

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

EFFECTIVE DATE: September 1, 2020
REVISION DATES: March 1, 2021, February 23, 2024, January 8, 2025

ISSUED TO

Corteva AgriScience LLC (Corteva)

State Registration Number (SRN): B4942

LOCATED AT

305 North Huron Avenue, Harbor Beach, Huron County, Michigan 48441

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B4942-2020c

Expiration Date: September 1, 2025

Administratively Complete ROP Renewal Application Due Between
March 1, 2024 and March 1, 2025

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-B4942-2020c

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



Gina McCann, Bay City District Supervisor

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AUTHORITY AND ENFORCEABILITY

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

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

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

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

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

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

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

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

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

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
- 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.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- 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(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 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 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.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

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.

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. Formaldehyde	35.07 tpy ¹	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1225(2)

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))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.¹ (R 336.1225(2))
2. The permittee shall calculate formaldehyde emission rates Source-wide for each calendar month and rolling 12-month time period using a method acceptable to the AQD District Supervisor.¹ (R 336.1225(2))

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)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

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
EUPROCESS	Insect management product production process. The manufacturing process consists of fermentation, extraction, crystallization, evaporation, continuous belt filter, centrifuge, vacuum and steam dryer equipment. The emission group also includes a raw material storage tank for glucose, one organic oil tank, and two solvent tanks. Emissions from the production process are vented to the thermal treatment units. Emissions from the bioreactor are controlled by an enclosed flare. This emission unit is subject to 40 CFR Part 63, Subpart MMM and 40 CFR Part 64. (PTI No. 107-18D)	01-18-1996 10-26-1998 11-18-2004 12-29-2005 08-04-2006 10-09-2008 2011 2017 2018 03-07-2019 03-31-2020 01-25-2023	FGPAIPMACT
EUAMMONIATK	20,000-gallon capacity anhydrous ammonia storage tank. (PTI No. 142-95A)	01-18-1996	NA
EUKOHLER38RCL	38 kW, 60 Hz, 75 HP emergency generator fired on liquified petroleum gas exempt from Rule 201 pursuant to Rule 278 and Rule 285(2)(g). Certified by the USEPA to conform to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60, Subpart JJJJ).	08-2019	NA
EUSOLIDHAND1	(F-585A) Solids handling process used for packaging of dry Spinosad product that is manufactured by EUPROCESS. Particulate emissions are controlled by filters of the sock and cage style that use pulsed nitrogen to knock down accumulated dust. This unit vents to the TTUs. (PTI No. 107-18B)	10-01-2000 03-31-2020	FGSOLIDHAND

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUSOLIDHAND2	(F-586) Solids handling process used for packaging of dry Spinosad product that is manufactured by EUPROCESS. Particulate emissions are controlled by filters of the sock and cage style that use pulsed nitrogen to knock down accumulated dust. The vacuum source pulls through this filter and the exhaust from the dual filter system and dryer vent to the TTUs. (PTI No. 107-18B)	08-01-1996 03-31-2020	FGSOLIDHAND
EUSOLIDHAND3	Dust Collector #3 exhausts to the in-plant environment. Dust Collector #3 is a Nilfisk A15 EXP air driven venture style dust collector. (PTI No. 107-18B)	11-30-2011 03-31-2020	FGSOLIDHAND
EUNBURNER	Coen Company, Inc. burner installed in the exhaust duct of the North Turbine to provide supplemental heat to the heat recovery steam generator. The duct burner has a nominal heat input rate of 30 MMBTU/hr and has the capacity to fire natural gas. (PTI No. 303-98E)	11-01-1998	FGBURNERS FGUTILITIES
EUSBURNER	Coen Company, Inc. burner installed in the exhaust duct of the South Turbine to provide supplemental heat to the heat recovery steam generator. The duct burner has a nominal heat input rate of 30 MMBTU/hr and has the capacity to fire natural gas. (PTI No. 303-98E)	11-01-1998	FGBURNERS FGUTILITIES
EUNTURBINE	Solar Turbines, Inc. natural gas fired turbine engine, model Centaur 40-T4700S, equipped with SoLoNOx combustor. Turbine engine is rated for 4700 horsepower and 42.47 MMBTU/hr heat input. (PTI No. 303-98E)	11-01-1998	FGTURBINES FGUTILITIES
EUSTURBINE	Solar Turbines, Inc. natural gas fired turbine engine, model Centaur 40-T4700S, equipped with SoLoNOx combustor. Turbine engine is rated for 4700 horsepower and 42.47 MMBTU/hr. heat input. (PTI No. 303-98E)	11-01-1998	FGTURBINES FGUTILITIES
EUCOLDCLEANER	Cold cleaner exempt from Rule 201 pursuant to Rule 278 and Rule 281(h)	07-19-2011	FGCOLDCLEANERS

EUPROCESS EMISSION UNIT CONDITIONS

DESCRIPTION

Insect management product production process. The manufacturing process consists of fermentation, extraction, crystallization, evaporation, continuous belt filter, centrifuge, vacuum, and steam dryer equipment. The emission group also includes a raw material storage tank for glucose, one organic oil tank, and two solvent tanks. Emissions from the production process are vented to the thermal treatment units. Emissions from the bioreactor are controlled by an enclosed flare. This emission unit is subject to 40 CFR Part 63, Subpart MMM – National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production, and 40 CFR Part 64 – Compliance Assurance Monitoring. (PTI No. 107-18D)

Flexible Group ID: FGPAIPMACT

POLLUTION CONTROL EQUIPMENT

- Four (4) Catalytic Thermal Treatment Units (TTUs) that operate at 30,000 cubic feet per minute (cfm) each, identified as:
 - TTU-850
 - TTU-855
 - TTU-860
 - TTU-865
- One regenerative thermal oxidizer (RTO), also a TTU, that operates at 30,000 to 38,000 standard cubic feet per minute (scfm), identified as TTU-870
- Enclosed Flare

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Organic HAP*	20 ppmv ⁺²	Daily Average	EUPROCESS emissions exhausted through TTU-850	SC V.1, SC V.2, SC VI.9, SC VI.11, SC VI.13,	40 CFR 63.1362(b)
2. Organic HAP*	20 ppmv ⁺²	Daily Average	EUPROCESS emissions exhausted through TTU-855	SC V.1, SC V.2, SC VI.9, SC VI.11, SC VI.13,	40 CFR 63.1362(b)
3. Organic HAP*	20 ppmv ⁺²	Daily Average	EUPROCESS emissions exhausted through TTU-860	SC V.1, SC V.2, SC VI.9, SC VI.11, SC VI.13,	40 CFR 63.1362(b)
4. Organic HAP*	20 ppmv ⁺²	Daily Average	EUPROCESS emissions exhausted through TTU-865	SC V.1, SC V.2, SC VI.9, SC VI.11, SC VI.13,	40 CFR 63.1362(b)
5. Organic HAP*	20 ppmv or 98% destruction ²	Daily Average	EUPROCESS emissions exhausted through TTU-870	SC V.3, SC VI.13	40 CFR 63.1362(b)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. VOC	13.99 lb/hr ²	Hourly	EUPROCESS emissions exhausted through each TTU: TTU-850, TTU-855, TTU-860, TTU-865, and TTU-870	SC V.1, SC V.3	R 336.1225 R 336.1702(a)
7. VOC	53.60 tpy ²	12-month rolling time period as determined at the end of each calendar month	EUPROCESS	SC VI.7	R 336.1702(a)
8. Ammonia	31 lb/hr ¹	Hourly	EUPROCESS	SC V.1, SC V.3	R 336.1225
9. Ammonia	2.0 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EUPROCESS	SC VI.8	R 336.1224
10. PM	0.006 lb/1000 lb of exhaust gas, calculated on a dry gas basis ²	Hourly	EUPROCESS emissions exhausted through each TTU: TTU-850, TTU-855, TTU-860, TTU-865, and TTU-870	SC V.1, SC V.3	R 336.1331
11. Formaldehyde	13.1 lb/hr ¹	Hourly	EUPROCESS	SC V.1, SC V.3, SC VI.13	R 336.1225(2)
12. Methanol	13.99 lb/hr ¹	Hourly	EUPROCESS	SC V.1, SC V.3, SC VI.13	R 336.1225

* Organic HAP as defined in 40 CFR 63.1361

+ Alternative Operating Parameter per Alternative Monitoring Request (AMR) (**40 CFR 63.1362(b)(2)(iv)(A)**).

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate the EUPROCESS bioreactor unless the enclosed flare is installed, maintained, and operated in a satisfactory manner.² (**R 336.1225, R 336.1702(a), R 336.1910, 40 CFR Part 63, Subpart MMM**)
- The permittee shall not operate EUPROCESS unless a malfunction abatement plan (MAP) for the thermal treatment units that includes the Fourier Transform Infrared Spectroscopy (FTIR) continuous monitor and Catalyst Inspection and Maintenance Plan, as described in Rule 911(2), is implemented and maintained. 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 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.² (**R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR Part 63, Subpart MMM**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the temperature of each TTU on a continuous basis. For the purpose of this condition, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes for at least 90% of the operating time during an operating calendar day. In the event the permittee collects more than one data point during the 15-minute period, the data point recorded may be the average (rolling or block) of all data points recorded during the 15-minute period. Unless otherwise noted in this permit, the permittee is not required to monitor and record operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies.² **(R 336.1225, R 336.1910)**
2. The permittee shall operate a continuously burning pilot flame at the enclosed flare at all times when the EUPROCESS bioreactor is operating. In the event that the pilot flame is extinguished, shutdown of all feed streams to the EUPROCESS bioreactor shall commence automatically within one second. The permittee shall not restart operation of the EUPROCESS bioreactor unless the pilot flame is re-ignited and maintained. Pilot fuel shall be only sweet natural gas.² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR Part 63, Subpart MMM)**
3. The permittee shall not operate the portions of EUPROCESS ducted to TTU-850, TTU-855, TTU-860, TTU-865, and TTU-870 unless the associated thermal treatment unit is installed, maintained and operated in a satisfactory manner, as described below.² **(R 336.1225, R 336.1702(a), R 336.1331, R 336.1910, 40 CFR Part 63, Subpart MMM)**
 - a. Satisfactory operation of each catalytic thermal treatment unit (TTU-850, TTU-855, TTU-860, and TTU-865) includes all of the following:
 - i. A maximum outlet organic HAP concentration of 20 ppmv on a daily average;
 - ii. Maintaining a minimum daily average temperature as specified in the most recent Notice of Compliance Status Report (or other temperature determined by the most recent compliance demonstration);
 - iii. Maintaining a minimum retention time of 0.5 seconds;
 - b. Satisfactory operation of TTU-870 includes all the following:
 - i. A maximum outlet organic HAP concentration of 20 ppmv on a daily average or minimum organic HAP destruction of 98%;
 - ii. Maintaining a minimum combustion chamber temperature as specified in the approved MAP.
4. The permittee shall not operate the portions of EUPROCESS ducted to TTU-850, TTU-855, TTU-860, TTU-865, and TTU-870 unless FTIR monitoring system is installed, maintained, and operated in a satisfactory manner as described in the MAP.² **(40 CFR Part 63, Subpart MMM)**

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, PM, HAPs, and/or ammonia concentrations and/or emission rates from any or all of the four catalytic TTUs (850, 855, 860, and 865), by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOC	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
HAPs	40 CFR Part 63, Appendix A
Ammonia	40 CFR Part 63, Appendix A, ASTM D6348, Conditional Test Method 027

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 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.² **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. Pursuant to the approved Alternative Monitoring Request (AMR), the permittee shall conduct periodic performance sampling according to the methodology and frequency described in the AMR.² **(40 CFR Part 63, Subpart MMM)**
3. Upon request of the AQD District Supervisor, the permittee shall verify organic HAP, VOC, ammonia, and/or PM emission rates and/or organic HAP destruction efficiency from TTU-870 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
HAPs	40 CFR Part 63, Appendix A
VOCs	40 CFR Part 60, Appendix A
Ammonia	40 CFR Part 63, Appendix A, ASTM D6348, Conditional Test Method 027
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules

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.² **(R 336.1205, R 336.1225, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004)**

4. The permittee shall verify the HAPs, VOC, Ammonia, and PM emission rates from TTU-870, 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)**
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are 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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall keep, in a satisfactory manner, monthly production records for EUPROCESS.² **(R 336.1224, R 336.1702(a))**
3. The permittee shall monitor and record, in a satisfactory manner, the daily average temperature in each catalytic TTU (850, 855, 860, and 865) each day that the TTU operates.² **(R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall monitor and record, in a satisfactory manner, the inlet and outlet catalyst temperature for each catalytic TTU (850, 855, 860, and 865).² **(R 336.1910, 40 CFR 63.1366(b)(1)(viii))**
5. The permittee shall monitor and record, in a satisfactory manner, the combustion chamber temperature for TTU-870. The frequency of monitoring and recording of temperatures shall be as described in the approved MAP.² **(R 336.1910, 40 CFR 63.1366(b)(1)(vii))**
6. The permittee shall keep, in a satisfactory manner, records of catalyst regeneration hours and temperature.² **(R 336.1910, 40 CFR Part 63, Subpart MMM)**
7. The permittee shall calculate the VOC emission rate from EUPROCESS monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor.² **(R 336.1702(a))**

8. The permittee shall calculate the ammonia emission rates from EUPROCESS monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor.¹ **(R 336.1224)**
9. The permittee shall monitor and record, in a satisfactory manner, total hydrocarbon concentration on each catalytic TTU outlet stack (SV00003, SV00004, SV00005, and SV00006) pursuant to the approved AMR.² **(40 CFR Part 63, Subpart MMM)**
10. The permittee shall maintain a current list of the materials emitted from EUPROCESS that are determined to be exempt from the health-based screening level requirement of Rule 225 pursuant to Rule 226(a). The list shall include the compound name and CAS number and a calculation demonstrating the emission rate of each material. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1225)**
11. The permittee shall comply with the alternative monitoring agreement for the catalytic TTUs (850, 855, 860, and 865) as outlined in EPA's letter dated September 20, 2022 (or any subsequent revisions).² **(40 CFR Part 63, Subpart MMM)**
12. The permittee shall monitor and record the following for each catalytic thermal treatment unit (TTU-850, TTU-855, TTU-860, and TTU-865):
 - a. The amount of combustion air fed to the unit, by volume, on a continuous basis;
 - b. The amount of natural gas fed to the unit, by volume, on a continuous basis;
 - c. The hourly average ratio of combustion air to natural gas.

For the purpose of this condition, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes for at least 90% of the operating time during an operating calendar day. In the event the permittee collects more than one data point during the 15-minute period, the data point recorded may be the average (rolling or block) of all data points recorded during the 15-minute period. Unless otherwise noted in this permit, the permittee is not required to monitor and record operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies.² **(R 336.1910)**
13. The permittee shall continuously monitor and record, in a satisfactory manner acceptable to the AQD District Supervisor, the organic HAP emissions from TTU-850, TTU-855, TTU-860, TTU-865, and TTU-870. The permittee shall operate the continuous Fourier Transform Infrared Spectroscopy monitoring system pursuant to the approved AMR.² **(40 CFR Part 63, Subpart MMM)**
14. The temperature monitors shall continuously monitor the combustion chamber temperature and record every 15 minutes for a daily average as an indicator of proper operation of the TTU. The indicator range for TTU-850, TTU-855, TTU-860 and TTU-865 includes maintaining a minimum daily average temperature of 650 degrees F (or other temperature determined by the most recent compliance demonstration). The indicator range for TTU-870 includes maintaining a minimum combustion chamber temperature of 1,500 degrees F (or other temperature as specified in the approved MAP). The temperature monitors shall be calibrated annually. **(40 CFR 64.6(c)(1))**
15. For TTU-850, TTU-855, TTU-860 and TTU-865, an excursion is a departure from the minimum daily average temperature of 650 degrees F (or other temperature determined by the most recent compliance demonstration). For TTU-870, an excursion is a departure from the minimum daily average temperature of 1,500 degrees F (or other temperature as specified in the approved MAP). **(40 CFR 64.6(c)(2))**
16. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device 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). The

corrective actions are specified in the “Request to Establish Alternative Parameters for Control Devices Subject to Pesticides Active Ingredient MACT.” **(40 CFR 64.7(d))**

17. 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 emissions 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))**
18. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
6. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

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. SV00003 (TTU-850)	48 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV00004 (TTU-855)	48 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV00005 (TTU-860)	48 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SV00006 (TTU-865)	48 ²	90 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV00017 (TTU-870)	36 x 78 ²	35 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVFLARE (Bioreactor)	32 ²	30 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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 MMM, as they apply to EUPROCESS.² **(40 CFR Part 63, Subpart MMM)**
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 EEEE, as they apply to EUPROCESS.² **(40 CFR Part 63, Subparts A and EEEE)**
3. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**
4. 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 ROP and 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:

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

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

EUAMMONIATK EMISSION UNIT CONDITIONS

DESCRIPTION

20,000-gallon capacity anhydrous ammonia storage tank. (PTI No. 142-95A)

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the ammonia facility unless an inspection and maintenance program, as approved by the AQD District Supervisor, has been implemented and maintained.² **(R 336.1201(3))**
2. The permittee shall not operate the ammonia facility unless a remotely operated internal or external positive shut-off valve is installed to allow access for emergency shut-off of all flow from stationary storage containers.² **(R 336.1201(3))**
3. The permittee shall not operate the ammonia facility unless a bulkhead, anchorage, or equivalent system is used at each transfer area so that any break resulting from a pull will occur at a predictable location while retaining intact the valves and piping on the plant side of the transfer area.² **(R 336.1201(3))**
4. The permittee shall not conduct any ammonia transfer operations unless all transfer operations including transport deliveries are performed by a reliable person properly trained and made responsible for proper compliance with all applicable procedures.² **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The hose used for transferring liquid and /or vapor to and from ammonia storage tanks shall not exceed 25 feet in length.² **(R 336.1201(3))**
2. All ammonia transfer hoses shall be replaced five years after date of manufacture or more often if there is evidence of damage or deterioration.² **(R 336.1201(3))**

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))**

NA

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. SV00011	8 ²	85 ²	R 336.1201(3), R 336.1230

IX. OTHER REQUIREMENT(S)

1. Except where specific requirements of these special conditions are applicable and more stringent, the anhydrous ammonia storage and handling facilities, shall conform to relevant requirements of the American Society of Mechanical Engineers (ASME) Code, Section VIII, Div. 1, for the Storage and Handling of Anhydrous Ammonia. A copy of this standard shall be maintained for inspection at the facility.² **(R 336.1201(3))**
2. After each ammonia transfer operation is completed, the applicant shall vent the hoses used to transfer the ammonia to a stack with a maximum diameter of 8 inches and an exit point not less than 85 feet above ground level. This shall be done in a manner that minimizes any spillage of liquid ammonia from the hoses.² **(R 336.1201(3), R 336.1230))**

Footnotes:

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

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

EUKOHLER38RCL EMISSION UNIT CONDITIONS

DESCRIPTION

38 kW, 60 Hz, 75 HP stationary spark ignition (SI) emergency internal combustion engine (ICE) fired on liquified petroleum gas exempt from Rule 201 pursuant to Rule 278 and Rule 285(2)(g). Certified by the USEPA to conform to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60, Subpart JJJJ).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	10 g/HP-hr ^a	Hourly	EUKOHLER38RCL	SC VI.1 – VI.4	40 CFR 60.4233(d), Table 1, 40 CFR Part 60, Subpart JJJJ
2. CO	387 g/HP-hr	Hourly	EUKOHLER38RCL	SC VI.1 – VI.4	40 CFR 60.4233(d), Table 1, 40 CFR Part 60, Subpart JJJJ

^aThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NOx + HC.

3. The permittee must comply with the emission standards in 40 CFR 60.4231(c). **(40 CFR 60.4233(c))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operation and maintain EUKOHLER38RCL over the entire life of the engine. **(40 CFR 60.4234)**
- The permittee shall install a non-resettable hour meter upon startup of EUKOHLER38RCL. **(40 CFR 60.4237(c))**
- In order for the engine to be considered an emergency SI ICE under 40 CFR Part 60, Subpart JJJJ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in SC III.4 and III.5, is prohibited. If the engine is not operated according to the requirements in SC III.4 and III.5, the engine will not be considered an emergency engine under 40 CFR Part 60, Subpart JJJJ and must meet all requirements for non-emergency engines. **(40 CFR 60.4243(d))**

4. The permittee may operate the emergency SI ICE for any combination of the purposes specified in 40 CFR 60.4243(d)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by SC III.5 counts as part of the 100 hours per calendar year allowed by this condition. **(40 CFR 60.4243(d)(2))**
5. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in SC III.4. Except as provided in 40 CFR 60.4243(d)(3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. If the permittee does not operate and maintain the certified SI ICE and control device according to manufacturer's written emission-related instructions, the permittee is required to perform initial performance testing as indicated in 40 CFR 60.4243, but is not required to conduct subsequent performance testing unless the SI ICE is rebuilt or undergoes major repair or maintenance. **(40 CFR 60.4243(f))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee must comply with 40 CFR Part 60, Subpart JJJJ by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, the permittee must meet one of the requirements specified in SC VI.2 and VI.3. **(40 CFR 60.4243(a))**
2. If the permittee operates and maintains the certified stationary SI ICE and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance. The permittee must also meet the requirements as specified in 40 CFR Part 1068, Subparts A through D, as they apply. **(40 CFR 60.4243(a)(1), 40 CFR 60.4245(a)(2))**
3. If the permittee does not operate and maintain the certified SI ICE and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. To demonstrate compliance, the permittee must keep a maintenance plan and records of conducted maintenance, and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(a)(2)(i), 40 CFR 60.4245(a)(2))**
4. The permittee shall keep the following records: **(40 CFR 40.4245(a))**
 - a. All notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ and all documentation supporting any notification;
 - b. If the SI ICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
 - c. If the SI ICE is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 62.4243(a)(2), documentation that the engine meets the emission standards.
5. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(40 CFR 60.4245(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. If the permittee is required to conduct a performance test, the permittee must submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7. **(40 CFR 60.4245(d))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

D. FLEXIBLE GROUP SPECIAL CONDITIONS

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

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

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGBURNERS	North and South duct burners located in FGUTILITIES. Both burners are fired with natural gas. (PTI No. 303-98E)	EUNBURNER EUSBURNER
FGTURBINES	North and South natural gas fired turbine engines located in FGUTILITIES. (PTI No. 303-98E)	EUNTURBINE EUSTURBINE
FGSOLIDHAND	Solids handling processes used for packaging dry product. The solids handling processes consist of packaging equipment and dust collectors. (PTI No. 107-18B)	EUSOLIDHAND1 EUSOLIDHAND2 EUSOLIDHAND3
FGUTILITIES	All fuel burning units providing compressed air, steam, and chilled water generation. (PTI No. 303-98E)	EUNBURNER EUSBURNER EUNTURBINE EUSTURBINE
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUCOLDCLEANER
FGPAIPMACT	These conditions apply to the facility-wide collection of pesticide active ingredient manufacturing process units (PAI process units) that process, use, or produce HAP, are located at a plant site that is a major source, as defined in section 112(a) of the CAA, and are subject to Title 40 of the Code of Federal Regulations (CFR), Part 63, Subpart MMM, National Emission Standards for Hazardous Air Pollutants for PAI Production. An affected source also includes waste management units, heat exchange systems, and cooling towers that are associated with the PAI process units.	EUPROCESS

FGBURNERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

North and south duct burners located in FGUTILITIES. Both burners are fired with natural gas. (PTI No. 303-98E)

Emission Unit: EUNBURNER, EUSBURNER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x - Fresh Air Mode	4.5 lb/hr ² (each)	Based upon a calendar day averaging period	EUNBURNER, EUSBURNER	SC V.1, VI.1	R 336.1205(3)
2. CO - Fresh Air Mode	4.8 lb/hr ² (each)	Based upon a calendar day averaging period	EUNBURNER, EUSBURNER	SC V.1, VI.1	R 336.1205(3)

Operating Modes:

- Supplemental Mode = gas turbine operating, heat recovery steam generator operating. Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- TEG (Turbine Exhaust Gas) Mode = gas turbine operating & heat recovery steam generator operating (the burner is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- Fresh Air Mode = burner operating & heat recovery steam generator operating (the gas turbine is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- Turbine Running (Air Generation) = gas turbine operating (the burners & heat recovery steam generator are not operating). Emissions for the north unit vent through SV00008 and the south unit through SV00010.

II. MATERIAL LIMIT(S)

1. The permittee shall combust only natural gas in FGBURNERS.² (**R 336.1205**)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate either burner in FGBURNERS (EUNBURNER, EUSBURNER) in fresh air firing mode if its respective turbine (EUNTURBINE, EUSTURBINE) is operating.² (**40 CFR 52.21(c) & (d)**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the daily natural gas usage rate in standard cubic feet per day for each unit in FGBURNERS. (**R 336.1205(3), 40 CFR 60.48c(g)**)

V. TESTING/SAMPLING

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

1. At least once every five years from the date of the previous performance test, the permittee shall verify NO_x and CO mass emissions and emission factors from each burner in FGBURNERS (EUNBURNER and EUSBURNER), while firing in Fresh Air Mode, by testing at owner's expense, in accordance with Department requirements. No

less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office; the test plan shall include stack testing procedures and the location of stack testing ports. 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. Verification of mass emissions and emission factors includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004)**

2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

The hourly emission rate shall be determined by the average of three test runs per the method requirements. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1205(3))**
2. The permittee shall monitor and record, in a satisfactory manner, the total daily natural gas usage rate in standard cubic feet per calendar day for fresh air mode and all operating modes combined for each burner in FGBURNERS (EUNBURNER and EUSBURNER).² **(R 336.1205, 40 CFR 60.48c(g))**
3. The permittee shall monitor and record, in a satisfactory manner, the total operating hours for fresh air mode for each burner in FGBURNERS (EUNBURNER and EUSBURNER) on a calendar day basis. Records shall also be maintained on a monthly and 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1205)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of hourly NOx and CO mass emissions for each burner in FGBURNERS (EUNBURNER and EUSBURNER) on a calendar day averaging period basis, as required by SC I.1 and SC I.2. The calculations shall be performed using the method included in Appendix 7, unless a new method is approved by the District Supervisor.² **(R 336.1205(3))**
5. The permittee shall keep, in a satisfactory manner, a log of the hours of operation and mode of operation of each burner in FGBURNERS (EUNBURNER and EUSBURNER) and each turbine (EUNTURBINE and EUSTURBINE) to demonstrate compliance with SC III.1.² **(40 CFR 52.21(c) & (d))**
6. The permittee shall keep, in a satisfactory manner, test reports for FGBURNERS required by SC V.1 on file at the facility.² **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004)**

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. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

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. SV00007 (North Burner Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)
2. SV00009 (South Burner Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to EUNBURNER and EUSBURNER.² **(40 CFR Part 60, Subparts A & Dc)**

Footnotes:

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

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

FGTURBINES FLEXIBLE GROUP CONDITIONS

DESCRIPTION

North and south natural gas fired turbine engines located in FGUTILITIES. (PTI No. 303-98E)

Emission Unit: EUNTURBINE, EUSTURBINE

POLLUTION CONTROL EQUIPMENT

Dry ultra-low NOx burners (SoLoNOx)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx – TEG & Turbine Running Modes	25 ppmvd ^{2,A,B,D} (each)	Hourly	EUNTURBINE, EUSTURBINE	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG
2. NOx – TEG & Turbine Running Modes	75 ppmvd ^{2,C} (each)	Hourly	EUNTURBINE, EUSTURBINE	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. CO – TEG & Turbine Running Modes	50 ppmvd ^{2,A} (each)	Hourly	EUNTURBINE, EUSTURBINE	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. CO – TEG & Turbine Running Modes	210 ppmvd ^{2,C} (each)	Hourly	EUNTURBINE, EUSTURBINE	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

ppmvd = parts per million by volume at 15 percent oxygen and on a dry gas basis

^A Limits do not include startup, shutdown and malfunction conditions.

^B The emission limit as required in 40 CFR Part 60, Subpart GG is determined by a formula found in 40 CFR 60.332(a)(2); at the time this permit was issued, it was calculated to be 167 ppmv, based upon a Y value of 12.905. SC I.1 subsumes the NSPS emission limit. Per 40 CFR 60.335(b)(3), the NSPS limit includes the emissions of the duct burners if the test ports are after the inclusion of emissions from the duct burners, which would be Supplemental Mode.

^C Limits are for uncontrolled operation, where the dry ultra-low NOx burners are not operating in low NOx mode.

^D In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined emission limit shall be considered compliance with the emission limit established by R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d), 40 CFR Part 60, Subparts A & GG and also compliance with the emission limit established by 40 CFR 60.332(a)(2), an additional applicable requirement(s) that has/have been subsumed within this condition.

Operating Modes:

- Supplemental Mode = gas turbine operating, heat recovery steam generator operating. Emissions for the north unit vent through SV00007 & the south unit through SV00009.
- TEG (Turbine Exhaust Gas) Mode = gas turbine operating & heat recovery steam generator operating (the burner is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.

- Fresh Air Mode = burner operating & heat recovery steam generator operating (the gas turbine is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- Turbine Running (Air Generation) = gas turbine operating (the burners & heat recovery steam generator are not operating). Emissions for the north unit vent through SV00008 and the south unit through SV00010.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	0.104 MMscf/hr ^{2,D}	Hourly, based upon a calendar day averaging period	FGTURBINES	SC VI.4	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG

^D This limit is equivalent to 100 MMBTU/hr based upon a lower heating value of 960 MMBTU/MMscf.

2. The permittee shall not burn natural gas which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmw).² **(40 CFR 60.333(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUNTURBINE and EUSTURBINE uncontrolled for more than 500 hours combined per 12-month rolling time period as determined at the end of each calendar month for all of the turbine operating modes combined. Uncontrolled operation is when the dry ultra-low NOx burners are not operating in low NOx mode.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate both turbines in FGTURBINES (EUNTURBINE and EUSTURBINE) in turbine running mode at the same time.² **(40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate either turbine in FGTURBINES (EUNTURBINE or EUSTURBINE) unless its respective dry ultra-low NOx burner is installed, maintained, and operated in a satisfactory manner, except as allowed by SC III.1.² **(R 336.1205(1)(a) & (3), R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subpart GG)**
2. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the daily natural gas usage rate in standard cubic feet per day for FGTURBINES.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. At least once every five years from the date of the previous performance test, the permittee shall verify NOx and CO emission rates and emission factors from each turbine in FGTURBINES (EUNTURBINE and EUSTURBINE), while firing in TEG or Turbine Running Modes, by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office; the test plan shall include stack testing procedures and the location of stack testing ports. 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 submittals. Verification of emission rates and emission factors includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG)**

2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

The hourly emission rate shall be determined by the average of three test runs per the method requirements. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

3. The permittee shall verify the NOx and CO emission rates from FGTURBINES, 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)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG)**
2. The permittee shall keep, in a satisfactory manner, test reports for FGTURBINES required by SC V.1 on file at the facility.² **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG)**
3. The permittee shall keep, in a satisfactory manner, records demonstrating that the natural gas meets the definition of natural gas in 40 CFR 60.331(u). The records shall be in the form of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less. The documentation shall also include the lower heating value of the natural gas in BTU per cubic foot.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.334(h)(3))**
4. The permittee shall monitor and record, in a satisfactory manner, the total daily natural gas usage rate in standard cubic feet per day for all operating modes combined for FGTURBINES and the hourly usage rate as required in SC II.1 based upon a calendar day averaging period.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subparts A & GG)**
5. The permittee shall monitor and record, in a satisfactory manner, the total hours of uncontrolled operation for FGTURBINES on a monthly and 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

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. SV00008 (North Turbine HRSG Bypass)	42 ²	62 ²	40 CFR 52.21(c) & (d)
2. SV00010 (South Turbine HRSG Bypass)	42 ²	62 ²	40 CFR 52.21(c) & (d)
3. SV00007 (North Burner/Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)
4. SV00009 (South Burner/Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and GG, as they apply to EUNTURBINE and EUSTURBINE.²
(40 CFR Part 60, Subparts A & GG)

Footnotes:

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

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

FGSOLIDHAND FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Solids handling processes used for packaging dry product. The solids handling processes consist of packaging equipment and dust collectors. (PTI No. 107-18B)

Emission Units: EUSOLIDHAND1, EUSOLIDHAND2, EUSOLIDHAND3

POLLUTION CONTROL EQUIPMENT

- EUSOLIDHAND1 (F-585A): First filtering unit attached directly to the dryer. This unit has filters of sock and cage style that use pulsed nitrogen to knock down accumulated dust. F-585A exhausts to the TTUs through F-586.
- EUSOLIDHAND2 (F-586): The second in-series filter that is connected to F-585A by approximately 20 feet of six-inch piping. This unit has filters of sock and cage style that uses pulsed nitrogen to knock down accumulated dust. The vacuum source (VP590) pulls through this filter and the exhaust gas from the dryer and dual filter system is sent to the TTUs.
- EUSOLIDHAND3 (DC-583A): Dust Collector #3 exhausts to the in-plant environment. Dust Collector #3 is a Nilfisk A15 EXP air driven venturi style dust collector equipped with a HEPA filter.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUSOLIDHAND1 and EUSOLIDHAND2 unless dust collector F-586 and at least one TTU are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of dust collector F-586 includes a pressure drop across the filter less than 10 psig and greater than 0 psig. Satisfactory operation of any TTU includes meeting the requirements in EUPROCESS for the TTU.² **(R 336.1331, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain dust collector F-586 with a pressure drop indicator.² **(R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, in a satisfactory manner, the pressure drop for dust collector F-586 once each shift when EUSOLIDHAND2 is operating. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1331, R 336.1910)**

2. The permittee shall monitor dust collector DC-583A to verify it is operating properly, by taking visible emission readings for its exhaust a minimum of once each shift when EU-SOLID-HAND3 is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect dust collector DC-583A and perform any required maintenance.² **(R 336.1910)**
3. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for dust collector DC-583A. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, the status of visible emissions, and any maintenance performed as a result of the visible emissions reading. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.13910)**

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)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

FGUTILITIES FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All fuel burning devices providing compressed air, steam and chilled water generation equipment. (PTI No. 303-98E)

Emission Unit: EUNBURNER, EUSBURNER, EUNTURBINE, EUSTURBINE

POLLUTION CONTROL EQUIPMENT

Dry ultra-low NOx burners (SoLoNOx) for the turbines

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	13.6 lb/hr ² , ^A	Hourly	FGUTILITIES	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
2. NOx	28 lb/hr ² , ^C	Hourly	FGUTILITIES	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. NOx	63 tpy ² , ^D	Based upon a 12-month rolling time period as determined at the end of each calendar month.	FGUTILITIES	SC VI.3	R 336.1205(1)(a) & (3)
4. CO	14.1 lb/hr ² , ^A	Hourly	FGUTILITIES	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
5. CO	30 lb/hr ² , ^C	Hourly	FGUTILITIES	SC V.1, VI.2	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
6. CO	66 tpy ²	Based upon a 12-month rolling time period as determined at the end of each calendar month.	FGUTILITIES	SC VI.3	R 336.1205(1)(a) & (3)

^A Limits do not include startup, shutdown and malfunction conditions.

^C Limits are for uncontrolled operation, where the dry ultra-low NOx burners are not operating in low NOx mode.

^D Limits are combined for all operating modes, controlled and uncontrolled emissions.

Operating Modes:

- Supplemental Mode = gas turbine operating, heat recovery steam generator operating. Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- TEG (Turbine Exhaust Gas) Mode = gas turbine operating & heat recovery steam generator operating (the burner is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- Fresh Air Mode = burner operating & heat recovery steam generator operating (the gas turbine is not operating). Emissions for the north unit vent through SV00007 and the south unit through SV00009.
- Turbine Running (Air Generation) = gas turbine operating (the burners & heat recovery steam generator are not operating). Emissions for the north unit vent through SV00008 and the south unit through SV00010.

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))**

1. At least once every five years from the date of the previous performance test, the permittee shall verify NO_x and CO mass emissions and emission factors from each burner/turbine pairing in FGUTILITIES (EUNBURNER/EUNTURBINE and EUSBURNER/EUSTURBINE), while firing in Supplemental Mode, by testing at owner's expense, in accordance with Department requirements. Verification of the mass emissions involves summing the emissions from the pairings to compare against SC I.1, SC I.2, SC I.4, and SC I.5. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office; the test plan shall include stack testing procedures and the location of stack testing ports. 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. Verification of emission rates and emission factors includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

The hourly emission rate shall be determined by the average of three test runs per the method requirements. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1205(1)(a) & (3))**
2. The permittee shall keep, in a satisfactory manner, test reports for FGUTILITIES required by SC V.1 on file at the facility.² **(R 336.1205(1)(a) & (3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
3. The permittee shall compile all information from FGBURNERS and FGTURBINES needed to calculate emissions for FGUTILITIES on a monthly basis. This information shall include fuel usage specified by mode of operation and emission calculations. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total NO_x and CO mass emissions for FGUTILITIES, as required by SC I.3 and SC I.6. The calculations shall be performed using the method included in Appendix 7, unless a new method is approved by the District Supervisor.² **(R 336.1205(1)(a) & (3))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

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. SV00008 (North Turbine HRSG Bypass)	42 ²	62 ²	40 CFR 52.21(c) & (d)
2. SV00010 (South Turbine HRSG Bypass)	42 ²	62 ²	40 CFR 52.21(c) & (d)
3. SV00007 (North Burner / Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)
4. SV00009 (South Burner / Turbine)	42 ²	62 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet; **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

- 1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
- 2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner;
 - b. The date the unit was installed, manufactured or that it commenced operation;
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h);
 - d. The applicable Rule 201 exemption;
 - e. The Reid vapor pressure of each solvent used;
 - f. If applicable, the option chosen to comply with Rule 707(2).
- 3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
- 4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

FGPAIPMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These conditions apply to the facility-wide collection of pesticide active ingredient manufacturing process units (PAI process units) that process, use, or produce HAP, are located at a plant site that is a major source, as defined in section 112(a) of the CAA, and are subject to Title 40 of the Code of Federal Regulations (CFR), Part 63, Subpart MMM, National Emission Standards for Hazardous Air Pollutants for PAI Production. An affected source also includes waste management units, heat exchange systems, and cooling towers that are associated with the PAI process units.

Emission Unit: EUPROCESS

POLLUTION CONTROL EQUIPMENT

- Four (4) Catalytic Thermal Treatment Units (TTUs) that operate at 30,000 cubic feet per minute (cfm) each, identified as:
 - TTU-850
 - TTU-855
 - TTU-860
 - TTU-865
- One regenerative thermal oxidizer (RTO), also a TTU, that operates at 30,000 to 38,000 standard cubic feet per minute (scfm), identified as TTU-870.
- Enclosed Flare

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Each applicable provision set forth in 40 CFR Part 63, Subpart MMM shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which Subpart MMM applies: **(40 CFR 63.1360(e)(1))**
 - a. The startup, shutdown, or malfunction precludes the ability of the permittee to comply with one or more specific emission limitations to which a particular emission point is subject; and
 - b. The permittee follows the provisions for periods of startup, shutdown, and malfunction as specified in 40 CFR 63.1367(a)(3) and 63.1368(i).
2. The applicable provisions set forth in 40 CFR 63.1363 shall apply at all times except during periods of nonoperation of the PAI process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in the cessation of the emissions to which 40 CFR 63.1363 applies. **(40 CFR 63.1360(e)(2))**
3. The permittee shall not shut down items of equipment that are required or utilized for compliance with the emissions limitations of 40 CFR Part 63, Subpart MMM during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene limitations of Subpart MMM applicable to such items of equipment. **(40 CFR 63.1360(e)(3))**
4. At all times, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to

make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the USEPA Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.1360(e)(4))**

5. On and after the compliance dates specified in 40 CFR 63.1364, the permittee shall control HAP emissions to the levels specified in 40 CFR 63.1362 and in 63.1363, as summarized in Table 2 of Subpart MMM. **(40 CFR 63.1362(a))**
6. If the permittee opens a safety device, as defined in 40 CFR 63.1361, the permittee is not exempt from applicable standards in order to avoid unsafe conditions. If opening a safety device results in the failure to meet any applicable standard, the permittee must still comply with the general duty to minimize emissions. If opening a safety device results in a deviation or excess emissions, such events must be reported as specified in 40 CFR 63.1368(i). If the permittee attributes the event to a malfunction and intends to assert an affirmative defense, the permittee is subject to 40 CFR 63.1360(k). **(40 CFR 63.1362(i))**
7. For general equipment leaks, when each leak is detected by visual, audible, or olfactory means, or by monitoring as described in 40 CFR 63.180(b) or (c) of Subpart H of Part 63, the following requirements apply: **(40 CFR 63.1363(a)(10))**
 - a. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
 - b. The identification on a valve in light liquid or gas/vapor service may be removed after it has been monitored as specified in 40 CFR 63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring.
 - c. The identification on equipment, except as specified in 40 CFR 63.1363(a)(10)(ii), may be removed after it has been repaired.
8. The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart H as specified in 40 CFR 63.1363(b)(1) through (3) and with (b)(4) for pressure relief devices. **(40 CFR 63.1363(b))**
9. The permittee shall comply with the applicable standards in 40 CFR 63.1363(e) for valves in gas/vapor service and in light liquid service. **(40 CFR 63.1363(e))**
10. For equipment that is unsafe to monitor, difficult-to-monitor, and/or inaccessible, the permittee shall comply with the applicable provisions in 40 CFR 63.1363(f). **(40 CFR 63.1363(f))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. If a design evaluation is used to demonstrate that a control device meets the required control efficiency, the design evaluation must address the composition and HAP concentration of the vent stream entering the control device. A design evaluation also must address other vent stream characteristics and control device operating parameters as specified below. If the vent stream is not the only inlet to the control device, the efficiency demonstration also must consider all other vapors, gases, and liquids, other than fuels, received by the control device. **(40 CFR 63.1365(a)(1)(ii)(A) & (B))**.
 - a. For a thermal vapor incinerator, the design evaluation must consider the autoignition temperature of the organic HAP, must consider the vent stream flow rate, and must establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.
 - b. For a catalytic vapor incinerator, the design evaluation must consider the vent stream flow rate and must establish the design minimum and average temperatures across the catalyst bed inlet and out.
2. To provide evidence of continued compliance with 40 CFR Part 63, Subpart MMM, the permittee shall install, operate, and maintain monitoring devices as specified in 40 CFR 63.1366. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, as appropriate, shall be established for emission sources that will indicate the source is in compliance. Test data,

calculations, or information from the evaluation of the control device design, as applicable, shall be used to establish the operating parameter level or characteristic. **(40 CFR 63.1366(a))**

V. TESTING/SAMPLING

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

1. Initial compliance with the 20 ppmv TOC or total organic HAP concentration is demonstrated when the outlet TOC or total organic HAP concentration is 20 ppmv or less. To demonstrate initial compliance, the permittee shall use applicable test methods described in 40 CFR 63.1365(b)(1) through (9), and test conditions described in (b)(10) or (11), as applicable. The permittee shall comply with the monitoring provisions in 40 CFR 63.1366(b)(1) through (5) on the initial compliance date. **(40 CFR 63.1365(a)(6))**
2. If supplemental gases are added to a vent stream for which compliance with an outlet concentration standard in 40 CFR 63.1362 or 63.1363 will be demonstrated, the permittee must correct the outlet concentration as specified in 40 CFR 63.1365(a)(7)(i) and (ii). **(40 CFR 63.1365(a)(7))**
3. When testing is conducted to measure emissions from an affected source, the test methods specified in 40 CFR 63.1365(b)(1) through (9) shall be used. Compliance and performance tests shall be performed under such conditions as the USEPA Administrator specifies to the permittee based on representative performance of the affected source for the period being tested and as specified in 40 CFR 63.1365(b)(10) and (11). Representative conditions exclude periods of startup and shutdown unless specified by the USEPA Administrator or an applicable subpart. The permittee may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the permittee shall make available to the USEPA Administrator such records as may be necessary to determine the conditions of performance tests. **(40 CFR 63.1365(b))**
4. For initial compliance with process vent provisions, the permittee shall demonstrate compliance with the applicable process vent standards in 40 CFR 63.1362(b) using the procedures described in 40 CFR 63.1365(c)(1) through (3). **(40 CFR 63.1365(c))**
5. The permittee shall demonstrate initial compliance with the wastewater requirements by complying with the applicable provisions in 40 CFR 63.145, except that the permittee need not comply with the requirement to determine visible emissions that is specified in 40 CFR 63.145(j)(1), and references to compounds in Table 8 of 40 CFR Part 63, Subpart G are not applicable for the purposes of 40 CFR Part 63, Subpart MMM. When 40 CFR 63.145(i) refers to Method 18 of 40 CFR Part 60, appendix A-6, the permittee may use any method specified in 40 CFR 63.1362(d)(12) to demonstrate initial compliance with this subpart. **(40 CFR 63.1365(e))**

VI. MONITORING/RECORDKEEPING

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

1. After the compliance dates specified in 40 CFR 63.1364, an affected source subject to the provisions of 40 CFR Part 63, Subpart MMM that is also subject to the provisions of any other subpart of 40 CFR Part 63 may elect, to the extent the subparts are consistent, under which subpart to maintain records and report to USEPA. The affected source shall identify in the Notification of Compliance Status report required by 40 CFR 63.1368(f) under which authority such records will be maintained. **(40 CFR 63.1360(i)(1)(i))**
2. For general equipment leaks, each piece of equipment to which 40 CFR 63.1363 applies shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63.1363. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed, within 15 calendar days of the end of each monitoring period for that component. **(40 CFR 63.1363(a)(7))**
3. All records and information required by 40 CFR 63.1363 shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the

records from a central location by computer at the plant site. The permittee shall maintain the following information pertaining to all equipment subject to 40 CFR Part 63, Subpart MMM, as described in 40 CFR 63.1363(g)(2) through (11): **(40 CFR 63.1363(g), 40 CFR 63.1367(c))**

- a. General recordkeeping requirements;
 - b. Records of visual inspections;
 - c. Monitoring records;
 - d. Records of pressure tests;
 - e. Records of compressor and pressure relief device compliance tests;
 - f. Records for closed-vent systems;
 - g. Records for components in heavy liquid service;
 - h. Records of exempt components;
 - i. Records of alternative means of compliance determination;
 - j. Records of pressure releases to the atmosphere from pressure relief devices.
4. Except as provided in 40 CFR 63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with 40 CFR 63.1366, the permittee shall comply with the applicable requirements of 40 CFR 63.1366(h)(2) through (8). **(40 CFR 63.1366(h)(1))**
 5. The permittee shall comply with the applicable recordkeeping requirements in 40 CFR Part 63, Subpart A as specified in Table 1 of 40 CFR Part 63, Subpart MMM and in 40 CFR 63.1367(a)(1) through (5), as listed below: **(40 CFR 63.1367(a))**
 - a. Records of applicability determinations;
 - b. Records of malfunctions;
 - c. For continuous monitoring systems, the records specified in 40 CFR 63.10(c)(1) through (14) of Subpart A;
 - d. Application for approval of construction or reconstruction;
 6. The permittee must keep records of equipment operation, as specified in 40 CFR 63.1367(b)(1) through (11), up to date and readily accessible. **(40 CFR 63.1367(b))**
 7. The permittee shall keep records of inspections, as specified in 40 CFR 63.1367(f)(1) through (6). **(40 CFR 63.1367(f))**
 8. For a PAI process unit that is used to produce a given material for use as a PAI as well as for other purposes, the permittee shall keep records of the total production and the production for use as a PAI on a semiannual or more frequent basis if the use as a PAI is not the primary use. **(40 CFR 63.1367(g))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit the reports listed below: **(40 CFR 63.1363(h)(1))**
 - a. A Notification of Compliance Status report described in 40 CFR 63.1363(h)(2);
 - b. Periodic reports described in 40 CFR 63.1363(h)(3).
5. The permittee shall comply with the reporting requirements of 40 CFR 63.1368(b) through (j), as listed below. The permittee shall also comply with applicable paragraphs of 40 CFR 63.9 and 63.10 of Subpart A, as specified in Table 1 of 40 CFR Part 63, Subpart MMM. **(40 CFR 63.1368(a)-(j))**
 - a. Initial notification;
 - b. Application for approval of construction or reconstruction;

- c. Notification of continuous monitoring system performance evaluation;
 - d. Precompliance plan;
 - e. Notification of compliance status report;
 - f. Periodic reports;
 - g. Notification of process change;
 - h. Reports of malfunctions;
 - i. Reports of equipment leaks.
6. The permittee shall notify the USEPA Administrator of the planned date of a performance test at least 60 days before the test in accordance with 40 CFR 63.7(b) of Subpart A. The permittee also must submit the test plan required by 40 CFR 63.7(c) of Subpart A and the emission profile required by 40 CFR 63.1365(b)(11)(iii) with the notification of the performance test. **(40 CFR 63.1368(m))**
7. The permittee may submit to the USEPA Administrator a request for an extension of compliance in accordance with 40 CFR 63.1364(a)(2). **(40 CFR 63.1368(n))**
8. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2), the permittee must submit the results of the performance tests, including any associated fuel analyses, required by 40 CFR Part 63, Subpart MMM according to the methods specified below: **(40 CFR 63.1368(p))**
- a. For data collected using test methods supported by the USEPA-provided software, the owner or operator shall submit the results of the performance test to the USEPA by direct computer-to-computer electronic transfer via USEPA-provided software, unless otherwise approved by the Administrator. Owners or operators, who claim that some of the information being submitted for performance tests is confidential business information (CBI), must submit a complete file using USEPA-provided software that includes information claimed to be CBI on a compact disk, flash drive, or other commonly used electronic storage media to the USEPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the USEPA by direct computer-to-computer electronic transfer via USEPA-provided software.
 - b. For any performance test conducted using test methods that are not compatible with the USEPA-provided software, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 60.4.

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the permittee elects to designate the storage vessel as a Group 1 storage vessel, the permittee is not required to determine the maximum true vapor pressure of the material stored in the storage vessel. **(40 CFR 63.1362(c)(1))**
2. For wastewater, the permittee of each affected source shall comply with the requirements of 40 CFR 63.132 through 63.147, with the differences noted in 40 CFR 63.1362(d)(1) through (16) for the purposes of 40 CFR Part 63, Subpart MMM. **(40 CFR 63.1362(d))**

Footnotes:

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

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

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ 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 ₂ 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 _x	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 ₂	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

The permittee shall use the following approved test plans, procedures, and averaging times to measure the pollutant emissions for the applicable requirements referenced in FGUTILITIES. All testing procedure requirements shall be followed in accordance with the applicable provisions of 40 CFR Part 60, Subparts GG and Dc. Specific requirements include Section 60.335 (a), (b), (c), (d), (e) and (f), also 60.42c.

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-B4942-2015. 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-B4942-2015b is being reissued as Source-Wide PTI No. MI-PTI-B4942-2020c.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
303-98E	201700050	Incorporate PTI No. 303-98E, which changed testing Conditions in FGTURBINES from both modes testing, to testing only one of the two. Additionally, the PTI clarified that all operating days in a month must be summed for recording purposes, and Appendix 7 has been added to clarify how to perform all required emission limit calculations. The PTI accommodated the unavoidable times without NOx control, by allowing a certain amount of operation at higher NOx emissions. Also resolved compliance issues and provided emission scenarios that can be met at all times (sometimes controlled, sometimes uncontrolled, etc.)	FGBURNERS FGTURBINES FGUTILITIES

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
		The emission limits for NOx and CO in FGTURBINES removed a pound per hour limit that was based on a time period average and now is a limit as concentration per volume. The stack heights for FGBURNERS, FGTURBINES, and FGUTILITIES were increased.	
166-17	201800150	Incorporate PTI 166-17 into the ROP, which was for the installation of new fermentation equipment at the manufacturing facility in Harbor Beach.	EUPROCESS
107-18A	201900092*	Incorporate PTI 107-18A into the ROP renewal, which is for the instillation of the regenerative thermal oxidizer (RTO) thermal treatment unit (TTU) identified as TTU-870 as an additional control for EUPROCESS.	EUPROCESS
107-18B	202000078*	Incorporate PTI 107-18B into the ROP renewal, which is for the installation of three new fermentation reactors for spinosyn production.	EUPROCESS

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP B4942-2020b.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
107-18C	202300159 / February 23, 2024	Incorporate PTI No. 107-18C into the ROP renewal, which is to address formaldehyde emissions from the catalytic thermal treatment units (TTU's) and install a continuous monitor utilizing Fourier Transform Infrared Spectroscopy (FTIR) to ensure that total organic HAP concentrations do not exceed 20 ppm.	EUPROCESS Source-Wide Conditions
107-18D	202400194 / January 8, 2025	Incorporate PTI No. 107-18D into the ROP, which is to revise the OHAP emission limit averaging times to daily instead of hourly, change the VOC emission limits to specify that they include total OHAP, and add an hourly methanol emission limit. In addition, the catalytic thermal treatment units temperature requirement was changed in attempt to minimize conversion of methanol to formaldehyde.	EUPROCESS

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 FGBURNERS and FGUTILITIES:

For FGBURNERS (Fresh Air Mode):

The emission limits in FGBURNERS are for each burner; therefore, the following must be performed for EACH burner (EUNBURNER and EUSBURNER).

Pollutant Emissions (lb/day) = Fuel Usage (MMscf/day) x Emission Factor (lb/MMscf)
Pollutant Emissions (pph) = Pollutant Emissions (lb/day) / Hours of Operation (hr/day)

Where:

Fuel Usage (MMscf/day) = daily fuel usage data from fuel flow meter during Fresh Air Mode

Emission Factor (lb/MMscf) = emission factor determined during the most recent stack test

Hours of Operation (hr/day) = hours of fresh air mode recorded during a calendar day

There are currently no emission limits specific to fresh air mode on a longer-term basis; however, the calculations are needed to comply with emission limits located within FGUTILITIES.

FAM Pollutant Emissions (lb/month) = Sum of [EUNBURNER Pollutant Emissions (lb/day) + EUSBURNER Pollutant Emissions (lb/day)] for all operating days in a month

For TEG and Turbine Running (TEG/TR) Modes:

There are no emission limits specific to these modes currently requiring calculations for continuous compliance; however, the calculations are needed to comply with emission limits located within FGUTILITIES.

TEG/TR Pollutant Emissions (lb/month) = Fuel Usage (MMscf/month) x Emission Factor (lb/MMscf)

Where:

Fuel Usage (MMscf/month) = Sum of FGTURBINES Fuel Usage (MMscf/day) for all operating days in a month

Fuel Usage (MMscf/day) = daily fuel usage data from fuel flow meter during TEG/TR Modes

Emission Factor (lb/MMscf) = emission factor determined during the most recent stack test

For FGUTILITIES (All Operating Modes):

The tpy emission limits in FGUTILITIES are combined limits for all emission units (EUNBURNER, EUSBURNER, EUNTURBINE, and EUSTURBINE) in all operating modes.

Pollutant Emissions (lb/month) = FAM Pollutant Emissions (lb/month) + TEG/TR Pollutant Emissions (lb/month) + Fuel Usage (MMscf/month) x Emission Factor (lb/MMscf)

Where:

Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meters during supplemental mode

Emission Factor (lb/MMscf) = emission factor determined during the most recent stack test for supplemental mode

To calculate the tpy emission limits, the emissions should be a summation of the 12 most recent months. When a new month lapses, the first month in the previous 12-month grouping shall be removed and the new month shall be added. This constitutes a 12-month rolling calculation.

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.