



**MICHIGAN DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
AIR QUALITY DIVISION**

EFFECTIVE DATE: March 11, 2011

ISSUED TO

Quantum Composites, Inc.

State Registration Number (SRN): N6874

LOCATED AT

1310 South Valley Center Drive, Bay City, Michigan 48706

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N6874-2011

Expiration Date: March 11, 2016

Administratively Complete ROP Renewal Application Due Between October 11, 2014 and
October 11, 2015

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 Michigan Air Pollution Control Rule 210(1), 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-N6874-2011

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI 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 Natural Resources and Environment

Chris Hare, Saginaw Bay 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 Natural Resources and Environment (MDNRE) 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 will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, 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 federally enforceable Source-wide PTI No. MI-PTI-N6874-2011 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). **(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. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part: "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 Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
 - b. A limit specified by an applicable federal new source performance standard.
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). **(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(4))**

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 states 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. **(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))**:
- 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.
 - 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. **(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))**
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))**
 - 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))**
 - 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(9))**
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(7))**

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 reclaiming, 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, Part 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, Part 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
 - 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, MDNRE.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, or has been interrupted for 18 months, the applicable terms and conditions from that PTI 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, MDNRE, 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:

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

²This 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 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.	8-2001/5-2010	FGSMCBMC
EUSMCI	Sheet molding compound process (see EUSMC1 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.	8-2001/5-2010	FGSMCBMC
EUSMCI	Sheet molding compound process (see EUSMC1 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.	8-2001/5-2010	FGSMCBMC

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
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.	8-2001/5-2010	FGSMCBMC
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.	8-2001/5-2010	FGSMCBMC
EUSOLVENT	Solvents used for clean up. Pollution Control Equipment: None. Exhaust Stacks: SV-15.	8-2001/5-2010	FGSMCBMC
EUPRESS	150 ton press for compression molding of polyester SMC. Pollution Control Equipment: None. Exhaust Stacks: SV-15.	8-2001/5-2010	FGSMCBMC

D. FLEXIBLE GROUP 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

**FGSMCBMC
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION: Production and cleanup solvent emission units associated with SMC and BMC production.

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 LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring 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	Test Protocol	FGSMCBMC	GC 13	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	Test Protocol	SMCIII	GC 13	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*}	Test Protocol	VTI dust collector system controlling fiber chopper areas for EUSMCI, EUSMCII, EUSMCIII, and PM emissions for EUMIXERS, and EUBMCMIXER	GC 13	R 336.1331
6. PM10	0.054 pph ²	Test Protocol	VTI dust collector system controlling fiber chopper areas for EUSMCI, EUSMCII, EUSMCIII, and PM emissions for EUMIXERS, and EUBMCMIXER	GC 13	R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
7. PM	0.01 lbs per 1000 lbs of exhaust gases* ²	Test Protocol	Torit dust collector system controlling carbon fiber materials addition for EUSMCI	GC 13	R 336.1331
8. PM10	0.27 pph ²	Test Protocol	Torit dust collector system controlling carbon fiber materials addition for EUSMCI	GC 13	R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d)
* Calculated on a dry gas basis					

- 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 resins². **(R 336.1205, R 336.1225, R 336.1702(a))**
- 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 resins². **(R 336.1205, R 336.1225, R 336.1702(a))**
- The actual VOC annual emission rate for EUSMCI shall be determined based on the emission rate listed in Appendix B and the actual hours of operation for any processing of polyimide resins². **(R 336.1205, R 336.1225, R 336.1702(a))**
- 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 B with the actual hours of operation of each emission unit². **(R 336.1205, R 336.1225, R 336.1702(a))**
- 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 B together with the actual hours of operation of each emission unit². **(R 336.1205, R 336.1225, R 336.1702(a))**

II. MATERIAL LIMITS

- 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 Limits². **(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. EUBCMIXER	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

- 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 reclaimed². **(R 336.1205, R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

- 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))**
- 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 necessary². **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)**
- 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)

4. The permittee shall monitoring pressure drop at the VTI dust collector and record a reading of pressure drop once per shift². **(R 336.1331)**

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 shift². **(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 manner². **(R 336.1331)**

V. TESTING/SAMPLING

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

N/A

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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition². **(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 request². **(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.10, I.11, I.12, I.13, I.14 and Appendix 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 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.10, I.11, I.12, I.13, I.14 and Appendix 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 request². **(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 request². **(R 336.1205, R 336.1225, R 336.1702)**

- 5. The permittee shall keep records of the VTI dust collector pressure drop. The permittee shall keep all records on file at the facility and make them available to the Department upon request². **(R 336.1331)**

See Appendices 3, 4, and 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
a. SV-14	14 ²	42 ²	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
b. 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

N/A

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

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 LIMITS

Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	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) and 63.5799(c)

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

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 regulations². **(R 336.1224, R 336.1702(a))**
2. 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 FGMACT². **(40 CFR Part 63, Subparts A and WWWW)**
3. The permittee shall not operate FGMACT except in compliance with the work practice standards of 40 CFR Part 63, Subpart WWWW, Table 4². **(R 336.1205, R 336.1225, R 336.1702, R 336.1901, 40 CFR 63.5805(b))**

IV. DESIGN/EQUIPMENT PARAMETERS

N/A

V. TESTING/SAMPLING

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

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 311². **(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 request². **(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, §63.5800. Subsequent calculations should cover the periods in the semiannual compliance reports². **(R 336.1205, 40 CFR 63.5799(b) and 63.5799(c))**

See Appendix 3 and 4

VII. REPORTING

1. The permittee shall submit the applicable notifications and reports by the dates 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, respectively². **(40 CFR Part 63, Subparts A and WWWW)**
2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
3. 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))**
4. 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 RESTRICTIONS

N/A

IX. OTHER REQUIREMENTS

N/A

Footnotes:

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

²This 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. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Natural Resources and Environment	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
M	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDNRE	Michigan Department of Natural Resources and Environment	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (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 Permit to Install and/or Operate, that relate to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. MI-PTI-N6874-2011. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
303-00B	Sheet molding compound process including rollers, doctor boxes, fiber chopper, compaction, heater, mixers, and bulk molding mixers	FGSMCBMC

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, ft²

Ac = Area of chop-covered paste uncovered by carrier film on the machine, ft²

* 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 the MDNRE Report Certification form (EQP 5736) and MDNRE 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.