

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

EFFECTIVE DATE: May 1, 2024

ISSUED TO

**Harbor Foam, Inc.**

State Registration Number (SRN): N7754

LOCATED AT

2950 Prairie Street SW, Grandville, Kent County, Michigan 49418

**RENEWABLE OPERATING PERMIT**

Permit Number: MI-ROP-N7754-2024

Expiration Date: May 1, 2029

Administratively Complete ROP Renewal Application  
Due Between November 1, 2027, and November 1, 2028

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-N7754-2024

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 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 Environment, Great Lakes, and Energy

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Heidi Hollenbach, Grand Rapids 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).<sup>2</sup> **(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:"<sup>2</sup> **(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.<sup>1</sup> **(R 336.1901(a))**
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> **(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).<sup>2</sup> **(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 annual compliance certification (pursuant to Rule 213(4)(c)) shall be submitted to the USEPA through the USEPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through CDX (<https://cdx.epa.gov/>), unless it contains confidential business information then use the following address: 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.<sup>2</sup> **(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):
- June 21, 1999,
  - Three years after the date on which a regulated substance is first listed under 40 CFR 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.<sup>2</sup> **(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.<sup>2</sup> **(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.<sup>2</sup> **(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.<sup>2</sup> **(R 336.1201(4))**

#### **Footnotes:**

<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>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.

## SOURCE-WIDE CONDITIONS

### DESCRIPTION

All process equipment at the stationary source including equipment covered by other permits, grandfathered equipment, and exempt equipment.

### POLLUTION CONTROL EQUIPMENT

NA

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	Less than 224 tpy <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	SOURCE-WIDE	SC VI.2	<b>R 336.1205(3)</b>

\*For the first month following permit issuance, and continuing for the first 12 calendar months, this limit applies to the cumulative total VOC emissions. Thereafter, the limit shall become a 12-month rolling limit.

#### II. MATERIAL LIMIT(S)

NA

#### III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

#### 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))**

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> **(R 336.1205(3))**
- The permittee shall calculate the VOC emission rate from the facility monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>2</sup> **(R 336.1205)**

#### VII. REPORTING

- 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)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

### 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
EU35-07C	Hirsch 9000 resin pre-expander, canvas holding bags, Hirsch adjustable wall mold, hot room, wire cutting operations, embossing area, and other associated operations to produce expanded polystyrene (EPS) foam. This emission unit is for operation of the associated equipment before installation of the non-fugitive enclosure (NFE) and regenerative thermal oxidizer (RTO).	June 2007	NA
EUPLASTICRESIN	Expanded polystyrene foam operations including a Hirsch 9000 resin pre-expander, Hirsch 18000 resin pre-expander, pre-puff storage (canvas holding bags), molds, hot room, wire cutting operations, embossing area, regrind operations and other associated operations to produce expanded polystyrene (EPS) foam. Pre-expanders and pre-puff storage are controlled by a non-fugitive enclosure (NFE) and regenerative thermal oxidizer (RTO). This emission unit is for operation of the associated equipment after installation of the NFE and RTO.	June 2007 / TBD	NA

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

**EU35-07C  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Hirsch 9000 resin pre-expander, canvas holding bags, Hirsch adjustable wall mold, hot room, wire cutting operations, embossing area, and other associated operations to produce expanded polystyrene (EPS) foam. This emission unit is for operation of the associated equipment before installation of the non-fugitive enclosure (NFE) and regenerative thermal oxidizer (RTO).

**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. VOC	139.8 tpy <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month. Effective through August 31, 2021.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
2. VOC	164.8 tpy <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month. Effective from September 1, 2021, through February 28, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
3. VOC	159.8 tpy <sup>*2</sup>	12-month time period effective from April 1, 2021, through March 31, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
4. VOC	154.8 tpy <sup>*2</sup>	12-month time period effective from May 1, 2021, through April 30, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
5. VOC	149.8 tpy <sup>*2</sup>	12-month time period effective from June 1, 2021, through May 31, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
6. VOC	144.8 tpy <sup>*2</sup>	12-month time period effective from July 1, 2021, through June 30, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>
7. VOC	139.8 tpy <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month. Effective beginning July 1, 2022.	EU35-07C	SC V.1 SC VI.1 SC VI.6	<b>R 336.1702(a)</b>

\*SC I.3, I.4, I.5 and I.6 are monthly step downs in the emission limit to transition from the SC I.2 emission limit to the SC I.7 emission limit.

**II. MATERIAL LIMIT(S)**

- The VOC content of the EPS beads used in EU35-07C shall not exceed 6.3 pounds per 100 pounds of EPS beads processed, based upon a 12-month rolling time period as determined at the end of each month.<sup>2</sup> **(R 336.1225, R 336.1702(a))**

### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

### **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. Upon request of the AQD District Supervisor, the permittee shall verify the VOC content, as shipped, of product from EU35-07C, by testing at owner's expense, in accordance with Department requirements. The samples shall represent the full range of VOC content of EPS beads used in EU35-07C and shall support an estimate of the production-weighted average VOC content of product from EU35-07C. The permittee shall use sampling and analysis methods approved by the AQD District Supervisor.<sup>2</sup> **(R 336.1702(a))**

### **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 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> **(R 336.1225, R 336.1702)**
2. The permittee shall keep, in a satisfactory manner, a separate record of the pounds of VOC per 100 pounds of EPS beads for each shipment of EPS beads received. All records shall be kept on file and made available to the Department upon request.<sup>2</sup> **(R 336.1225, R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, a separate record of the pounds of scrap material processed by the grinder. All records shall be kept on file and made available to the Department upon request.<sup>2</sup> **(R 336.1225, R 336.1702(a))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the throughput of EPS beads at the pre-expander portion of EU35-07C. All records shall be kept on file and made available to the Department upon request.<sup>2</sup> **(R 336.1702(a))**
5. The permittee shall keep, in a satisfactory manner, records of the VOC content, as shipped, of product from EU35-07C. All records of VOC content determinations shall be kept on file and made available to the Department upon request.<sup>2</sup> **(R 336.1702(a))**
6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU35-07C using the method detailed in Appendix A. All records shall be kept on file and made available to the Department upon request.<sup>2</sup> **(R 336.1702(a))**

### **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-1	24 <sup>2</sup>	43 <sup>2</sup>	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SV-2	16 <sup>2</sup>	41 <sup>2</sup>	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the requirements of EU35-07C until the NFE and RTO have been installed and any emissions from the pre-expanders or pre-puff storage are exhausted to the control equipment. Once emissions from the pre-expanders and pre-puff storage are captured by the NFE and controlled by the RTO, the requirements in EU35-07C are no longer applicable.<sup>2</sup> **(R 336.1201)**

**Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EUPLASTICRESIN  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Expanded polystyrene foam operations including a Hirsch 9000 resin pre-expander, Hirsch 18000 resin pre-expander, pre-puff storage (canvas holding bags), molds, hot room, wire cutting operations, embossing area, regrind operations and other associated operations to produce expanded polystyrene (EPS) foam. Pre-expanders and pre-puff storage are controlled by a non-fugitive enclosure (NFE) and regenerative thermal oxidizer (RTO). This emission unit is for operation of the associated equipment after installation of the NFE and RTO.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

The pre-expanders and pre-puff storage are controlled by a non-fugitive enclosure (NFE) and regenerative thermal oxidizer (RTO).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	223.5 tpy**2	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC V.1, V.2, V.3, V.4, V.5, VI.2, VI.3, VI.4, VI.5.	<b>R 336.1205 R 336.1702(a)</b>

\*\*12-month rolling time period emission calculations for EUPLASTICRESIN shall include prior emissions from associated equipment in EU35-07C.

**II. MATERIAL LIMIT(S)**

1. The VOC content of the EPS beads used in EUPLASTICRESIN, based on the monthly average bead VOC content, shall not exceed 6.3 pounds per 100 pounds of EPS beads processed.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a))**

2. The permittee shall not exceed the material usage limits in the following table:

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
a. EPS beads used for molded foam density of 1.0 lbs/ft <sup>3</sup>	5,000,000 <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC VI.2	<b>R 336.1205(1)(a) &amp; (3)</b>
b. EPS beads used for molded foam density of 1.25 lbs/ft <sup>3</sup>	4,000,000 <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC VI.2	<b>R 336.1205(1)(a) &amp; (3)</b>
c. EPS beads used for molded foam density of 1.5 lbs/ft <sup>3</sup>	12,000,000 <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC VI.2	<b>R 336.1205(1)(a) &amp; (3)</b>

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
d. EPS beads used for molded foam density of 2.0 lbs/ft <sup>3</sup>	12,000,000 <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC VI.2	<b>R 336.1205(1)(a) &amp; (3)</b>
e. EPS beads used for molded foam density of 3.0 lbs/ft <sup>3</sup>	2,000,000 <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUPLASTICRESIN	SC VI.2	<b>R 336.1205(1)(a) &amp; (3)</b>

3. The permittee shall not regrind more than 2,000,000 pounds of EPS foam per 12-month rolling time period as determined at the end of each calendar month.<sup>2</sup> **(R 336.1205(1)(a) & (3))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EUPLASTICRESIN unless a malfunction abatement plan (MAP) as described in Rule 911(2), is implemented and maintained. The MAP shall include:
- a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, records of maintenance activities performed, records of calibration of the RTO temperature monitoring device, and a description of the method of monitoring or surveillance procedures.
  - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

2. The permittee shall not operate the pre-expanders or pre-puff storage unless the NFE is installed, maintained, and operated in a satisfactory manner. Satisfactory operation requires that the NFE is operating at a pressure lower than all adjacent areas, so that air flows into the NFE through all natural draft openings (NDOs). NDO is defined as any opening that is not connected to a duct in which a fan or blower is installed.<sup>2</sup> **(R 336.1205, R 336.1702(a))**
3. The permittee shall not operate the pre-expanders or pre-puff storage unless the NFE is vented to the RTO and the RTO is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum VOC destruction efficiency in the regenerative thermal oxidizer of 98.0 percent by weight and a minimum combustion temperature of 1500°F.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a temperature monitoring device in the combustion chamber of the RTO to monitor and record the temperature on a continuous basis.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**

#### **V. TESTING/SAMPLING**

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

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC content, as shipped, of product from EUPLASTICRESIN, by testing at owner's expense, in accordance with Department requirements. The samples shall represent the full range of VOC content of EPS beads used in EUPLASTICRESIN and shall support an estimate of the production-weighted average VOC content of product from EUPLASTICRESIN. The permittee shall use sampling and analysis methods approved by the AQD District Supervisor.<sup>2</sup> **(R 336.1205, R 336.1702(a))**
2. Notwithstanding the provisions of SC V.1, the permittee shall determine the VOC content, as received and as shipped, of product from EUPLASTICRESIN. The permittee shall use sampling and analysis methods approved by the AQD District Supervisor. An approved analysis may include, but is not limited to, a Certificate of Analysis obtained from the manufacturer for every batch received. The samples, or batches, shall represent the full range of VOC content of EPS beads used in EUPLASTICRESIN and shall support an estimate of the production-weighted average fraction of VOC retained in product from EUPLASTICRESIN. **(R 336.1213(3))**
3. The permittee shall determine the VOC content of the regrind, or densified scrap, from EUPLASTICRESIN. The permittee shall use sampling and analysis methods approved by the AQD District Supervisor. The results shall be submitted to the AQD District Supervisor in an acceptable format within 14 days following the receipt of analytical results.<sup>2</sup> **(R 336.1213(3))**
4. The permittee shall conduct the required sampling and analysis outlined in SC V.2 and SC V.3 on an annual basis or on an alternate sampling schedule or analysis approved by the AQD District Supervisor.<sup>2</sup> **(R 336.1213(3))**
5. Within 180 days after commencement of trial operation of the RTO, the permittee shall verify the VOC emission rates from the RTO and the RTO destruction efficiency, 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 and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**
6. Within 180 days after commencement of trial operation of the RTO, and annually thereafter, the permittee shall verify that the direction of air flow at each natural draft opening (NDO) is into the NFE, using a smoke test (i.e., smoke bomb, smoke tube) or an approved alternate method. The permittee shall notify the AQD District Supervisor in writing at least 15 days before the test is scheduled. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of air flow direction includes the submittal of a complete report of the test results to the AQD District Supervisor within 30 days following the date of the test. After two consecutive tests demonstrate that the direction of air flow at each NDO is into the non-fugitive enclosure, the permittee may submit a request for a change in the testing frequency to the AQD District Supervisor for review and approval.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a))**

7. Within 180 days after commencement of the trial operation of the RTO, and annually thereafter, the permittee shall determine the weight fraction of VOC in the raw beads that is emitted from the controlled portion of EUPLASTICRESIN (pre-expansion and pre-puff storage), and the weight fraction of VOC in the raw beads that is emitted from the uncontrolled portion of EUPLASTICRESIN (molding, cutting and storage). These VOC emission rates shall be determined for each density of foam produced (i.e. 1.0 lbs/ft<sup>3</sup>, 1.25 lbs/ft<sup>3</sup>, 1.5 lbs/ft<sup>3</sup>, 2.0 lbs/ft<sup>3</sup>, and 3.0 lbs/ft<sup>3</sup>). The permittee shall use sampling and analysis methods approved by the AQD District Supervisor.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a))**
8. Within 180 days after commencement of the trial operation of the RTO, and annually thereafter, the permittee shall determine the weight fraction of VOC in the foam that is used in the regrind process; and the weight fraction of the VOC in the final compressed product from the reground foam. The permittee shall use sampling and analysis methods approved by the AQD District Supervisor.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a))**
9. The permittee shall verify the VOC emission rates from pre-expanders and pre-puff storage, at a minimum, every five years from the date of the last test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
10. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

## **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 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702)**
2. The permittee shall keep, in a satisfactory manner, records of the following:
  - a. A separate record of each shipment of EPS beads received which includes the total weight (in pounds) of each shipment of EPS beads and the VOC content (in pounds of VOC per 100 pounds of EPS beads) for each shipment of EPS beads.
  - b. Monthly records of the amount of each shipment of EPS beads processed which includes the weight (in pounds) of each batch processed, and the VOC content (in pounds of VOC per 100 pounds of EPS beads) for each batch processed.
  - c. Monthly records of the average VOC content (in pounds of VOC per 100 pounds of EPS beads) of the EPS beads processed that month.

The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request<sup>2</sup>. **(R 336.1205, R 336.1225, R 336.1702(a))**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the throughput of the following:
  - a. The amount (in pounds) of EPS beads used to produce foam with a final density of 1.0 lbs/ft<sup>3</sup>.
  - b. The amount (in pounds) of EPS beads used to produce foam with a final density of 1.25 lbs/ft<sup>3</sup>.
  - c. The amount (in pounds) of EPS beads used to produce foam with a final density of 1.50 lbs/ft<sup>3</sup>.
  - d. The amount (in pounds) of EPS beads used to produce foam with a final density of 2.0 lbs/ft<sup>3</sup>.
  - e. The amount (in pounds) of EPS beads used to produce foam with a final density of 3.0 lbs/ft<sup>3</sup>.
  - f. The amount (in pounds) of scrap material processed by the grinder.

The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EUPLASTICRESIN using the method detailed in Appendix A. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.<sup>2</sup> **(R 336.1205, R 336.1702(a))**
5. The permittee shall monitor and record, in a satisfactory manner, the regenerative thermal oxidizer combustion chamber temperature on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
6. The permittee shall conduct weekly inspections of the RTO incinerator and blower during production, as specified in the MAP and the CAM Plan. **(40 CFR 64.6(c)(1)(i))**
7. The permittee shall conduct weekly, monthly, quarterly, and semi-annual inspections, part replacements and calibrations of the capture system as specified in the MAP and CAM plan. **(40 CFR 64.6(c)(1)(i))**
8. The permittee shall continuously monitor and record the combustion chamber temperature as an indicator of proper operation of the RTO. The minimum temperature is 1,500°F. **(40 CFR 64.6(c)(1)(i and ii))**
9. The permittee shall evaluate the capture efficiency of the capture system by monitoring the pressure drop across the NFE. This shall be monitored continuously on a data acquisition system or other method and recorded continuously. The indicator range is -1.0 to 1.0" water column. **(40 CFR 64.3(a)(2))**
10. The temperature monitor shall continuously monitor the RTO combustion chamber temperature. The averaging period is hourly. The monitor shall be calibrated according to the manufacturer recommendations, or semi-annually, whichever is more frequent. **(40 CFR 64.6(c)(1)(iii))**
11. The pressure monitoring system shall continuously monitor the capture system static pressure. The averaging period is hourly. The monitor shall be calibrated according to manufacturer recommendations or every six months, whichever is more frequent. **(40 CFR 64.6(c)(1)(iii))**
12. An excursion is identified as a departure from the following indicators: **(40 CFR 64.6(c)(2))**
  - a. RTO combustion zone temperature measurement of less than 1,500°F.
  - b. Any static pressure reading more than -0.009" WC.
  - c. Failure to perform inspections, maintenance, replacements, or calibrations as specified in SC VI.8 and SC VI.9.
13. For each control device in operation, the permittee shall conduct bypass monitoring for each bypass line such that the valve or closure method cannot be opened without creating an alarm condition for which a record shall be made. Records of the bypass line that was opened and the length of time the bypass line was opened shall be kept on file. **(40 CFR 64.3(a)(2))**
14. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the regenerative thermal oxidizer and associated capture system to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). If the duration of the temperature excursion exceeds 10 minutes, the coating line operation will be curtailed. All excursions will be documented. If the temperature is below 1,525 °F it is considered an exceedance and is reported. If the pressure is greater than -0.009 inches of water column, Worthen will assess the system operations and determine if any corrective action is necessary. If the pressure is greater than -0.007 inches of water column, it is considered an exceedance and is reported. **(40 CFR 64.7(d))**

15. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emission unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
16. The permittee shall properly maintain the monitoring systems, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**
17. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

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))**
4. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of the RTO.<sup>2</sup> **(R 336.1201(7)(a))**

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-RTO	34 <sup>2</sup>	45 <sup>2</sup>	<b>R 336.1225, 40 CFR 52.21(c) &amp; (d)</b>

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the requirements listed in EUPLASTICRESIN after emissions from the pre-expanders and pre-puff storage are captured by the NFE and controlled by the RTO.<sup>2</sup> **(R 336.1205, R 336.1225, R 336.1702)**
2. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**
3. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

**Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## **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.

## **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 <sub>2</sub> e	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
EGLE	Michigan Department of Environment, Great Lakes, and Energy	HAP	Hazardous Air Pollutant
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallons of Applied Coating Solids	HP	Horsepower
GC	General Condition	H <sub>2</sub> S	Hydrogen Sulfide
GHGs	Greenhouse Gases	kW	Kilowatt
HVLP	High Volume Low Pressure*	lb	Pound
ID	Identification	m	Meter
IRSL	Initial Risk Screening Level	mg	Milligram
ITSL	Initial Threshold Screening Level	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NMOC	Non-methane Organic Compounds
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SDS	Safety Data Sheet	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
VE	Visible Emissions	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		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**

There are no specific testing requirement plans or procedures for this ROP. 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-N7754-2018. 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-N7754-2018 is being reissued as Source-Wide PTI No. MI-PTI-N7754-2024.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
35-07C	20210114	Temporary increase in VOC limits.	EU35-07C
35-07D*	20220310	Increase in VOC limits with installation of RTO for VOC control from the pre-expanders and pre-puff storage.	EUPLASTICRESIN

**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 EUPLASTICRESIN.

- I. Emission calculations shall be performed using the emissions profile based on the VOC content of the EPS bead used and the final product density of the foam produced. For each lot of EPS beads (*i*) used in the processes, the VOC emissions for the calendar period shall be calculated as follows:

$$E_i = \frac{PC}{100} \left[ \left( U_i \times \frac{V_i}{100} \right) - \left( U_i \times \frac{V_i}{100} \times \frac{CE \times DE}{100} \right) \right] + \frac{PF}{100} \left( U_i \times \frac{V_i}{100} \right)$$

where:

- $E_i$  = VOC emissions (in pounds) due to use of EPS beads from lot  $i$  during the calendar period.
- $U_i$  = EPS beads (in pounds) from lot  $i$  used during the calendar period.
- $V_i$  = VOC content of EPS beads (in pounds per 100 pounds of beads) from lot  $i$ .
- $PC$  = Percent Controlled: weight fraction (percent) of VOC in the raw beads that is emitted during pre-expansion and pre-puff storage; and controlled by the NFE and RTO. Based upon most recent test results (EUPLASTICRESIN SC V.4).
- $PF$  = Percent Fugitive: weight fraction (percent) of VOC in the raw beads that is emitted during molding, cutting and storage. Based upon most recent test results (EUPLASTICRESIN SC V.4).
- $PR$  = Percent Retained: weight fraction (percent) of the VOC in the raw beads that remains in the foam product. Based upon most recent test results (EUPLASTICRESIN SC V.4).
- $CE$  = Capture efficiency of the NFE (percent). The default value for this shall be 90.0 percent.
- $DE$  = VOC destruction efficiency (percent of VOC in the inlet to the RTO that is destroyed in the RTO) of the thermal oxidizer. The default value for this shall be 98.0 percent; the actual tested value may be used with the approval of the AQD District Supervisor.

II. The VOC emissions for the calendar period from the grinding of scrap material shall be calculated as follows:

$$E_i(\text{scrap}) = U_i \left( \frac{V_s - V_r}{100} \right)$$

where:

- $E_i(\text{scrap})$  = VOC emissions (in pounds) due to grinding of EPS foam from lot  $i$  and producing a recycled product during the calendar period, in pounds.
- $U_i$  = EPS beads (in pounds) from lot  $i$  used during the calendar period.
- $V_s$  = VOC content of EPS foam scrap (in pounds per 100 pounds of beads) from lot  $i$ . Based upon most recent test results (EUPLASTICRESIN SC V.5).
- $V_r$  = VOC content of recycled product EPS foam scrap (in pounds per 100 pounds of beads) from lot  $i$ . Based upon most recent test results (EUPLASTICRESIN SC V.5).

III. The total VOC emission for the calendar period due to the use in the processes of all lots of EPS beads shall be calculated as follows:

$$T = \sum_i E_i + \sum_i E_i(\text{scrap})$$

where:

- $T$  = Total VOC emissions for all lots of beads processed during the calendar period, in pounds.
- $E_i$  = VOC emissions (in pounds) due to use of EPS beads from lot  $i$  during the calendar period, calculated as above.
- $E_i(\text{scrap})$  = VOC emissions (in pounds) due to grinding of EPS foam from lot  $i$  and producing a recycled product during the calendar period, in pounds, calculated as above.

## 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.