr for major sources of HAP emissions per 40 CFR Part 63, Subpart DDDDD (Boiler MACT). These boilers or process heaters are designed to burn gaseous fuels. A unit is classified as new if it was installed or reconstructed after June 4, 2010.

Emission Unit:

Equal to or less than 5 MMBTU/hr and only burns gaseous or light liquid fuels	EULOCHINVAR 1 Installation 9/2008 (used for comfort heat) (existing) EULOCHINVAR 2 Installation 9/2008 (used for comfort heat) (existing) EUSTEAMBOILER Installation 11/2014 (used for process heat) (new)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must, for boilers or process heaters with a heat input capacity of less than or equal to 5 MMBTU/hr, conduct a 5-year tune-up according to 40 CFR 63.7540(a)(12). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. The burner inspection may be delayed until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months. **(40 CFR 63.7500(d) or (e), 40 CFR 63.7515(d), 40 CFR 63.7540(a)(12), 40 CFR Part 63, Subpart DDDDD, Table 3.1)**

2. The permittee must conduct a tune-up of each boiler or process heater as specified in the following: **(40 CFR 63.7540(a)(11) or (12))**
   a. As applicable, inspect the burner and clean or replace any components of the burner as necessary. The permittee may perform the burner inspection any time prior to the tune-up or may delay the burner inspection until the next scheduled unit shutdown. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
   b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
   c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The permittee may delay the inspection until the next scheduled unit shutdown. **(40 CFR 63.7540(a)(10)(iii))**
   d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**

e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**

3. If the unit is not operated on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**

4. At all times, the permittee must operate and maintain each existing small boiler or process heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or 2 or 5 year compliance report or one-time energy assessment, as applicable, that the permittee submitted. **(40 CFR 63.7555(a)(1))**

2. The permittee must keep the records in a form suitable and readily available for expeditious review. **(40 CFR 63.7560(a))**

3. The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**

4. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee must submit boiler or process heater tune-up compliance reports to the appropriate AQD District Office and must be postmarked or submitted by March 15th of the year following the applicable 5-year period starting from January 1 of the year following the previous tune-up to December 31 (of the latest tune-up year). Compliance reports must also be submitted to EPA using the Compliance and Emissions Data Reporting Interface (CEDRI) which is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). If the reporting form is not available in CEDRI at the time the compliance report is due, a hardcopy of the compliance report shall be submitted to EPA Region 5. **(40 CFR 63.7550(b)**, **40 CFR 63.7550(h)(3))**

5. The permittee must include the following information in the compliance report: **(40 CFR 63.7550(c)(1))**
   a. Company and Facility name and address; **(40 CFR 63.7550(c)(5)(i))**
   b. Process unit information, emissions limitations, and operating parameter limitations; **(40 CFR 63.7550(c)(5)(ii))**
   c. Date of report and beginning and ending dates of the reporting period; **(40 CFR 63.7550(c)(5)(iii))**
   d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done biennially or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown; **(40 CFR 63.7550(c)(5)(xiv))**
   e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters. **(40 CFR Part 63, Subparts A and DDDDD)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
		HAP	Hazardous Air Pollutant
EGLE	Michigan Department of Environment, Great Lakes, and Energy	Hg	Mercury
		hr	Hour
EU	Emission Unit	HP	Horsepower
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallons of Applied Coating Solids	kW	Kilowatt
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	m	Meter
HVLP	High Volume Low Pressure*	mg	Milligram
ID	Identification	mm	Millimeter
IRSL	Initial Risk Screening Level	MM	Million
ITSL	Initial Threshold Screening Level	MW	Megawatts
LAER	Lowest Achievable Emission Rate	NMOC	Non-methane Organic Compounds
MACT	Maximum Achievable Control Technology	NO_x	Oxides of Nitrogen
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	Particulate Matter equal to or less than 10 microns in diameter
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pounds per hour
		ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	%	Percent
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonable Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	TAC	Toxic Air Contaminant
SCR	Selective Catalytic Reduction	Temp	Temperature
SNCR	Selective Non-Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	µg	Microgram
USEPA/EPA	United States Environmental Protection Agency	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
VE	Visible Emissions	yr	Year

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

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N6874-2016. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N6874-2016 is being reissued as Source-Wide PTI No. MI-PTI-N6874-2022.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA			

Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGSMCBMC.

A. SMC Machine Emission Formula*

Styrene Emission Rate (lb/hr) = 0.267 x Ae – 0.849

Where:

Ae = Effective Area = Ao + 0.238 x Ac

Ao = Area of bare paste uncovered by carrier film on the machine, ft^2

Ac = Area of chop-covered paste uncovered by carrier film on the machine, ft^2

*Per "VOC Emissions From Production of Sheet Molding Compound", Lipiro, David, J. Principal Consulting Scientist, Environmental Compliance & Risk Management Inc.; Prepared for Premix, Inc., PO Box 281, North Kingsville, OH 44068; February 2007, Updated July 2007

B. Emission Factors and Emission Rates for Determining Actual Emissions

Equipment	Polyester Resin VOC and Styrene Emission Factors (lb emitted / lb styrene processed)	Epoxy Resin VOC and Styrene Emission Rates (lb/hr)	Epoxy Resin VOC and Maleic Anhydride Emission Rates (lb/hr)	Phenolic Resin VOC and Phenol Emission Rates (lb/hr)	Phenolic Resin VOC and Formaldehyde Emission Rates (lb/hr)	Polyimide Resin VOC and Methanol Emission Rate (lbs/hr)
a. 1. EUSMCI	*	0.584	0.0062	0.066	0.0012	59.0
2. EUSMCII	*	^	^	^	^	^
3. EUSMCIII	*	^	^	^	^	^
b. EUMIXERS	0.000292	0.1419	0.0032	0.011	0.0343	**
c. EUBMCMIXER	0.0125	^	^	^	^	^
d. EUPRESS	0.015	^	^	^	^	^

*Use SMC Machine Emission Formula listed in Appendix 7.A
**Polyimide resin materials not mixed at the facility
^Epoxy, phenolic, and polyimide resins not used in EUBMCMIXER, EUPRESS, EUSMCII, or EUSMCIII

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.