

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

EFFECTIVE DATE: February 20, 2019

ISSUED TO

Dow Silicones Corporation

State Registration Number (SRN): A4043

LOCATED AT

3901 South Saginaw Road, Midland, Michigan 48640

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-A4043-2019

Expiration Date: February 20, 2024

Administratively Complete ROP Renewal Application Due Between
August 20, 2022 and August 20, 2023

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

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-A4043-2019

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

Chris Hare, Saginaw Bay District Supervisor

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AUTHORITY AND ENFORCEABILITY

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

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

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

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

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

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in 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 40 CFR 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 states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(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 reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

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

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.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, MDEQ.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, MDEQ, 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

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 any emission units having emission vents tied into FGSITEBLOWER, FGTHROX, and FGSITESCRUBBERS unless malfunction abatement plan (MAP) as described in Rule 911(2), for FGTHROX and FGSITESCRUBBERS has been submitted to the AQD District Supervisor. 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 336.1205(2), R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

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. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
2. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b) for those storage vessels which are exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. **(40 CFR Part 60, Subpart Kb)**
3. The permittee shall maintain an up-to-date list of all storage vessels exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. **(R 336.1213(3))**

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)

1. The permittee shall comply with the malfunction abatement plan (MAP) for the chlorosilane transfer highline systems. Applicant shall not operate the process until the MAP is reviewed and approved by the AQD District Supervisor. This information shall be kept on file and be made available to the Air Quality Division upon request. **(R 336.1911)**
2. The permittee shall comply with the applicable provisions of 1994 PA 451, Section 324.5524 (Fugitive dust sources or emissions) and with the provisions of the operating program received by the AQD, Saginaw Bay District Office on March 16, 2001. The operating program shall be amended by the permittee so that the operating program is current and reflects any significant change in the fugitive dust source or fugitive dust emissions. An amendment to an operating program shall be consistent with the requirements of Section 324.5524 and shall be submitted to the department for its review and approval. **(1994 PA 451, Section 324.5524)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR Part 61, Subparts A and M)**
 - a. 61.145 (Standard for demolition and renovation)
 - b. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)

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).

C. EMISSION UNIT CONDITIONS

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

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

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU108-01	Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 622-92D.	1992, 2000, 2014, 2016	FGMONMACT, FGHAP2012A2A
EU207-01	Silicone rubber manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 134-08.	1994, 1998, 2008	FGMONMACT, FGHAP2012A2A
EU207-02	Treated filler process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 336-88B.	1988, 1994, 1999	FGMONMACT, FGHAP2012A2A
EU207-03	Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 156-06D.	1994, 1996, 1999, 2001, 2008, 2011, 2012	FGMONMACT
EU212-01	Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser	2014	FGMONMACT, FGHAP2012A2A

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	6060. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 63-14A.		
EU212-03	Cold blend mixing process in 6019 Kettle with product drum-off at DV212DO. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 104-14A.	2014	FGMONMACT, FGHAP2012A2A
EU212-12	Batch reaction process consisting of the 20400 batch kettle (an agitated, jacketed kettle), a trap, a receiver, and two service water cooled heat exchangers located in 212 building. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 48-14B.	2012	FGMONMACT, FGHAP2012A2A
EU2504-01	Silicone products manufacturing process including packaging, filtration, and cleanout operations. EU2504-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 44-89D.	1987, 1989, 1997, 2008, 2009, 2015	NA
EU2703-01	Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU2703-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 155-80G.	2001, 1999, 2003	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU2703-03	Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU2703-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 920-84B.	1985, 1992, 2000	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A, FGOLDFACILITY
EU2703-17	9025C dedicated waste tank in 2703 building. The most recent PTI for this emission unit is PTI No. 26-14.	2014	FGTHROX, FGSITEBLOWER

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU2901-12	Distillation pilot process consisting of distillation column and ancillary equipment. Control consists of a cryogenic condenser. The most recent PTI for this emission unit is PTI No. 125-10A.	2000, 2010	NA
EU2901-16	2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 180-15A.	2015	FGMONMACT, FGHAP2012A2A
EU303-01	Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the 337 wet scrubber, the THROX, or the site scrubbers. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 804-92D.	1999	FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A, FGLEAKDETECTION
EU303-02	Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 804-92B.	1999	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU303-06	Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 420-84E.	1996	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU303-09	Flake resin hydrolysis process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-09 is a CAM	1979, 1983, 2001	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER,

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 726-78B.		FGMONMACT, FGHAP2012A2A
EU303-11	T57 waste tank. This emission unit is exempt from air permit to install requirements (R 336.1201) pursuant to Rule 284. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V.	NA	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A
EU303-15	1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle with a service water condenser (DV1602), water trap, receiver, blending and filtration, and product packaging. The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 146-16.	1996, 2002, 2016	FGSITEBLOWER, FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU303-16	1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle with a service water condenser (DV3420), water trap, receiver, blending and filtration, and product packaging. The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 147-16.	1996, 2002, 2016	FGSITEBLOWER, FGSITESCRUBBERS, FGTHROX, FGMONMACT
EU304-02	Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 258, 259, and 34E. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. This emission unit vents to the 337 wet scrubber. The most recent PTI for this emission unit is PTI No. 616-92A.	05-31-1996	FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU311-01	HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor and related equipment. Several processes on-site vent to this recovery process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 01-08.	05-01-1996, 2008	FGMONMACT, FGHAP2012A2A, FGOLDFACILITY
EU321-01	40x Resin process including reactors, distillation, storage tanks, condensers, scrubber, separators, and related equipment. This emission unit is subject to the miscellaneous chemical manufacturing NESHA in 40 CFR Part 63, Subparts A and FFFF. EU321-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 174-12A.	11-22-1995, 2013	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A
EU322-01	LP-1 process (vinylchlorosilane) including reactors, distillation equipment, storage tanks, condensers, and related equipment.	1999	FG322-01, FGHAP2012A2A
EU322-02	HP-7 process (methylvinylchlorosilane) including reactor, tanks, receivers, scrubber, and related equipment.	1996	FG322-01, FGHAP2012A2A
EU322-03	Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 296-07.	1999, 1994, 1992, 1991, 1984	FGMONMACT, FGHAP2012A2A
EU322-04	HP-6 process (Dimethylvinylchlorosilane) including reactors, tanks, condensers, coolers, compressors, and related equipment.	08-31-2000	FG322-01
EU322-06	Siloxane catalyst process. EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 308-94.	1994	NA
EU322-11	Methylvinylchlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU322-11 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.	2000, 2004	FGMONMACT, FGHAP2012A2A

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	The most recent PTI for this emission unit is PTI No. 338-99B.		
EU324-01	4820 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 5618 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 15-13.	1996, 2008, 2013	FGMONMACT, FGHAP2012A2A
EU324-08	5617 batch kettle process producing silane and siloxane products. Emissions are controlled by service water condenser 5618 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 14-13.	2012	NA
EU324-18	25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers. The most recent PTI for this emission unit is PTI No. 19-14A.	2014	NA
EU325-01	TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down. The most recent PTI for this emission unit is PTI No. 44-06B.	1997, 2009	FG325-01, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER,
EU325-03	Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building. The most recent PTI for this emission unit is PTI No. 44-06.	1997	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU340-01	<p>Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 34-04B.</p>	1999, 2004	FGMONMACT, FGHAP2012A2A, FGLEAKDETECTION
EU340-03	T53 Methanol storage tank, AQD Rule 290 emission unit. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 63, Subpart EEEE.	NA	FGRULE290, FGOLDFACILITY, FGHAP2012A2A, FGMONMACT
EU356-01	<p>Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388), capable of producing either anhydrous HCl or aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.</p> <p>The most recent PTI for this emission unit is PTI No. 29-07B.</p>	2008, 2013	FGHCLMACT
EU356-02	<p>Rail car transfer station No. 9E with packed bed scrubber (24401), capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.</p> <p>The most recent PTI for this emission unit is PTI No. 29-07B.</p>	2008, 2013	FGHCLMACT
EU356-03	Rail car unloading station No. 10E with packed bed scrubber (24344), capable of unloading aqueous HCl from rail cars.	2008, 2013	NA
EU501-01	<p>Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 158-87B.</p>	1997	FGMONMACT, FGHAP2012A2A

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU501-02	1107 hydrolysis process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 126-03A.	1978, 1986, 1988, 1989, 1991, 2003	FGMONMACT, FGHAP2012A2A
EU501-49	Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-49 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 437-90B.	1998, 2014	FGMONMACT, FGHAP2012A2A
EU502-01	Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methyldichlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07. The most recent PTI for this emission unit is PTI No. 131-15.	1999, 2008	FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A
EU502-04	Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers. The most recent PTI for this emission unit is PTI No. 18-18.	5-14-2018	FGSITEBLOWER, FGTHROX, FGLEAKDETECTION
EU502-07	Trichlorosilane (TCS) distillation and associated equipment for distillation of TCS into various grades (electronic-, chemical- and plant-grade). This emission unit is	1999, 2007	FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX,

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	<p>subject to the requirements of 40 CFR Part 60, Subparts A and Kb. This emission unit vents to both the 304 vent recovery system and the 337 wet scrubber in series. In the event 304 vent recovery goes down, the emission unit vents to the air pollution control (APC) train described in FG325-01. This APC train is comprised of a carbon bed and scrubber system which operate in series to control emissions.</p> <p>The most recent PTI for this emission unit is PTI No. 185-07B.</p>		FGSITESCRUBBERS, FGSITEBLOWER,
EU502-09	<p>Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm. This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by THROX or vapor balance back to the tank.</p> <p>The most recent PTI for this emission unit is PTI No. 91-14.</p>	NA (not installed as of 2-5-2015).	FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER
EU502-11	<p>Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.</p> <p>The most recent PTI for this emission unit is PTI No. 132-15.</p>	2015	FGTHROX, FGSITESCRUBBERS, FG337SCRUBBER
EU505-01	<p>Resin and coating manufacturing including reactors, kettles, NSPS storage tanks, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 60, Subpart Kb, 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subparts EEEE and FFFF. EU505-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 169-12.</p>	01-19-2000, 2007, 2013	FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A, FGOLDFACILITY

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU505-04	<p>Silicone fluids manufacturing process using 23390 reaction kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.</p> <p>The most recent PTI for this emission unit is PTI No. 200-15.</p>	2016	FGMONMACT, FGHAP2012A2A, FGGLEAKDETECTION
EU508-01	<p>Phenyltrichlorosilane and diphenyldichlorosilane recovery process, including reactors, columns, condensers, tanks, and related equipment. Included in this emission unit is the phenylchlorosilane distillation process which is defined in the conditions for this emission unit. This permit covers all PINTO vents associated with these processes. EU508-01 includes a 60,000 gallon benzene storage tank (i.e. tank T-60). This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb, 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subparts A, EEEE, and FFFF. EU508-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. Emissions are controlled by the benzene absorber followed by the 304 vent recovery system and then the THROX, the 337 wet scrubber, or the site scrubbers.</p> <p>The most recent PTI for this emission unit is PTI No. 84-08B.</p>	1996, 2008, 2012	FGGLEAKDETECTION, FG304VENTRECOVERY, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A, FGOLDFACILITY
EU515-01	<p>Grignard process for production of chlorosilanes and related materials including reactors, distillation, filtration, drying, vacuum system, condensers, hoppers, dust collectors, scrubber, and related equipment. EU515-01 is subject to the requirements of 40 CFR Part 60, Subpart Kb, 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF. EU515-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. This emission unit vents to the THROX and, when the THROX is not operating, the site scrubbers.</p> <p>The most recent PTI for this emission unit is PTI No. 812-91C.</p>	1997, 2004, 2008, 2012	FGGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A, FGOLDFACILITY
EU601-01	<p>Alkoxylation process including kettle, condensers, storage tanks, distillation columns, drum off station equipment, scrubbers, and other related equipment. Includes filler handling and loading for alkoxylation manufacturing. This emission unit is subject to the requirements of 40 CFR</p>	2000, 2009,	FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
	Part 63, Subpart FFFF. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 534-77G.		
EU604-08	Fluoro cyclics process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The most recent PTI for this emission unit is PTI No. 466-73E.	2000	FGMONMACT
EU800-01	800 block tank farm consisting of storage and transfer operations for on-site waste liquids. The most recent PTI for this emission unit is PTI No. 334-88C.	1999	FGLEAKDETECTION
EURULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a, and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification. Some emission units are subject to the requirements of 40 CFR Part 63, Subparts FFFF and EEEE, and 40 CFR Part 61, Subparts J and V.	NA	FGRULE290, FG304VENTRECOVERY, FGTHROX, FGSITEBLOWER, FGSITESCRUBBERS, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION
EUCOLDCLEANER	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 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.	NA	FGCOLDCLEANER
EURULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE604
EURULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	NA	FGRULE605

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EURULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2,000 gallon capacity located at any gasoline dispensing facility.	NA	FGRULE703
EUBOILER12	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER13	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER14	103 MMBTU/hr natural gas fired boiler with low-NOx burners.	2006	FG432BOILERS
EUBOILER2515	25.1 MMBTU/hr boiler capable of burning natural gas, synthetic gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.	2009	FGPEM&BLR
EUEMERGENCIRICE<500	Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).	NA	FGEMERGENCIRICE<500HP
EU2515-01	An electrically powered plasma arc gasifier known as a "plasma enhanced melter (PEM)" with ancillary equipment. The most recent PTI for this emission unit is PTI No. 175-09A.	2008	FGTHROX, FGPEM&BLR

EU108-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Platinum catalyst manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 622-92D.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Carbon adsorption system consisting of two carbon drums in series
- Hydrogen chloride (HCl) scrubber (tank 20734)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.6 pph ²	Hourly	EU108-01	SC IV.1, VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1225
2. VOC	0.7 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU108-01	SC IV.1, IV.3, VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1225, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate EU108-01 unless the carbon adsorption system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the carbon adsorption system includes exhausting emissions directed to the system through two carbon drums connected in series and replacing activated carbon in the system based on the weight gain of the second of the two drums. The permittee shall put a fresh drum in the second drum position before the weight gain of the second drum exceeds 30 pounds over the "as received" weight of the drum.² (R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall not produce Platinum II unless the HCl scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the HCl scrubber includes replacing the scrubbing solution before beginning each batch of Platinum II production.² (R 336.1224, 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 keep records as required to demonstrate compliance with the emission limits specified in SC I.1 and I.2. Emission totals shall be calculated using the method described in Appendix 7, Section 7.1. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in SC I.2.² **(R 336.1225, R 336.1702(a))**
2. The permittee shall maintain records, in a satisfactory manner, of carbon replacement for the carbon adsorption system.² **(R 336.1910)**
3. The permittee shall maintain batch production records in sufficient detail to demonstrate compliance with SC IV.1 and IV.2.² **(R 336.1910)**
4. The permittee shall monitor and record, in a satisfactory manner, the weight gain of the second carbon drum over its "as received" weight on a continuous basis. For 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. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1910)**

See Appendix 7

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV108-001	2 ²	39 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV108-002	10 ²	35 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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).

EU207-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Silicone rubber manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 134-08.

Flexible Group ID: FGMONMACT, FGHP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condenser (19251). This is a CAM subject device for VOCs.
- Baghouse (12912). This is a CAM subject device for Particulate.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	35.4 pph ²	Hourly	EU207-01	SC VI.1, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
2. VOC	18.4 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU207-01	SC VI.1, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
3. Ammonia	60.2 pph ²	Hourly	EU207-01	SC VI.1, VI.3, VI.4, & VI.5	R 336.1225, R 336.1201
4. Ammonia	30.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU207-01	SC VI.1, VI.3, VI.4, & VI.5	R 336.1225, R 336.1201
5. Opacity	5% ²	Based on a six-minute average.	SV207-001	SC VI.2	R 336.1301(1)(c), R 336.1331, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The exit gas temperature of the glycol condenser shall not exceed 40°F. Exceeding this parameter is an excursion.² **(40 CFR 64.6(c)(2), R 336.1702(a), R 336.1201)**
2. If the pressure drop across the baghouse (12912) exceeds 10 inches of water, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
3. If the pressure drop across the baghouse (12912) is less than 0.5 inches of water, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the process unless the glycol condenser and baghouse are installed and operating properly.² **(R 336.1331, R 336.1702(a), R 336.1201)**
2. The permittee shall equip and maintain the baghouse (12912) with a pressure drop indicator.² **(R 336.1331, R 336.1201)**
3. The permittee shall calibrate the temperature gauge on condenser 19251 and the pressure drop indicator on baghouse 12912 in a satisfactory manner. **(R 336.64.6(c)(1)(iii))**

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, on a continuous basis, the exit gas temperature of the glycol condenser (19251) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. The permittee shall monitor and record, on a per shift basis, the pressure drop across the baghouse (12912) with instrumentation acceptable to the AQD. **(R 336.1213(3))**
3. Monthly production records of non-PL bases, PL bases and LSR's combined, and LSR's shall be kept on file and made available to the Department upon request.¹ **(R 336.1225)**
4. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
5. For condenser 19251, 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 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). **(40 CFR 64.7(d))**
6. For condenser 19251, 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 40 CFR Part 64 compliance, 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, in frequent, 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))**
7. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and

other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

8. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV207-007, SV207-008, SV207-009, SV207-010, SV207-011, SV207-013 and SV207-019 discharge downward.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-001	30 ¹	85 ¹	R 336.1225
2. SV207-007	4 ¹	50 ¹	R 336.1225
3. SV207-008	4 ¹	50 ¹	R 336.1225
4. SV207-009	4 ¹	50 ¹	R 336.1225
5. SV207-010	4 ¹	50 ¹	R 336.1225
6. SV207-011	4 ¹	50 ¹	R 336.1225
7. SV207-013	4 ¹	50 ¹	R 336.1225
8. SV207-019	1.5 ¹	24 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

Footnotes:

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).

EU207-02 EMISSION UNIT CONDITIONS

DESCRIPTION

Treated filler process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 336-88B.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Packed column scrubber (19298). This device is subject to CAM for VOCs, Methanol, and Particulate.
- Water condenser (19296). This device is subject to CAM for VOCs and Methanol.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	7.7 pph ²	Hourly	EU207-02	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	8.7 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU207-02	SC VI.1, VI.2, & VI.3	R 336.1702(a)
3. Methanol from vent 207-014	3.8 pph ¹	Hourly	Equipment venting to SV207-014	SC VI.1 & VI.2	R 336.1225
4. Methanol from vent 207-014	3.7 tpy ¹	Based on a 12-month rolling time period as determined at the end of each calendar month.	Equipment venting to SV207-014	SC VI.1, VI.2, & VI.3	R 336.1225
5. Isopropyl Alcohol (IPA) from vent 207-014	2.4 pph ¹	Hourly	Equipment venting to SV207-014	SC VI.1 & VI.2	R 336.1225
6. Isopropyl Alcohol (IPA) from vent 207-014	4.9 tpy ¹	Based on a 12-month rolling time period as determined at the end of each calendar month.	Equipment venting to SV207-014	SC VI.1, 2, & 3	R 336.1225
7. Particulate Matter	0.10 lbs/1,000 lb exhaust gas ²	Instantaneous	EU207-02	SC VI.1 & 2	R 336.1224, R 336.1331(1)(a), R 336.1201
8. Particulate Matter	0.093 pph ²	Hourly	EU207-02	SC VI.1 & 2	R 336.1224, R 336.1331(1)(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The exit gas temperature from the chilled water condenser shall remain below 15°C. Exceeding this parameter is an excursion. Upon detecting an excursion of the exit gas temperature from the chilled water condenser limit, the permittee shall restore operation of the chilled water condenser to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1910, R 336.1225, R 336.1702(a), R 336.1201)**
2. The permittee shall maintain a steady scrubbing liquid flow rate in the packed column scrubber.² **(R 336.1910, R 336.1225, R 336.1201)**
3. Upon detecting an excursion of the liquid flow rate of the packed column scrubber limit, the permittee shall restore operation of the packed column scrubber to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1910, R 336.1201)**
- 4.. The permittee shall not operate the process unless the condenser is installed and operating properly.² **(R 336.1910, R 336.1225, R 336.1702(a), R 336.1201)**
5. The permittee shall not operate the process unless the packed column scrubber (using isopropanol as the scrubbing liquid) is installed and operating properly.² **(R 336.1910, R 336.1225, R 336.1201)**
6. The permittee shall calibrate the temperature gauge on condenser 19296 and the flow gauge on packed column scrubber 19298 in a satisfactory manner. **(R 336.64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The packed column scrubber (19298) shall be equipped with a low flow switch with a minimum flow rate alarm of 20 pounds per minute.² **(R 336.1910, R 336.1225, R 336.1702(a), R 336.1201, 40 CFR 64.6(c)(1)(i))**
2. The permittee shall equip and maintain the condenser (19296) with a continuous temperature indicator for monitoring the exit gas temperature.² **(R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(ii))**

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, on a continuous basis, the packed column scrubber liquid flow rate and the water condenser exit gas temperature with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. Records of the number of batches processed, on a monthly basis, and other records necessary to demonstrate compliance with the emission limits specified in this table shall be made available to the AQD upon request.² **(R 336.1702(a), R 336.1225, R 336.1201)**
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
4. For packed column scrubber 19298 and water condenser 19296, 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 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). **(40 CFR 64.7(d))**

5. For packed column scrubber 19298 and water condenser 19296, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
6. For packed column scrubber 19298 and water condenser 19296, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases from SV207-014, SV207-028 and SV207-029 shall be discharged unobstructed vertically upwards.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-012	2 ¹	59 ¹	R 336.1225
2. SV207-014	1 ¹	59 ¹	R 336.1225
3. SV207-028	1 ¹	32 ¹	R 336.1225
4. SV207-029	4 ¹	32 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU207-03 EMISSION UNIT CONDITIONS

DESCRIPTION

Liquid silicone rubber (LSR) rubber manufacturing batch mixer process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU207-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 156-06D.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Dust collectors (19313, 19314, 19328, 22409, 22419)
- Venturi scrubber (22426). This device is CAM subject for VOC and Particulate.
- Water scrubbers (22412 and 23828). This device is CAM subject for VOC.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.5 pph ²	Hourly	EU207-03	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	2.9 tpy ²	Based on a 12-month rolling time period	EU207-03	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
3. Octamethyl-cyclotetrasiloxane (D4)	1.0 pph ¹	Hourly	EU207-03	SC VI.1 & VI.2	R 336.1225
4. Particulate Matter	0.1 lbs/1,000 lbs exhaust gas ²	Instantaneous	Equipment venting from SV 207-016	SC VI.1 & 2	R 336.1331, R 336.1201
5. Particulate Matter	0.1 lbs/1,000 lbs exhaust gas ²	Instantaneous	Equipment venting from SV 207-018	SC VI.1 & 2	R 336.1331, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The water makeup rate of water scrubber 22412 shall be at least 0.2 gallons per minute when the process is venting through this scrubber. Exceeding this parameter is an excursion. An excursion is a water makeup rate less than 0.2 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the makeup water rate limit, the permittee shall restore operation of water scrubber 22412 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1201)**
2. The recycle liquid flow rate of the venturi scrubber (22426) shall be at least 15 gallons per minute when the process is venting through this scrubber. Exceeding this parameter is an excursion. An excursion is a recycle liquid flow rate less than 15 gallons per minute defined in this condition, or demonstrated during testing. Upon

detecting an excursion of liquid flow rate limit, the permittee shall restore operation of the venture scrubber to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1702(a), R 336.1910, R 336.1201)**

3. The water makeup rate of water scrubber 23828 shall be at least 0.7 gallons per minute when the process is venting through this scrubber. Exceeding this parameter is an excursion. An excursion is a water makeup rate less than 0.7 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of water makeup rate limit, the permittee shall restore operation of the water scrubber to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1201)**
4. The recycle liquid flow rate of water scrubber 23828 shall be at least 20 gallons per minute when the process is venting through this scrubber. Exceeding this parameter is an excursion. An excursion is a recycle liquid flow rate less than 20 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the recycle liquid flow rate limit, the permittee shall restore operation of water scrubber 23828 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1201)**
5. The temperature of the recycle water entering water scrubber 23828 shall not exceed 68°F. Exceeding this parameter is an excursion. An excursion is a recycle water temperature entering water scrubber 23828 at greater than 68°F defined in this condition, or demonstrated during testing. Upon detecting an excursion of the temperature of the recycle water limit, the permittee shall restore operation of water scrubber 23828 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1201)**
6. The permittee shall calibrate the liquid flow gauges on venturi scrubber 22426 and water scrubbers 22412 and 23828 in a satisfactory manner. **(R 336.64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU207-03 unless the vent is routed through scrubber system No. 1 (comprised of scrubber 22426 and scrubber 22412) and/or scrubber system No. 2 (comprised of water scrubber 23828) and these scrubbers are installed and operating properly.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1201)**
2. The permittee shall not operate EU207-03 unless the fumed silica and crystalline silica dust collectors (19314, 22409, 22419, 19313, and 19328) are installed and operating properly.² **(R 336.1331, R 336.1201)**
3. The permittee shall equip and maintain packed column scrubber 22412 with a water makeup flow indication device.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall equip and maintain venturi scrubber 22426 with a recycle liquid flow indication device.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
5. The permittee shall equip and maintain packed-bed scrubber 23828 with a water makeup and recycle liquid flow indication devices.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
6. The permittee shall equip and maintain water scrubber 23828 with a temperature indication device capable of monitoring the temperature of the recycle liquid entering the scrubber.² **(R 336.1201, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

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, on a continuous basis, the following parameters with instrumentation acceptable to the AQD:
 - a. water makeup rate for water scrubbers 22412 and 23828
 - b. recycle liquid temperature of water scrubber 23828
 - c. recycle liquid flow rate for water scrubber 23828
 - d. recycle liquid flow rate of venturi scrubber 22426

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period.² **(40 CFR 64.6(c)(1), R 336.1910, R 336.1201)**

2. The permittee shall keep records as required to demonstrate compliance with the emission limits listed in SC I.1 through SC I.6 of this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.2. A monthly summary of these emissions shall be kept on file and made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1702(a), R 336.1224, R 336.1225, R 336.1201)**
3. For venturi scrubber 22426 and water scrubbers 22412 and 23828, 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 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). **(40 CFR 64.7(d))**
4. For venturi scrubber 22426 and water scrubbers 22412 and 23828 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For venturi scrubber 22426 and water scrubbers 22412 and 23828, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV207-016	4 ¹	32 ¹	R 336.1225
2. SV207-018	2 ¹	54 ¹	R 336.1225
3. SV207-035	2 ¹	54 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and, if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU212-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Batch reaction process consisting of the 6054 batch kettle (an agitated, jacketed kettle), a heater, a receiver, and a service water cooled heat exchanger located in 212 building. Emissions are controlled by chilled condenser 6060. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 63-14A.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Chilled condenser 6060

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.88 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU212-01	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- While the EU212-01 is venting to chilled condenser 6060, the permittee shall not operate EU212-01 unless the chilled condenser 6060 coolant temperature is 10°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate EU212-01 unless the emissions are routed to chilled condenser 6060 and the condenser is installed, maintained, and operated in a satisfactory manner, except as allowed by SC IV.2.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee may vent EU212-01 through SV212-018, while bypassing chilled condenser 6060, for drum off of final products.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall equip and maintain chilled condenser 6060 with a coolant temperature indicator.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(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. While EU212-01 is venting to chilled condenser 6060, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser 6060 coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. 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 336.1205(3), R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU212-01, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205(3), R 336.1702(a))**

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-007 ^A	2 ¹	38 ¹	R 336.1225
2. SV212-018	24 ¹	42 ¹	R 336.1225
^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

IX. OTHER REQUIREMENT(S)

NA

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).

EU212-03 EMISSION UNIT CONDITIONS

DESCRIPTION

Cold blend mixing process in 6019 Kettle with product drum-off at DV212DO. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 104-14A.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU212-03	SC III.1, VI.2, VI.4	R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The period of time that the manway of 6019 Kettle is open during production operations shall not exceed a maximum of 1.0 hour per day on an annual average. The annual average shall be based on a rolling 12-month time period as determined at the end of each calendar month.² **(R 336.1224, R 336.1702(a))**
2. The period of time that the manway of 6019 Kettle is open during production operations shall not exceed a maximum of 3.0 hours during any calendar day.¹ **(R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETERS

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.² **(R 336.1702(a))**

2. The permittee shall calculate the VOC emission rate from EU212-03 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, a log of the daily hours during which the manway of 6019 Kettle is open during production operations. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702, R 336.2802, 40 CFR 52.21, 40 CFR Part 63, Subpart B)**
4. Each month, the permittee shall calculate the daily average period of time that the manway of 6019 Kettle is open during production operations, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003	24 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV212-006 ^A	4 ²	19 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV212-018	24 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)
^A This vent may discharge downwards.			

IX. OTHER REQUIREMENTS

NA

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).

EU212-12 EMISSION UNIT CONDITIONS

DESCRIPTION

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

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

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Chilled condenser HX20407

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.05 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU212-12	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- While the EU212-12 is venting to chilled condenser HX20407, the permittee shall not operate EU212-12 unless the chilled condenser HX20407 coolant temperature is 10°C or less.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate EU212-12 unless the emissions are routed to chilled condenser HX20407 and the condenser is installed, maintained, and operated in a satisfactory manner, except as allowed by SC IV.2 and SC IV.3.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee may vent EU212-12 through SV212-003, while bypassing chilled condenser HX20407, for up to three hours per day.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee may vent EU212-12 through SV212-018, while bypassing chilled condenser HX20407, for drum off of final products.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall equip and maintain chilled condenser HX20407 with a coolant temperature indicator.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(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. While EU212-12 is venting to chilled condenser HX20407, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser HX20407 coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. 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 336.1205(3), R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU212-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205(3), R 336.1702(a))**
4. The permittee shall keep, in a satisfactory manner, daily records of the time that EU212-12 vents through SV212-003. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV212-003	24 ¹	32 ¹	R 336.1225
2. SV212-018	24 ¹	42 ¹	R 336.1225
3. SV212-023 ^A	2.0 ¹	42 ¹	R 336.1225

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

IX. OTHER REQUIREMENT(S)

NA

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).

EU2504-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Silicone products manufacturing process including packaging, filtration, and cleanout operations. EU2504-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 44-89D.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Vent recovery system consisting of two parallel condenser trains. Each condenser train includes two shell-and tube condensers, the first (24608 & 24610) using service water as coolant, and the second (24609 & 24611) using a chilled mix of water and glycol as coolant. The condenser trains (24608/24609 and 24610/24611) typically operate in parallel, but only one set of condensers may operate at any given time. The vent recovery system is a CAM subject unit for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.4 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU2504-01	SC VI.3 & VI.4	R 336.1205(1), R 336.1702(a)
2. Isopropyl alcohol	11.4 pph ¹	Hourly	EU2504-01 operations exhausted through SV2504-007	SC VI.1 & VI.2	R 336.1225
3. Isopropyl alcohol	3.1 pph ¹	Hourly	EU2504-01 operations exhausted through SV2504-004	SC VI.1 & VI.2	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- Packaging and filtration operations in EU2504-01 are not subject to this requirement. The permittee shall not operate EU2504-01 unless the emissions from EU2504-01 are exhausted through the vent recovery system and the vent recovery system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the vent recovery system includes operating one chilled water condenser and glycol condenser in series and maintaining a maximum coolant outlet temperature of 40°F from the chilled water/glycol condenser through which EU2504-01 emissions are being exhausted. Exceeding this parameter is an excursion. An excursion of the coolant outlet temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant outlet temperature, the permittee shall restore operation of the vent recovery system to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each chilled water/glycol condenser with a coolant outlet temperature indicator. The temperature indicator shall be calibrated in a satisfactory manner.² **(40 CFR 64.6(c)(1)(i), (ii), (iii), 40 CFR 64.6(c)(1)(i), R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

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.² **(R 336.1205(1), R 336.1702(a))**
2. The permittee shall monitor and record, in a satisfactory manner, the coolant outlet temperature from the chilled water/glycol condenser through which EU2504-01 emissions are being exhausted on a continuous basis. For this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1910)**
3. The permittee shall maintain production records on a monthly basis and other records in sufficient detail to demonstrate compliance with the emission limit specified in SC I.1. The permittee shall keep these records on file at the facility and make them available to the Department upon request.² **(R 336.1205(1), R 336.1702(a))**
4. The permittee shall calculate the VOC emission rate from EU2504-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The calculations shall be based on production records and hours of operation records. The permittee shall keep all records on file at the facility and make them available to the Department upon request. The calculations shall be based upon production records and hours of operation records.² **(R 336.1205(1), R 336.1702(a))**
5. For the vent recovery system 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 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). **(40 CFR 64.7(d))**
6. For the vent recovery system 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For the vent recovery system, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data

used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

8. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2504-001	27 ¹	45 ¹	R 336.1225
2. SV2504-002	27 ¹	40 ¹	R 336.1225
3. SV2504-003	27 ¹	40 ¹	R 336.1225
4. SV2504-004	10 ¹	45 ¹	R 336.1225
5. SV2504-005	10 ¹	45 ¹	R 336.1225
6. SV2504-007*	2 ¹	53.5 ¹	R 336.1225

*This stack is required to discharge vertically upward but is allowed to be equipped with a flapper-type rain protection device.

IX. OTHER REQUIREMENT(S)

1. 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))**

2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU2703-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Hydrosilylation and alkoxylation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU2703-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 155-80G.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, FGHP2012A2A

POLLUTION CONTROL EQUIPMENT

- Shell and tube condensers (9214 and 9228). This device is a CAM subject unit for VOCs and Methyl Chloride.
- Emergency spray tower scrubber (9163). This device is a CAM subject unit for VOCs.
- Spray tower scrubbers (9208 and 9215). This device is a CAM subject unit for VOCs.
- Activated carbon units (CDCARBONUNITS)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	22.0 pph ²	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1227(2), R 336.1201
2. VOC	8.5 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU2703-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1227(2), R 336.1201
3. Trimethoxy-silane	0.30 pph ¹	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1225
4. Methallyl Chloride	0.20 pph ¹	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1225
5. Octene	0.60 pph ¹	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1225
6. Methyl Chloride	2.5 pph ¹	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1225
7. Tetramethoxy-silane	0.36 pph ¹	Hourly	EU2703-01	SC VI.1 & VI.2	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Proper operation for scrubber 9215 and 9208 means the scrubber liquid flow rate shall be at least 6.0 gallons per minute, respectively. An excursion is a liquid flow rate less than 6 gallons per minute. An excursion is a liquid flow rate less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubber liquid flow rate limit, the permittee shall restore operation of scrubber 9215 and 9208 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1225, R 336.1227(2), R 336.1201)

2. In the event of an emergency venting to scrubber 9163, scrubber 9163 shall be operated at a minimum of 6.0 gallons per minute. An excursion is a liquid flow rate less than 6.0 gallons per minute. An excursion is a liquid flow rate less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubber liquid flow rate limit, the permittee shall restore operation of scrubber 9163 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1225, R 336.1227(2), R 336.1201)**
3. Proper operation of condenser 9214 and 9228 means that the coolant return temperature from either of the two condensers shall not be greater than -10°C, respectively. Exceeding this parameter is an excursion. An excursion of the coolant return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant return temperature, the permittee shall restore operation of condensers 9214 and 9228 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1225, R 336.1227(2), R 336.1201)**
4. For CDCARBONUNITS, which are to be used when the EU2703-01 process manufactures compounds that emit methylalyl chloride, proper operation means that the first tote shall be replaced whenever the second tote's weight increases by 50 pounds (and the "second" tote now becomes the "first" tote).² **(R 336.1702(a), R 336.1225, R 336.1227(2), R 336.1201)**
5. The permittee shall not operate EU2703-01 unless scrubber 9215 and vent condenser 9214 and 9228 are installed and operating properly. The permittee shall not operate the process in such a way that methylalyl chloride is generated unless the dual-stage carbon units control system is installed and operating properly. Scrubber 9208 shall be installed and operating properly whenever EU2703-01 is operating, except when the process is manufacturing compounds that emit methylalyl chloride (i.e., scrubber 9215 need not operate whenever the carbon adsorption system is operating).² **(R 336.1702(a), R 336.1225, R 336.1227(2), R 336.1201)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain condenser 9228 and 9214 with a coolant return temperature monitor.² **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i)(ii))**
2. The permittee shall equip and maintain each scrubber with a liquid flow indicator.² **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i)(ii))**
3. The permittee shall equip and maintain CDCARBONTOTES with scales that measure each carbon tote's weight whenever the carbon adsorption system is operating.² **(R 336.1702(a), R 336.1910, R 336.1201)**
4. The permittee shall calibrate the temperature monitor on condensers 9214 and 9228, and the liquid flow indicator on scrubbers 9163, 9208, and 9215 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - a. The scrubber liquid flow rate of scrubber 9215, 9163 and 9208, respectively.
 - b. The coolant return temperature of condenser 9228 and 9214, respectively.
 - c. The weight of carbon totes.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. These records shall be kept on file and made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**

2. Production records on a monthly basis and other records necessary to demonstrate compliance with the emission rates listed in this table shall be kept on file and made available to the AQD upon request. Within 30 days, following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals listed in this table.² **(R 336.1227(2), R 336.1702(a), R 336.1201)**
3. For shell and tube condensers 9214 and 9228, emergency spray tower scrubber 9163, and spray tower scrubbers 9208 and 9215, 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 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). **(40 CFR 64.7(d))**
4. For shell and tube condensers 9214 and 9228, emergency spray tower scrubber 9163, and spray tower scrubbers 9208 and 9215, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For shell and tube condensers 9214 and 9228, emergency spray tower scrubber 9163, and spray tower scrubbers 9208 and 9215, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases from SV2703-056, SV2703-042, SV2703-043, and SV27030-044 shall be discharged unobstructed vertically upwards. Vent nos. SV2703-024, SV2703-042, SV2703-043, and SV27030-044 are equipped with weather caps however, the discharge is unobstructed due to the hinged design of the cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-020	1.0 ²	25.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
2. SV2703-042	2.0 ²	80.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
3. SV2703-043	2.0 ²	95.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
4. SV2703-044	2.0 ²	80.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201

IX. OTHER REQUIREMENT(S)

1. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU2703-03 EMISSION UNIT CONDITIONS

DESCRIPTION

Chloropropyl trichlorosilane process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU2703-03 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 920-84B.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Vent compressor 22790. This device is a CAM subject unit for VOCs.
- Vent condenser 22795. This device is a CAM subject unit for VOCs.
Venturi scrubbers 9390 A and B (scrubbers alternate in operation and act as backup for one another). These devices are CAM subject units for VOCs
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.6 pph ²	Hourly	EU2703-03	SC VI.1 & 2	R 336.1225, R 336.1702(a), R 336.1201
2. VOC	9.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU2703-03	SC VI.1 & 2	R 336.1225, R 336.1702(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The vent pressure control valve for vent compressor 22790 shall not open unless the pressure exceeds 200 pounds per square inch gauge. An excursion is a vent pressure less than 200 pound per square inch gauge. An excursion is a vent pressure less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of vent pressure control valve status limit, the permittee shall restore operation of vent compressor 22790 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)
2. The exhaust gas temperature for vent condenser 22795 shall not exceed 10°C. Exceeding this parameter is an excursion. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of exhaust gas temperature limit, the permittee shall restore operation of vent condenser 22795 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)

3. Proper operation of scrubbers 9390 A and B means the total scrubber water flow rate for scrubbers 9390 A and B shall not be less than 6.0 gallons per minute, respectively. An excursion is a flow rate less than 6.0 gallons per minute. An excursion is a liquid flow rate less than the operational parameter limit or outside the acceptable range defined in this condition or demonstrated during testing. Upon detecting an excursion of total scrubber water flow rate limit, the permittee shall restore operation of scrubbers 9390 A and B to the normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)**
4. The permittee shall not operate EU2703-03 unless the emission control train, consisting of vent compressor 22790, vent condenser 22795, and either scrubber 9390 A or B, is installed and operating properly.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)**
5. The permittee shall not load the allyl chloride storage tank unless the vent equalization system is installed and operating properly. Proper operation includes establishing and maintaining a vapor-tight connection between the allyl chloride storage tank and the loading vessel whenever allyl chloride is being loaded.² **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain vent compressor 22790 with a vapor outlet pressure indicator.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i))**
2. The permittee shall equip and maintain vent condenser 22795 with an exhaust gas temperature indicator.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i))**
3. The permittee shall equip and maintain scrubber 9390 A and B with a total scrubber water flow rate indicator.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i))**
4. The permittee shall calibrate the pressure indicator for vent compressor 22790, the temperature indicator for condenser 22795, and the water flow indicator for scrubber 9390 A and B in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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, on a continuous basis, the following with instrumentation acceptable to the AQD.
 - a. vapor outlet pressure for vent compressor 22790
 - b. exhaust gas temperature for vent condenser 22795
 - c. total scrubber water flow rate for scrubber 9390 A or B (dependent upon which scrubber is receiving process exhaust)

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)**

2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.3. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous

calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1225, R 336.1702(a), R 336.1201)**

3. For vent compressor 22790, vent condenser 22795, and venturi scrubbers 9390 A and B, 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 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). **(40 CFR 64.7(d))**
4. For vent compressor 22790, vent condenser 22795, and venturi scrubbers 9390 A and B, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For vent compressor 22790, vent condenser 22795, and venturi scrubbers 9390 A and B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include

documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011	2 ²	75 ²	R 336.1225, 40 CFR52.21(c) & (d), R 336.1201

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU2703-17 EMISSION UNIT CONDITIONS

DESCRIPTION

9025C dedicated waste tank in 2703 building.

The most recent PTI for this emission unit is PTI No. 26-14.

Flexible Group ID: FGTHROX, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- This emission unit vents to the site THROX and, when the THROX is not operating, scrubbers 9390 A and B. Emissions from transfers from the tank to tank trucks will be controlled by vapor balance back to the tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	5.72 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU2703-17	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- While EU2703-17 is venting to either scrubber 9390 A or B, the permittee shall not operate EU2703-17 unless the total scrubber water flow rate for scrubber 9390 A and B is not less than 6.0 gallons per minute, respectively.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall not load any tank truck from EU2703-17 unless the vapor balance system is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate EU2703-17 unless the emissions are routed to the THROX and the THROX is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee may operate EU2703-17 up to 2,000 hours per 12-month rolling time period, as determined at the end of each calendar month, while the THROX is shut down or experiencing a malfunction. During operation without the THROX, the permittee shall not operate EU2703-17 unless either scrubber 9390 A or B is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)
- The permittee shall equip and maintain scrubbers 9390 A and B with water flow rate indicators.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(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. While EU2703-17 is venting to either scrubber 9390 A or B, the permittee shall monitor and record, in a satisfactory manner, the total scrubber water flow rate for scrubber 9390 A or B (dependent upon which scrubber is receiving process exhaust) on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. 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 336.1205(3), R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU2703-17, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205(3), R 336.1702(a))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the number of hours that EU2703-17 vents to either scrubber 9390 A or B rather than the THROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**
2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2703-011 ^A	2 ¹	78 ¹	R 336.1225
^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

IX. OTHER REQUIREMENT(S)

NA

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).

EU2901-12 EMISSION UNIT CONDITIONS

DESCRIPTION

Distillation pilot process consisting of distillation column and ancillary equipment.

The most recent PTI for this emission unit is PTI No. 125-10A.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Cryogenic condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	7.5 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-12	SC VI.3	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser coolant temperature is -40°C or less, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-12 unless the cryogenic condenser is installed, maintained, and operated in a satisfactory manner, except during the phase separator cleanout operation.² (R 336.1225, R 336.1702(a))
2. The permittee shall equip and maintain the cryogenic condenser with a coolant temperature indicator.² (R 336.1225, R 336.1720(a), R 336.1910)

V. TESTING/SAMPLING

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

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 cryogenic condenser's coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the

continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time, and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² (R 336.1225, R 336.1702(a), R 336.1910)

2. 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 336.1205(3), R 336.1702(a))
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU2901-12, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² (R 336.1205(3), R 336.1702(a))

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-019 ^A	2 ¹	52 ¹	R 336.1225
^A This stack is not required to exhaust vertically upwards to the ambient air.			

IX. OTHER REQUIREMENTS

NA

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).

EU2901-16 EMISSION UNIT CONDITIONS

DESCRIPTION

2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 180-15A.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Xylene contact condenser 16621

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.9 TPY ²	12-month rolling time period as determined at the end of each calendar month	EU2901-16	SC VI.5	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU2901-16 unless the 16621 exhaust gas temperature is 35°C or less on an instantaneous basis.² (R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU2901-16 unless condenser 16621 is installed, maintained, and operated in a satisfactory manner.² (R 336.1225, R 336.1702(a))
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the exhaust gas temperature of condenser 16621 on a continuous basis while EU2901-16 is operating.² (R 336.1225, R 336.1702(a))

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.² (R 336.1225, R 336.1702(a))

2. The permittee shall monitor and record, in a satisfactory manner, the exhaust gas temperature of condenser 16621 on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1225, R 336.1702(a))**
3. The permittee shall calculate the VOC emission rate from EU2901-16 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a))**

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2901-010 ^A	2 ²	45 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV2901-011	12 ²	48 ²	40 CFR 52.21(c) & (d)
^A This stack is not required to exhaust vertically upwards to the ambient air.			

IX. OTHER REQUIREMENTS

NA

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).

EU303-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Phenyl methyl fluids and resin hydrolysis and polymerization. This emission unit vents to either the 337 wet scrubber, the THROX, or the site wide scrubbers. This emission unit is subject to 40 CFR Part 63, Subpart FFFF. EU303-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 804-92D.

Flexible Group ID: FG337SCRUBBER, FGSITEBLOWER, FGSITESCRUBBERS, FGTHROX, FGMONMACT, FGHP2012A2A, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Condenser 3469. This is a CAM subject device for VOC, Benzene, and Toluene
- 337 wet scrubbers (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	15 pph ²	Hourly	EU303-01	SC III.1, III.2, & VI.1	R 336.1702(a)
2. VOC	5.4 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-01	SC III.1, III.2, VI.1, & VI.2	R 336.1702(a)
3. Benzene	0.41 pph ²	Hourly	EU303-01	SC III.1, III.2, & VI.1	R 336.1224, R 336.1201
4. Isopropyl chloride	5.82 pph ²	Hourly	EU303-01	SC III.1, III.2, & VI.1	R 336.1224, R 336.1201
5. Toluene	8.44 pph ²	Hourly	EU303-01	SC III.1, III.2, & VI.1	R 336.1224, R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the equipment in EU303-01 listed below unless the vent streams from the equipment are exhausted to the associated emission control device listed below and the associated emission control device is installed, maintained, and operating in a satisfactory manner. For FGTHROX, FGSITEBLOWER, and FGSITESCRUBBERS, satisfactory operation includes meeting the requirements of FGTHROX, FGSITEBLOWER, and FGSITESCRUBBERS, respectively.² (R 336.1910)

Equipment in EU303-01	Emission control device
a. Chlorosilanes blend and feed tanks	FG337SCRUBBER
b. DV3463 when exhausted through SV303-024	Condenser No. 3469

c. DV3463 when not exhausted through SV303-024

FGTHROX or FGSITEBLOWER or
 FGSITESCRUBBERS

2. If the outlet glycol temperature of condenser No. 3469 exceeds 40 degrees F (4.44 degrees C) when DV3463 is exhausting through SV303-001, SV303-024, or SV303-055, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion of the outlet glycol temperature of condenser 3469 when DV3463 is exhausting through SV303-001, SV303 024, or SV303-055, is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of outlet glycol temperature of condenser 3469 when DV3463 is exhausting through SV303-001, SV303 024, or SV303-055 limit, the permittee shall restore operation of condenser 3469 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain condenser 3469 with an outlet glycol temperature indicator. The permittee shall calibrate the temperature indicator in a satisfactory manner.² **(R 336.1910, 40 CFR 64.6(c)(1)(i), (ii), (iii))**

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, on a continuous basis, the outlet glycol temperature of condenser 3469 with instrumentation acceptable to the AQD. For 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. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1910, 40 CFR 64.6(c)(1))**
2. The permittee shall keep records as required to demonstrate compliance with the emission limit specified in SC I.2. Emissions shall be calculated using the methods described in Emission Inventory Improvement Program, Volume II, Chapter 16: Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, August 2007, or an alternate method acceptable to the AQD District Supervisor. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the emission limit specified in SC I.2.² **(R 336.1702(a))**
3. For condenser 3469, 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 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). **(40 CFR 64.7(d))**
4. For condenser 3469, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

5. For condenser 3469, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. Each semiannual report of monitoring 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV303-023, SV303-039, and SV303-040 may discharge downward. SV303-024 and SV303-038 discharge unobstructed vertically upwards to the ambient air.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-023 (Storage tank)	1 ¹	3 ¹	R 336.1225
2. SV303-024 (3463 reactor vent)	1 ¹	50 ¹	R 336.1225

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
3. SV303-038 (3320/3337 vent)	1 ¹	50 ¹	R 336.1225
4. SV303-039 (storage tank)	1 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-040 (storage tank)	1 ¹	3 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU303-02 EMISSION UNIT CONDITIONS

DESCRIPTION

Polymer and resin surge, mixing, filtration, and blending. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 804-92B.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condenser (3400). This device a CAM subject unit for VOCs, Benzene, and Toluene

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	18.1 pph ²	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	4.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU303-02	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
3. Benzene	0.08 pph ¹	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1224
4. D4 (cyclic phenylheptam ethylsiloxane)	0.67 pph ¹	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1224
5. Isopropyl Alcohol	1.96 pph ¹	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1224
6. MD2M (linear dimethyl siloxanes)	0.02 pph ¹	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1224
7. Toluene	9.40 pph ¹	Hourly	EU303-02	SC VI.1 & VI.2	R 336.1224

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- If the coolant flow rate of condenser 3400 is less than 5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a coolant flow rate less than 5 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant flow rate, the permittee shall restore operation of condenser 3400 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
- The permittee shall not operate EU303-02 unless the control equipment (condenser 3400) is installed and operating properly.² **(R 336.1910, R 336.1201)**
- The permittee shall equip and maintain condenser 3400 with a coolant flow indicator. The permittee shall calibrate the flow indicator in a satisfactory manner.² **(R 336.1702(a), R 336.1201, 40 CFR 64.6(c)(1)(i), (ii), (iii))**

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 monitor and record, on a continuous basis, the coolant flow rate of condenser 3400 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.4. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**
3. For condenser 3400, 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 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). **(40 CFR 64.7(d))**
4. For condenser 3400, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For condenser 3400, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. Each semiannual report of monitoring 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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: SV303-011, SV303-013, SV303-014, SV303-015, SV303-021, SV303-039, and SV303-041 discharge downward. SV303-012 discharges upward with a rain cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001	6 ¹	40 ¹	R 336.1225
2. SV303-011	2 ¹	0.5 ¹	R 336.1225
3. SV303-012	1.5 ¹	41 ¹	R 336.1225
4. SV303-013	2 ¹	0.5 ¹	R 336.1225
5. SV303-014	2 ¹	0.5 ¹	R 336.1225
6. SV303-015	2 ¹	4.5 ¹	R 336.1225
7. SV303-021	2 ¹	1 ¹	R 336.1225
8. SV303-039	1 ¹	3 ¹	R 336.1225
9. SV303-041	1 ¹	1.5 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. 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))**

2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU303-06 EMISSION UNIT CONDITIONS

DESCRIPTION

Batch and semi continuous polymer and resin processing including reactors, distillation columns, strippers, receivers, storage tanks, accumulators, separators, vacuum pumps, condensers, adsorbers, filters and related equipment. This emission unit is subject to the requirements of 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subpart FFFF. EU303-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 420-84E.

Flexible Group ID: FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condensers (1637, 3458, 3475, 1623, 1645, 3303, 3307). These devices are CAM subject units for VOCs and Benzene.
- Carbon drum. This device is a CAM subject unit for VOCs and Benzene.

Note: Prior to discharge of process exhaust to the air through vent no. SV303-050, process gas passes through either the adsorber (1655) or a carbon drum.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	60.0 pph ²	Hourly	EU303-06	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
2. VOC	30.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-06	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
3. Benzene	0.10 pph ²	Hourly	EU303-06	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)
4. Benzene	0.2 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-06	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1201(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The exhaust gas temperature at the outlet of condenser 3475 shall not exceed 36°F. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the outlet gas temperature limit, the permittee shall restore operation of condenser 3476 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)**

2. The exhaust gas temperature at the outlet of condenser 3458 on the silicone mixing process shall not exceed 50°F. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the outlet gas temperature limit, the permittee shall restore operation of condenser 3458 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)**
3. If the exhaust gas temperature at the outlet of condenser no. 1637 exceeds 50 F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of condenser 1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3), 40 CFR 64.6(c)(1)(i))**
4. If the exhaust gas temperature at the outlet of condenser no. 1623, no. 1645, no. 3303 and no. 3307 exceeds 95°F, respectively, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of condensers 1623, 1645, 3303 and/or 3307 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7, R 336.1213(3), 40 CFR 64.6(c)(1)(i))**
5. While venting to the carbon drum, if the weight of the drum exceeds 36 pounds, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the weight of the carbon drum is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the weight of the carbon drum limit, the permittee shall restore operation of the carbon drum to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7, R 336.1213(3), 40 CFR 64.6(c)(1)(i))**
6. The permittee shall not operate the process unless the condenser (3458) is installed and operating properly.² **(R 336.1910, R 336.1201)**
7. The permittee shall not operate the process unless the carbon drum is installed and operating properly.² **(R 336.1910, R 336.1201)**
8. The permittee shall not operate the toluene stripper and phenyl fluid stripper under vacuum unless the vacuum pump (3473) is vented through a seal fluid tank (3474) followed by a condenser (3475). Noncondensable gases from the condenser (3475)/receiver (3477) shall be vented through the adsorption system.² **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, on a continuous basis, the exhaust gas temperature of condenser 1637, 3458, 3475, 1623, 1645, 3303, and 3307, respectively, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods

calculated from all measured data values during each period. The permittee shall calibrate the temperature gauges in a satisfactory manner. **(40 CFR 64.6(c)(1)(i), (ii), (iii), R 336.1213(3))**

2. While venting to the carbon drum, the permittee shall monitor and record the drum weight once every 8 hours. **(40 CFR 64.6(c)(1), R 336.1213(3))**
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
4. For condensers 1637, 3458, 3475, 1623, 1645, 3303, 3307, and the carbon drum, 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 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). **(40 CFR 64.7(d))**
5. For condensers 1637, 3458, 3475, 1623, 1645, 3303, 3307, and the carbon drum, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
6. For condensers 1637, 3458, 3475, 1623, 1645, 3303, 3307, and the carbon drum, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV303-044 and SV303-049 discharge downward. SV303-046 and SV303-050 discharge vertically upward with a rain cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-001	6 ²	40 ²	R 336.1201(3)
2. SV303-044	1 ²	3 ²	R 336.1201(3)
3. SV303-046	2 ²	42 ²	R 336.1201(3)
4. SV303-049	1 ²	34 ²	R 336.1201(3)
5. SV303-050	3 ²	40 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU303-09 EMISSION UNIT CONDITIONS

DESCRIPTION

Flake resin hydrolysis process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-09 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 726-78B.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Graphite block service water condenser (3335). This device is a CAM subject unit for VOCs and Toluene
- Glycol condenser DV24697. This device is a CAM subject unit for VOC and Toluene.
- Cyclone (3446). This device is a CAM subject unit for Particulate.
- Reverse jet fabric filter (22770). This device is a CAM subject unit for Particulate.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.13 pph ²	Hourly	EU303-09	SC VI.2	R 336.1225, R 336.1331, R 336.1201
2. Particulate Matter	0.20 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-09	SC VI.2	R 336.1331, R 336.1201
3. Particulate Matter	0.10 lbs/1,000 lbs exhaust gas ²	Instantaneous	EU303-09	SC VI.2	R 336.1331, R 336.1201
4. VOC	14 pph ²	Hourly	EU303-09	SC VI.1	R 336.1702(a), R 336.1201
5. VOC	11 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-09	SC VI.1	R 336.1702(a), R 336.1201
6. Toluene	11.5 pph ²	Hourly	EU303-09	SC VI.1	R 336.1225, R 336.1702(a), R 336.1201
7. Toluene	8.6 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU303-09	SC VI.1	R 336.1702(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Proper operation for the graphite block service water condenser (3335) means the coolant flow rate shall be at least 40.0 gallons per minute. An excursion is a coolant flow rate less than 40 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of coolant flow rate limit, the permittee shall restore operation of the graphite block service water condenser (3335) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a), R 336.1201)**
2. Proper operation for the shell and tube service water condenser (DV24697) means the exhaust gas temperature from this condenser shall not exceed 95°F (35°C). An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of the shell and tube service water condenser (DV24697) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a), R 336.1201)**
3. Proper operation for the reverse jet fabric filter (22770) means that the pressure drop is maintained within a range of 0 to 20 inches water. An excursion is a pressure drop reading outside the range defined in this condition or demonstrated during testing. Upon detecting an excursion of the pressure drop limit, the permittee shall restore operation of the reverse jet fabric filter (22770) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1331, R 336.1201)**
4. The permittee shall not operate EU303-09 unless the following air pollution control equipment is installed and operating properly: 3335 (graphite block service water condenser), DV24697 (glycol condenser), 3446 (cyclone), and 22770 (reverse jet fabric filter).² **(R 336.1225, R 336.1702(a), R 336.1331, R 336.1201)**
5. The permittee shall calibrate the temperature monitor for condenser DV24697, the liquid flow indicator for condenser 3335, and the pressure drop gauge for fabric filter 22770 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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 monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - The coolant flow rate of the graphite block service water condenser (3335).
 - The exhaust gas temperature of the shell and tube service water condenser (DV24697).

For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. These records shall be made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1225, R 336.1702(a), R 336.1910, R 336.1201)**

2. The permittee shall monitor and record, at least once every 12-hour shift, the pressure drop for the reverse jet fabric filter (22770) with instrumentation acceptable to the AQD. These records shall be kept on file and made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1331, R 336.1910, R 336.1201)**

3. For the graphite block service water condenser (3335), shell and tube service water condenser (DV24697), cyclone (3446), and reverse jet fabric filter (22770), 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 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). **(40 CFR 64.7(d))**
4. For the graphite block service water condenser (3335), shell and tube service water condenser (DV24697), cyclone (3446), and reverse jet fabric filter (22770), 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For the graphite block service water condenser (3335), shell and tube service water condenser (DV24697), cyclone (3446), and reverse jet fabric filter (22770), the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall equip and maintain the shell and tube service water condenser (DV24697) with an exhaust gas temperature monitor.² **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i)(ii))**
7. The permittee shall equip and maintain the graphite block service water condenser (3335) with a liquid flow rate indicator.² **(R 336.1225, R 336.1702(a), R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i)(ii))**
8. The permittee shall equip and maintain the cyclone (3446) and the reverse jet fabric filter (22770) with a pressure drop indicator.² **(R 336.1331, R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i)(ii))**
9. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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: Exhaust gases from vent no. SV303-006 shall be discharged unobstructed vertically upwards.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-002	2.0 ²	43.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
2. SV303-003	1.0 ²	39.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
3. SV303-004	1.0 ²	40.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
4. SV303-005	3.0 ²	39.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
5. SV303-006	20.0 ²	44.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201
6. SV303-007	2.0 ²	42.0 ²	R 336.1225, 40 CFR 52.21(c), R 336.1201

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU303-15 EMISSION UNIT CONDITIONS

DESCRIPTION

1600 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle, with a service water condenser (DV1602), water trap, receiver, blending and filtration, and product packaging. The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-15 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 146-16.

Flexible Group ID: FGSITEBLOWER, FGSITESCRUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water condenser DV1602 and glycol condenser DV1637. These devices are CAM subject units for VOC

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	15 tpy ²	12 month rolling time period as determined at the end of each calendar month	EU303-15	SC VI.4	R 336.1205, R 336.1225, R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

- While 1600 Batch Kettle is venting through SV303-019, the permittee shall not operate 1600 Batch Kettle unless the service water condenser DV1602 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV1602 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))
- While 1600 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1600 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))

IV. DESIGN/EQUIPMENT PARAMETERS

- The permittee shall not route emissions from 1600 Batch Kettle through SV303-019 unless the emissions are routed to service water condenser DV1602 and the condenser is installed, maintained, and operated in a satisfactory manner.² (R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)

2. The permittee shall not route emissions from 1600 Batch Kettle through the vacuum pump unless the emissions are routed to glycol condenser DV1637 and the condenser is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain service water condenser DV1602 with an exit coolant temperature indicator.² **(R 336.1205, R 336.1225, R 336.1720(a), R 336.1910, 40 CFR 64.6(c)(1)(i))**
4. The permittee shall equip and maintain glycol condenser DV1637 with an exit coolant temperature indicator.² **(R 336.1205, R 336.1225, R 336.1720(a), R 336.1910, 40 CFR 64.6(c)(1)(i))**
5. The permittee shall calibrate the temperature indicator for condensers DV1602 and DV 1637 in a satisfactory manner.² **(40 CFR 64.6(c)(1)(iii))**

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.² **(R 336.1205, R 336.1225, R 336.1702(a))**
2. While 1600 Batch Kettle is venting through SV303-019, the permittee shall monitor and record, in a satisfactory manner, the service water condenser DV1602 exit coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
3. While 1600 Batch Kettle is venting to glycol condenser DV1637, the permittee shall monitor and record, in a satisfactory manner, the glycol condenser DV1637 exit coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU303-15, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1702(a))**
5. For condensers DV1602 and DV1637, 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 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). **(40 CFR 64.7(d))**

6. For condensers DV1602 and DV1637, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For condensers DV1602 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
8. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-019 1600 batch kettle through condenser DV1602	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-010 drum off vent	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 drum off vent	12 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1600 batch kettle through condenser DV1637	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-055 wet vent blowers to atmosphere or THROX	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-001 1656 catch tank vent to atmosphere	6 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU303-16 EMISSION UNIT CONDITIONS

DESCRIPTION

1650 Batch Kettle batch manufacturing process consisting of an agitated, jacketed kettle with a service water condenser (DV3420), water trap, receiver, blending and filtration, and product packaging. The process can also use a shared vacuum pump that exhausts through a glycol condenser (DV1637). This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU303-16 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 147-16.

Flexible Group ID: FGSITEBLOWER, FGSITESCRUBBERS, FGTHROX, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Service water condenser DV3420 and glycol condenser DV1637. These devices are CAM subject units for VOC.
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	15 tpy ²	12 month rolling time period as determined at the end of each calendar month	EU303-16	SC VI.4	R 336.1205 R 336.1225 R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. While 1650 Batch Kettle is venting through SV303-019, the permittee shall not operate 1650 Batch Kettle unless the service water condenser DV3420 exit water temperature is 35°C or less. An excursion of the exit water temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit water temperature limit, the permittee shall restore operation of condenser DV3420 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))
2. While 1650 Batch Kettle is venting through the vacuum pump to glycol condenser DV1637, the permittee shall not operate 1650 Batch Kettle unless the glycol condenser DV1637 exit coolant temperature is 5°C or less. An excursion of the exit coolant temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit coolant temperature limit, the permittee shall restore operation of condenser DV1637 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not route emissions from 1650 Batch Kettle through SV303-019 unless the emissions are routed to service water condenser DV3420 and the condenser is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not route emissions from 1650 Batch Kettle through the vacuum pump unless the emissions are routed to glycol condenser DV1637 and the condenser is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain service water condenser DV3420 with an exit coolant temperature indicator.² **(R 336.1205, R 336.1225, R 336.1720(a), R 336.1910, 40 CFR 64.6(c)(1)(i)(ii))**
4. The permittee shall equip and maintain glycol condenser DV1637 with an exit coolant temperature indicator.² **(R 336.1205, R 336.1225, R 336.1720(a), R 336.1910, 40 CFR 64.6(c)(1)(i)(ii))**
5. The permittee shall calibrate the temperature indicator for condensers DV3420 and DV1637 in a satisfactory manner.² **(40 CFR 64.6(c)(1)(iii))**

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.² **(R 336.1205, R 336.1225, R 336.1702(a))**
2. While 1650 Batch Kettle is venting through SV303-019, the permittee shall monitor and record, in a satisfactory manner, the service water condenser DV3420 exit coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**
3. While 1650 Batch Kettle is venting to glycol condenser DV1637, the permittee shall monitor and record, in a satisfactory manner, the glycol condenser DV1637 exit coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU303-15, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205, R 336.1225, R 336.1702(a))**

5. For condensers DV3420 and DV1637, 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 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). **(40 CFR 64.7(d))**
6. For condensers DV3420 and DV1637, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For condensers DV3420 and DV1637, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
8. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV303-019 1650 batch kettle through condenser DV3420	2 ²	36 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV303-010 drum off vent	45 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV303-037 drum off vent	12 ²	44 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV303-046 1650 batch kettle through condenser DV1637	2 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV303-055 wet vent blowers to atmosphere or THROX	3 ²	43 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV303-001 1656 catch tank vent to atmosphere	6 ²	42 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU304-02 EMISSION UNIT CONDITIONS

DESCRIPTION

Alkylsilane process including reactors, distillation columns, condensers, scrubber, storage tanks, tanker station, and related equipment. Tanks that do not vent include 258, 259, and 34E. This emission unit vents to the 337 wet scrubber. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU304-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 616-92A.

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- Condensers (414, 1154) These devices are CAM subject units for VOCs
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	3.93 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
2. VOC	15.2 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
3. EtTCS (CAS # 115219)	0.046 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1201(3)
4. EtTCS (CAS # 115219)	0.149 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)
5. MeHDCS (CAS # 75547)	0.511 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1201(3)
6. MeHDCS (CAS # 75547)	1.273 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)
7. EtMeDCS (CAS # 4525444)	0.031 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1201(3)
8. EtMeDCS (CAS # 4525444)	1.37 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)
9. Amylene (CAS # 513359)	0.220 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1201(3)
10. Amylene (CAS # 513359)	0.346 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)
11. 1-Octene (CAS # 111660)	0.065 pph ²	Hourly	EU304-02	SC VI.1, VI.2, & VI.3	R 336.1201(3)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
12. 1-Octene (CAS # 111660)	0.287 tpy ²	12-month rolling time period*	EU304-02	SC VI.1, VI.2, VI.3, & VI.4	R 336.1201(3)

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The maximum coolant inlet temperature of condenser 414 shall not exceed -13°C. An excursion of the maximum coolant inlet temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the maximum coolant inlet temperature limit, the permittee shall restore operation of condenser 414 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)**
2. The maximum coolant inlet temperature of condenser 1154 shall not exceed -13°C. An excursion of the maximum coolant inlet temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the maximum coolant inlet temperature limit, the permittee shall restore operation of condenser 1154 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)**
3. The permittee shall not operate the process unless the 337 wet scrubber is installed and operating properly.² **(R 336.1910, R 336.1201)**
4. The permittee shall not operate the process unless the condensers (414, 1154) are installed and operating properly.² **(R 336.1910, R 336.1201)**
5. The permittee shall equip and maintain the coolant line connected to the condensers (414, 1154) with a temperature indication device.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
6. The permittee shall not operate the amytrichlorosilane process for more than 262 hours per calendar month.² **(R 336.1201(3))**
7. The permittee shall not operate the amytrichlorosilane process for more than 3153 hours per year, based on a 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1201(3))**
8. The permittee shall calibrate the temperature indicator for condensers 414 and 1154 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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 monitor and record, on a continuous basis, the coolant inlet temperature of condensers 414 and 1154, with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. The permittee shall maintain a written log of the hours of operation of the amyltrichlorosilane process for each calendar month. These records shall be made available to the AQD upon request.² **(R 336.1201(3))**
3. Within 30 days following the end of each calendar month, the permittee shall determine the total hours of operation for the 12-month rolling time period for the amyltrichlorosilane process. **(R 336.1213(3))**
4. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
5. For condensers 414 and 1154, 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 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). **(40 CFR 64.7(d))**
6. For condensers 414 and 1154, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For condensers 414 and 1154, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
8. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-001	10 ²	30 ²	R 336.1201(3)
2. SV337-002	10 ²	30 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU311-01 EMISSION UNIT CONDITIONS

DESCRIPTION

HCl/MeCl recovery process including scrubbers, tanks, columns, vaporizer, absorber, compressor, and related equipment. Several processes at the on-site vent to this recovery process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF and Subpart EEEE. EU311-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 1-08.

Flexible Group ID: FGOLDFACILITY, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Absorbers (2810 and 24101), These are CAM subject devices for Hydrogen Chloride and Methyl Chloride
- Packed bed scrubber (2812 and 24102) These are CAM subject devices for Hydrogen Chloride and Methyl Chloride

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride	1.0 pph ²	Hourly	EU311-01	SC VI.1	R 336.1201(3)
2. Hydrogen Chloride	4.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.1 & VI.2	R 336.1201(3)
3. Methyl Chloride	40 pph during maintenance ²	Hourly	EU311-01	SC VI.1	R 336.1201(3)
4. Methyl Chloride	4.1 pph during normal operations ²	Hourly	EU311-01	SC VI.1	R 336.1201(3)
5. Methyl Chloride	2.5 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU311-01	SC VI.1 & VI.2	R 336.1201(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- If the liquid flow rate of the absorber (2810) is less than 4.0 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 4.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (2810) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (**40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1910**)
- If the liquid flow rate of the packed bed scrubber (2812) is less than 2.4 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.4 gallons per minute defined in this condition, or demonstrated during testing. Upon

detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (2812) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1910)**

3. If the liquid flow rate of the absorber 24101 is less than 2.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 2.5 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the absorber (24101) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1910)**
4. If the liquid flow rate of packed bed scrubber 24102 is less than 1.0 gallon per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. An excursion is a liquid flow rate less than 1.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of the packed bed scrubber (24102) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1910)**
5. The permittee shall not operate the process unless either the air pollution control equipment is installed and operating properly or the vent stream is sent to the fluidized bed reactors (FBR) at EU325-01. For this process, the control system consists of two absorbers (Nos. 2810 and 24101) and packed bed scrubbers (Nos. 2812 and 24102).² **(R 336.1201, R 336.1910)**
6. The permittee shall equip and maintain the scrubbers, that is absorbers 2810 and 24101 and packed bed scrubbers 2812 and 24102, with a liquid flow indication system.² **(R 336.1201, R 336.1910, 40 CFR 64.6(c)(1)(i))**
7. The permittee shall not operate EU311-01 in the vent down maintenance mode for more than 120 hours per year.¹ **(R 336.1225)**
8. The permittee shall not operate both distillation columns, that is 2890 and 24195, simultaneously in the vent down maintenance mode.¹ **(R 336.1225)**
9. The permittee shall calibrate the liquid flow indicator for absorbers 2810 and 24101 and scrubbers 2812 and 24102 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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 monitor and record, on a continuous basis, the liquid flow rate of the absorbers (2810 and 24101) and packed bed scrubbers (2812 and 24102) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1910)**
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1201(3))**

3. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, 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 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). **(40 CFR 64.7(d))**
4. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For absorbers 2810 and 24101, and packed bed scrubbers 2812 and 24102, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV310-009	2 ²	65 ²	R 336.1201(3), R 336.1225
2. SV311-005	2 ²	119 ²	R 336.1201(3), R 336.1225

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU321-01 EMISSION UNIT CONDITIONS

DESCRIPTION

40x Resin process including reactors, distillation, storage tanks, condensers, scrubber, separators, and related equipment. This emission unit is subject to the miscellaneous chemical manufacturing NESHAP in 40 CFR Part 63, Subparts A and FFFF. EU321-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 174-12A.

Flexible Group ID: FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condenser (24623). These devices are CAM subject units for VOC.
- Venturi scrubber (11472). These devices are CAM subject units for VOC.
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	5.2 lb/hr ²	Hourly	EU321-01	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a)
2. VOC	2.3 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU321-01	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a)
3. Hexamethyl-disiloxane	4.8 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU321-01	SC VI.1, VI.2, VI.3, VI.4, & VI.6	R 336.1224

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the coolant return temperature of condenser 24623 exceeds 40°C, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the coolant return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant return temperature limit, the permittee shall restore operation of condenser 24623 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
2. If the liquid flow rate of scrubber 11472 is less than 3.0 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion is a liquid flow rate less than 3.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of scrubber 11472 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**

3. During periods of planned routine maintenance for the HCl scrubber (venturi scrubber 11472), the permittee may continue to store material in, and withdraw material from, storage tank DV4755. If an extension has been approved, planned routine maintenance shall not exceed 360 hours per year. Otherwise, planned routine maintenance shall not exceed 240 hours per year. This condition does not authorize adding material to storage tank DV4755 during periods of planned routine maintenance.² **(R 336.1225, 40 CFR 63.2470(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed by SC III.3, the permittee shall not operate any equipment in EU321-01 that exhausts to emission control equipment unless the emission control device is installed, maintained, and operating in a satisfactory manner.² **(R 336.1910)**
2. The permittee shall equip and maintain the HCl scrubber (venturi scrubber 11472) with a liquid flow indication system.² **(R 336.1910, 40 CFR 64.6(c)(1)(i)(ii))**
3. The permittee shall equip and maintain condenser 24623 with a temperature indication system.² **(R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condenser 24623 and the flow indicator for scrubber 11472 in a satisfactory manner.² **(R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

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, on a continuous basis, the coolant return temperature of condenser 24623 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1910, 40 CFR 64.6(c)(1))**
2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of the scrubber (11472) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1910, 40 CFR 64.6 (c)(1))**
3. The permittee shall maintain a record of the date, time and duration of every low flow alarm (i.e., scrubber flow is less than 3 gallons per minute), as well as, actions taken to restore proper flow for venturi scrubber no. 11472.² **(R 336.1910, 40 CFR 64.6(c)(1))**

4. The permittee shall maintain a record of the date, time, and duration of every high temperature alarm (i.e., coolant return temperature exceeds 40°C), as well as actions taken to restore proper temperature for condenser 24623.² **(R 336.1910)**
5. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
6. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limit specified in SC I.3. The permittee shall make these records available to the AQD upon request.¹ **(R 336.1224)**
7. The permittee shall keep a record of the number of hours per month and per year that planned routine maintenance occurs for the HCl scrubber (venturi scrubber 11472) while material is stored in storage tank DV4755. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1225, 40 CFR 63.2470(d))**
8. The permittee shall keep a record of any extension approval of planned routine maintenance for the HCl scrubber (venturi scrubber 11472) and of any requirements accompanying the approval. If the extension approval has an expiration date, the permittee shall keep this record on file at the facility for a period of five years after the approval expires. If the extension has no expiration, the permittee shall keep this record on file at the facility for five years after the HCl scrubber is removed from service.² **(R 336.1225, 40 CFR 63.2470(d))**
9. For condenser 24623 and venturi scrubber 11472, 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 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). **(40 CFR 64.7(d))**
10. For condenser 24623 and venturi scrubber 11472, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
11. For condenser 24623 and venturi scrubber 11472, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
12. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

None of the stacks listed in the table below is required to discharge upwards:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV321-001	2 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV321-002	2 ²	83 ²	R 336.1225, 40 CFR 52.21(c) & (d) R 336.1225, R 336.2803, R 336.2804
3. SV321-004	2 ²	68 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV321-005	3 ²	7 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV321-012	1 ²	5 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV321-013	2 ²	53 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV321-014	3 ²	53 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV321-018	2 ²	45 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV321-065	1 ²	26 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV321-069	2 ²	46 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU322-03 EMISSION UNIT CONDITIONS

DESCRIPTION

Silizane manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 296-07.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condensers (6391, 6392, 7604, 7605, 7623)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	11.2 pph ²	Hourly	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
2. VOC	0.8 tpy ²	12-month rolling time period*	EU322-03	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Hexane	3.6 pph ²	Hourly	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
4. Hexane	0.1 tpy ²	12-month rolling time period*	Equipment venting to SV322-014	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
5. Ammonia	70.0 pph ¹	Hourly	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901
6. Ammonia	179.3 tpy ¹	12-month rolling time period*	Equipment venting to SV322-011	SC VI.1, VI.2, & VI.3	R 336.1224, R 336.1225, R 336.1901

* as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The coolant outlet temperature for condenser Nos. 6391 and 6392 shall not exceed 30°F.² (R 336.1702(a), R 336.1910, R 336.1201)
2. The process gas outlet temperature from condenser No. 7623 shall not exceed 30°F.² (R 336.1702(a), R 336.1910, R 336.1201)
3. The coolant exit temperature for the condensers (7604, 7605) shall not exceed 40°F.² (R 336.1910, R 336.1201)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the process unless the condensers (6391, 6392 and 7623) are installed and operating properly.² (R 336.1702(a), R 336.1201)

2. The permittee shall not operate the process unless the condensers (7604, 7605) are installed and operating properly.² **(R 336.1702(a), R 336.1201)**
3. The permittee shall equip and maintain the condensers (6391, 6392) associated with vent stack numbers SV322-011 and SV322-014 with a temperature instrument to monitor the coolant's outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
4. The permittee shall equip and maintain the condenser (7623) associated with vent stack number SV322-013 with a temperature instrument to monitor the process gas outlet temperature.² **(R 336.1702(a), R 336.1910, R 336.1201)**
5. The permittee shall equip and maintain the condensers (7604, 7605) with a coolant exit temperature instrument.² **(R 336.1910, R 336.1201)**

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, on a continuous basis, the outlet temperature for condensers 6391 and 6392 and, the process gas outlet temperature from condenser 7623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the exit temperature for condensers 7604 and 7605 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
3. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.7. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**

See Appendix 7

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: SV322-013 has an offset with a drain cut.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-011	15 ¹	80 ¹	R 336.1225
2. SV322-012	1.5 ¹	42 ¹	R 336.1225
3. SV322-013	2 ¹	42 ¹	R 336.1225
4. SV322-014	1.5 ¹	42 ¹	R 336.1225
5. SV322-015	1 ¹	26 ¹	R 336.1225
6. SV322-017	25 ¹	43 ¹	R 336.1225
7. SV322-025	1 ¹	42 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

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).

EU322-06 EMISSION UNIT CONDITIONS

DESCRIPTION

Siloxane catalyst process. EU322-06 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 308-94.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Condensers (4507, 7623). These devices are CAM subject units for VOC.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.7 pph ²	Hourly	EU322-06	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
2. VOC	3.3 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU322-06	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the exhaust gas temperature of condenser 7623 exceeds 30°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exhaust gas temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exhaust gas temperature limit, the permittee shall restore operation of condenser 7623 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
2. If the coolant exit temperature of condenser 4507 exceeds 50°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of condenser 4507 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
3. The permittee shall not operate the process unless the condensers (4507, 7623) are installed and operating properly.² **(R 336.1910, R 336.1201)**
4. The permittee shall equip and maintain the condenser 7623 with an exhaust gas temperature indicator and condenser 4507 with an exit coolant temperature indicator.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**

5. The permittee shall calibrate the temperature indicator for condensers 7623 and 4507 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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 monitor and record, on a continuous basis, the exhaust gas temperature from condenser no. 7623 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. The permittee shall monitor and record, on a per shift basis, the coolant exit temperature for condenser 4507 with instrumentation acceptable to the AQD. **(40 CFR 64.6(c)(1), R 336.1213(3))**
3. A written record of the amount of material processed shall be kept on file and made available to the AQD upon request.² **(R 336.1201(3))**
4. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
5. For condensers 4507 and 7623, 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 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). **(40 CFR 64.7(d))**
6. For condensers 4507 and 7623, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
7. For condensers 4507 and 7623, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

8. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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: SV322-013 has an offset with a drain cut. SV322-024 is 45 degrees down.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-013	2 ²	42 ²	R 336.1201(3)
2. SV322-024	2 ²	35 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU322-11 EMISSION UNIT CONDITIONS

DESCRIPTION

Methylvinylchlorosilane crude distillation process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU322-11 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 338-99B.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condenser (6384). This device is a CAM subject unit for VOC.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	38.3 pph ²	Hourly	EU322-11	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	14 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU322-11	SC VI.1 & VI.2	R 336.1702(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The coolant exit temperature of the condenser (6384) shall not exceed -15°C. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of condenser 6384 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)
- The permittee shall not operate EU322-11 unless the chilled condenser (6384) is installed and operating properly.² (R 336.1702(a), R 336.1201)
- The permittee shall equip and maintain the chilled condenser (6384) with an exhaust temperature device.² (R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))
- The permittee shall calibrate the temperature indicator for condenser 6384 in a satisfactory manner. (40 CFR 64.6(c)(1)(iii))

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 monitor and record, on a continuous basis, the coolant exit temperature of condenser no. 6384 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(40 CFR 64.6(c)(1), R 336.1213(3))**
2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.9. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1702(a), R 336.1201)**
3. For condenser 6384, 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 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). **(40 CFR 64.7(d))**
4. For condenser 6384, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For condenser 6384, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. Each semiannual report of monitoring 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below have a horizontal discharge:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-005	1.0 ¹	80 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU324-01 EMISSION UNIT CONDITIONS

DESCRIPTION

4820 batch kettle process producing silane and siloxane products. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU324-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 15-13.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Service water condenser 4818 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. These devices are CAM subject units for VOC.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.61 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU324-01	SC VI.3	R 336.1702(a)
2. VOC	20.86 pph ²	Hourly	EU324-01 venting through SV324-042	SC VI.1 & VI.2	R 336.1702(a)
3. VOC	4.93 pph ²	Hourly	EU324-01 venting through SV324-048	SC VI.1 & VI.2	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4804 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**
- The permittee shall not vent EU324-01 to the atmosphere through chilled condenser 4807 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c))(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**

3. The permittee shall not vent EU324-01 to the atmosphere through service water condenser 4818 unless the coolant exit temperature of the condenser 40°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 4818 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**
4. If any of the condenser coolant exit temperatures specified in SC III.1 to SC III.3 is exceeded, when venting to the atmosphere, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding any of these parameters is an excursion. **(40 CFR 64.6(c)(2))**
5. The permittee shall calibrate the temperature indicators for condensers 4804, 4807, and 4818 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not conduct vacuum stripping in EU324-01 unless the chilled condensers 4804 and 4807, which alternate in operation, are installed, maintained, and operated in a satisfactory manner.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU324-01 unless service water condenser 4818 is installed, maintained, and operated in a satisfactory manner.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain service water condenser 4818 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators.² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

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.² **(R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, in a satisfactory manner, the coolant exit temperatures for chilled condensers 4804 and 4807 and service water condenser 4818 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1225, R 336.1702(a), 40 CFR 64.6(c)(1))**
3. The permittee shall calculate the VOC emission rate from EU324-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702)**
4. For service water condenser 4818 and chilled condensers 4804 and 4807, 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 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). **(40 CFR 64.7(d))**

5. For service water condenser 4818 and chilled condensers 4804 and 4807, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
6. For service water condenser 4818 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-042 ^a	2 ²	56 ²	R 336.1201(3)
2. SV324-048 ^a	4 ²	51 ²	R 336.1201(3)

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

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU324-08 EMISSION UNIT CONDITIONS

DESCRIPTION

5617 batch kettle process producing silane and siloxane products. EU324-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 14-13.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Service water condenser 5618 and chilled condensers 4804 and 4807. The chilled condensers alternate in operation. These devices are CAM subject units for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.71 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU324-08	SC VI.3	R 336.1702(a)
2. VOC	20.86 pph ²	Hourly	EU324-08 venting through SV324-046	SC VI.1 & VI.2	R 336.1702(a)
3. VOC	4.93 pph ²	Hourly	EU324-08 venting through SV324-048	SC VI.1 & VI.2	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not vent EU324-08 to the atmosphere through chilled condenser 4804 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4804 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**
- The permittee shall not vent EU324-08 to the atmosphere through chilled condenser 4807 unless the coolant exit temperature of the condenser -8°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of chilled condenser 4807 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**
- The permittee shall not vent EU324-08 to the atmosphere through service water condenser 5618 unless the coolant exit temperature of the condenser 40°C or less. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated

during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of service water condenser 5618 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not conduct vacuum stripping in EU324-08 unless the chilled condensers 4804 and 4807, which alternate in operation, are installed, maintained, and operated in a satisfactory manner.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU324-08 unless service water condenser 5618 is installed, maintained, and operated in a satisfactory manner.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall equip and maintain service water condenser 5618 and chilled condensers 4804 and 4807 with condenser coolant exit temperature indicators.² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condensers 5618, 4804, and 4807 in a satisfactory manner. **(40 CFR 64(c)(1)(iii))**

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.² **(R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, in a satisfactory manner, the coolant exit temperatures for chilled condensers 4804 and 4807 and service water condenser 5618 on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1225, R 336.1702(a), 40 CFR 64.6(c)(1))**
3. The permittee shall calculate the VOC emission rate from EU324-08 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702)**
4. For service water condenser 5618 and chilled condensers 4804 and 4807, 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 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). **(40 CFR 64.7(d))**
5. For service water condenser 5618 and chilled condensers 4804 and 4807, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

6. For service water condenser 5618 and chilled condensers 4804 and 4807, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-046 ^a	2 ²	53 ²	R 336.1201(3)
2. SV324-048 ^a	4 ²	51 ²	R 336.1201(3)
^a This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU324-18 EMISSION UNIT CONDITIONS

DESCRIPTION

25156 batch kettle in 324 building, consisting of a reactor, heat exchanger, and a receiver. Emissions are controlled by a service water cooled condenser and two parallel chilled condensers.

The most recent PTI for this emission unit is PTI No. 19-14A.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Service water cooled condenser (25159) vents to SV324-054 or operates in series with the chilled condenser pair (4804/4807).
- Chilled condenser pair (4804/4807) that vents to SV324-048. The condensers operate in parallel, but only one at a time, sharing a common coolant line and temperature monitor.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	20.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU324-18	SC VI.4	R 336.1205(3), R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the 25156 batch kettle unless the service water condenser 25159 coolant temperature is 37°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)
2. Except when producing 204 fluid, the permittee shall not operate the 25156 batch kettle unless the chilled condenser 4804/4807 coolant temperature is -8°C or less.² (R 336.1225, R 336.1702(a), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the 25156 batch kettle unless the service water condenser 25159 is installed, maintained, and operated in a satisfactory manner.² (R 336.1225, R 336.1702(a), R 336.1910)
2. The permittee shall equip and maintain the service water condenser 25159 with a coolant temperature indicator.² (R 336.1225, R 336.1702(a), R 336.1910)
3. Except when producing 204 fluid, the permittee shall not operate the 25156 batch kettle unless the chilled condenser 4804/4807 is installed, maintained, and operated in a satisfactory manner.² (R 336.1225, R 336.1702(a), R 336.1910)
4. The permittee shall equip and maintain chilled condenser 4804/4807 with a coolant temperature indicator.² (R 336.1225, R 336.1720(a), R 336.1910)

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. While the 25156 batch kettle is operating, the permittee shall monitor and record, in a satisfactory manner, the service water condenser 25159's coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1225, R 336.1702(a), R 336.1910)**
2. While the 25156 batch kettle is operating, except when producing 204 fluid, the permittee shall monitor and record, in a satisfactory manner, the chilled condenser 4804/4807's coolant temperature on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event.² **(R 336.1225, R 336.1702(a), R 336.1910)**
3. 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 336.1205(3), R 336.1702(a))**
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the VOC emission rate from EU324-18, using a method acceptable to the AQD District Supervisor, on file at the facility and make them available to the Department upon request.² **(R 336.1205(3), R 336.1702(a))**

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV324-008	1 ²	11 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV324-013 ^A	1 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV324-048 ^A	4 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV324-054 ^A	2 ²	58.5 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV324-056 ^A	1 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV324-057 ^A	1 ²	25.7 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV324-058 ^A	6 ²	26.8 ²	R 336.1225, 40 CFR 52.21(c) & (d)
^A This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

IX. OTHER REQUIREMENTS

NA

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).

EU325-01 EMISSION UNIT CONDITIONS

DESCRIPTION

TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.

The most recent PTI for this emission unit is PTI No. 44-06B.

Flexible Group ID: FG325-01, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series)
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series)
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE – 337 scrubber acts as backup to venturi scrubber bank Nos. 1 and 2
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride	1.9 pph ¹	Hourly	EU325-01	SC III.2	R 336.1224, R 336.1225
2. Hydrogen Chloride	14.6 pph ²	Hourly	EU325-01	SC IV.1, VI.1	R 336.1225 R 336.1910

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless either carbon bed bank No. 1 (carbon beds 20587, 20588, and 20589) or carbon bed bank No. 2 (carbon beds 22200, 22205, and 22210) is installed, maintained, and operated in a satisfactory manner.² (R 336.1910)
2. The permittee shall not operate the process unless either venturi scrubber bank No. 1 (venturi scrubbers 9956, 9957, and 9958), venturi scrubber bank No. 2 (venturi scrubbers 22245-1, 22245-2, and 22245-3), or the 337 scrubber is installed, maintained, and operated in a satisfactory manner.² (R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee may operate equipment in EU325-01 under maintenance and/or upset conditions for a maximum of 200 hours per rolling 12-month time period.² (R 336.1225, 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 keep, in a satisfactory manner, records of the number and duration of maintenance and/or upset operation periods per calendar month and 12-month rolling time period as determined at the end of each calendar month. The permittee shall also record the reason the maintenance and/or upset operation period occurred. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1225, R 336.1910)

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
2. SV337-004	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
3. SV337-001	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
4. SV337-002	10 ²	30 ²	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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).

EU325-03 EMISSION UNIT CONDITIONS

DESCRIPTION

Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building.

The most recent PTI for this emission unit is PTI No. 44-06.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Venturi scrubbers in series (16810, 16811) or FG337SCRUBBER
- Scrubber liquid tank

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.10 lbs/1,000 lb exhaust gas ²	Instantaneous	EU325-03	SC VI.1	R 336.1331(1)(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 16810 is less than 40 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence.² (R 336.1910)
2. The permittee shall not operate the process serviced by the spent silicon material handling operation, including recovery of direct process residue solid/fines tank and spent bed tanks, hereinafter "system", unless the 348 building scrubbers (16810, 16811) are installed and operating properly.² (R 336.1910, R 336.1201)
3. The permittee shall equip and maintain scrubber 16810 with a liquid flow indicator.² (R 336.1910, R 336.1201)

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 monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - The liquid flow rate of venturi scrubber no. 16810.

- The liquid level of the scrubber tank.

For the purpose of this condition, “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV348-001	10 ¹	35 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

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).

EU340-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Calcium chloride process including condensers, scrubbers, columns, vaporizers, storage tanks, compressor, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU340-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 34-04B.

Flexible Group ID: FGMONMACT, FGHP2012A2A, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Absorber (8745A). This device is a CAM subject unit for VOC and Methyl Chloride
- Scrubbers (8745B). This device is a CAM subject unit for VOC and Methyl Chloride

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Benzene	0.05 pph ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
2. Methyl Chloride	3.5 pph, except when the gas stream is diverted to No. 8745 absorber and scrubber. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
3. Methyl Chloride	70.0 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 101 pounds per episode. ¹	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1225
4. Methyl Chloride	2.6 tpy ¹	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1225
5. VOC	7.0 pounds per hour, except when the gas stream is diverted to No. 8745 absorber and scrubber. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
6. VOC	97.7 pounds per the first hour of one of the infrequent episodes when the gas stream is diverted to No. 8745 absorber and scrubber, not to exceed 126 pounds per episode. ²	Hourly	EU340-01	SC VI.1 & VI.2	R 336.1702(a)
7. VOC	5.0 tpy ²	12-month rolling period*	EU340-01	SC VI.1 & VI.2	R 336.1702(a)

*As determined at the end of each calendar month.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the process unless the scrubbing water flow of scrubber 8745B is greater than 2.5 gallons per minute. An excursion is a scrubbing water flow rate less than 2.5 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**
2. The permittee shall not operate the process unless the coolant flow rate of absorber 8745A is greater than 50 gallons per minute. An excursion is a water flow rate less than 50 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of the scrubbing water flow limit, the permittee shall restore operation of scrubber 8745B to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain absorber 8745A with a liquid flow indication device. An alarm shall warn the operator whenever the coolant flow rate drops below 50 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain scrubber 8745B with a liquid flow indication device that shall warn the operator whenever the scrubbing water flow rate is less than 2.5 gallons per minute.² **(R 336.1702(a), R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
3. The permittee shall calibrate the flow indicators for scrubber 8745B and absorber 8745A in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

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 maintain a record of the date, time and duration of every low flow alarm, as well as, the actions taken to restore proper flow for scrubber 8745B and absorber 8745A.² **(40 CFR 64.6(c)(1), R 336.1910)**
2. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1225, R 336.1702(a))**
3. For absorber 8745A and scrubber 8745B, 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 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). **(40 CFR 64.7(d))**

4. For absorber 8745A and scrubber 8745B, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
5. For absorber 8745A and scrubber 8745B, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
6. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV340-001	6.0 ¹	70.0 ¹	R 336.1225, R 336.1901
2. SV340-003	2.0 ¹	55.0 ¹	R 336.1225, R 336.1901

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU356-01

EMISSION UNIT CONDITIONS

DESCRIPTION

Hydrochloric Acid (HCl) production plant with a packed bed scrubber (24388), capable of producing either anhydrous HCl or aqueous HCl. Production and storage of liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.

The most recent PTI for this emission unit is PTI No. 29-07B.

Flexible Group ID: FGHCLMACT

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-01 unless packed bed scrubber 24388 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 1,000 lbs/hr in the packed bed scrubber.¹ **(R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall equip and maintain packed bed scrubber 24388 with a liquid flow meter.² **(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, in a satisfactory manner, the liquid flow rate of scrubber 24388 on a continuous basis. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24388. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² (R 336.1225, R 336.1901, R 336.1910)

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-001	4 ¹	103 ¹	R 336.1225

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).

EU356-02

EMISSION UNIT CONDITIONS

DESCRIPTION

Rail car unloading station No. 9E with packed bed scrubber (24401) capable of either loading rail cars with aqueous HCl or unloading aqueous HCl from rail cars. Loading rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations is subject to the requirements of the Hydrochloric Acid Production NESHAP, 40 CFR Part 63, Subpart NNNNN.

The most recent PTI for this emission unit is PTI No. 29-07B.

Flexible Group ID: FGHCLMACT

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24401)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-02 unless packed bed scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.¹ **(R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall equip and maintain packed bed scrubber 24401 with a liquid flow meter.² **(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, in a satisfactory manner, the liquid flow rate of scrubber 24401 on a continuous basis whenever EU356-02 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24401 as required by SC IV.2. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1225, R 336.1901, R 336.1910)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-002	4 ¹	20 ¹	R 336.1225

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).

EU356-03

EMISSION UNIT CONDITIONS

DESCRIPTION

Rail car unloading station No. 10E with packed bed scrubber (24344) capable of unloading aqueous HCl from rail cars.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24344)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU356-03 unless packed bed scrubber 24344 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum liquid flow rate of 2,500 lbs/hr in the packed bed scrubber.¹ **(R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall equip and maintain packed bed scrubber 24344 with a liquid flow meter.² **(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, in a satisfactory manner, the liquid flow rate of scrubber 24344 on a continuous basis whenever EU356-03 operates. Unless otherwise specified in this permit, monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis.² **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**
2. The permittee shall keep, in a satisfactory manner, records of the flow rate for scrubber 24344. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1225, R 336.1901, R 336.1910)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV356-003	4 ¹	20 ¹	R 336.1225

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).

EU501-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Intermediate viscosity (IV) and very low viscosity (VLV) silicone fluid manufacturing process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 158-87B.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Carbon drum system - Plant currently vents to 5 drums in series; however, the number of drums may vary. The last drum is placed on a scale and weighed periodically to prevent breakthrough.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.34 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	0.5 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
3. Methyl Siloxane	4.1 pph ²	Hourly	EU501-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
4. Methyl Siloxane	4.2 tpy ²	12-month rolling time period*	EU501-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The weight increase of the last carbon drum (i.e., drum prior to discharge) within the carbon drum system shall not exceed 45 pounds.² (R 336.1910)

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 monitor and record, at least once per shift, the weight of the last carbon drum (i.e., drum prior to discharge to atmosphere) within the carbon drum system with instrumentation acceptable to the AQD. A written log of these weights shall be kept on file and made available to the AQD upon request. **(R 336.1213(3))**
2. A written record of the amount of material processed per 12-month rolling period shall be kept on file and made available to the AQD upon request.² **(R 336.1201(3))**
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in this table. These records shall be made available to the AQD upon request. **(R 336.1213(3))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-103	8 ²	57 ²	R 336.1201(3)
2. SV501-222	2 ²	58 ²	R 336.1201(3)
3. SV501-229	2 ²	59 ²	R 336.1201(3)
4. SV501-230	1.5 ²	59 ²	R 336.1201(3)
5. SV501-231	1 ²	59 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the process unless the carbon drum system is installed and operating properly.² **(R 336.1910)**
2. The permittee shall equip and maintain the carbon drum system with a scale that measures the weight of the last carbon drum.² **(R 336.1910)**

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).

EU501-02 EMISSION UNIT CONDITIONS

DESCRIPTION

1107 hydrolysis process, including tanks 4160 and 23535. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-02 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 126-03A.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

Venturi scrubbers (4109, 7585). These devices are CAM subject units for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	9.1 pph ²	Hourly	EU501-02	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	5.9 tpy ²	12-month rolling time period*	EU501-02	SC VI.1 & VI.2	R 336.1702(a)

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the liquid flow rate of venturi scrubber 4109 during startup, shutdown and emergency conditions is less than 18 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence². **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
2. If the liquid flow rate for venturi scrubber 7585 during process operations in EU501-02 is less than 1.5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence². **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall calibrate the liquid flow measurement devices for scrubbers 4109 and 7585 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not initiate startup or planned shutdown of operations in EU501-02 unless venturi scrubber 4109 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 4109 includes maintaining a minimum liquid flow rate of 18 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**
2. The permittee shall not operate EU501-02 unless venturi scrubber 7585 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of venturi scrubber 7585 includes maintaining a minimum liquid flow rate of 1.5 gallons per minute to the scrubber.² **(R 336.1224, R 336.1910)**

3. The permittee shall equip and maintain venturi scrubbers 4109 and 7585 with liquid flow measurement devices.² **(R 336.1201 R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**

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 within 30 days of the end of each calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 7585 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
3. During startup, shutdown, and emergency conditions, the permittee shall monitor and record, on a per shift basis, the liquid flow rate of venturi scrubber 4109 with instrumentation acceptable to the AQD.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1225, R 336.1702(a))**
4. The permittee shall calculate the VOC emission rate from EU501-02 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**
5. The permittee shall keep, in a satisfactory manner, a log of each startup, shutdown and emergency operation condition. The log shall include the date, time, duration, and cause of each emergency operation condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request² **(R 336.1912)**
6. For venturi scrubbers 4109 and 7585, 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 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). **(40 CFR 64.7(d))**
7. For venturi scrubbers 4109 and 7585, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. For venturi scrubbers 4109 and 7585, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

9. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-141	2 ²	54 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV503-158	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV503-159	1 ²	20 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU501-49 EMISSION UNIT CONDITIONS

DESCRIPTION

Low viscosity fluids and 3-component fluids process including reactors, tanks, condensers, and a vacuum system. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU501-49 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 437-90B.

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Condensers (15091, 4358). These devices are CAM subject units for VOCs.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	3.1 pph ²	Hourly	EU501-49 operations exhausting through SV501-018	SC VI.2	R 336.1702(a)
2. VOC	9.3 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU501-49 operations exhausting through SV501-018	SC VI.2 & VI.4	R 336.1702(a)
3. Hexamethyldisiloxane, MM	5.4 pph ¹	Hourly	EU501-49 operations exhausting through SV501-018	SC I.2	R 336.1224
4. Hexamethyldisiloxane, MM	23.7 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU501-49 operations exhausting through SV501-018	SC VI.2 & VI.5	R 336.1224

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Satisfactory operation of condenser 15091 means that the annual average service water temperature for the condenser will not exceed 80°F. Exceeding this parameter is an excursion. An excursion of the average service water temperature for the condenser is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of service water temperature for the condenser limit, the permittee shall restore operation of condenser 15091 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1702(a))**
2. If the service water return temperature of condenser 4358 exceeds 95°F while the batch kettle is operating, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding this parameter is an excursion. An excursion of the service water return temperature is the

exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the service water return temperature limit, the permittee shall restore operation of condenser 4358 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1225, R 336.1702(a))**

3. The permittee shall calibrate the temperature gauge for condensers 15091 and 4358 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate equipment in EU501-49 that exhausts to SV501-018 unless the vacuum pump and vent condenser (15091) are installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(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, on a continuous basis, the service water return temperature of condenser 4358 with instrumentation acceptable to the AQD whenever the batch kettle operates. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the service water inlet temperature of condenser 15091 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1910)**
3. Within 30 days following the end of each calendar month, the permittee shall calculate and record the average service water inlet temperature for condenser 15091 for the 12-month rolling time period ending that month. The permittee shall use this average temperature to determine compliance with SC III.1. The permittee shall keep these records on file at the facility and make them available to the AQD upon request.² **(R 336.1224, R 336.1702(a))**
4. Within 30 days following the end of each calendar month, the permittee shall calculate and record VOC emissions from EU501-49 operations exhausting through SV501-018 for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limit specified in SC I.2. The permittee shall keep these records on file at the facility and make them available to the AQD upon request.² **(R 336.1702(a))**
5. Within 30 days following the end of each calendar month, the permittee shall calculate and record MM emissions from EU501-49 operations exhausting through SV501-018 for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limit specified in SC I.4. The permittee shall keep these records on file at the facility and make them available to the AQD upon request.¹ **(R 336.1224)**
6. For condensers 15091 and 4358, 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 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). **(40 CFR 64.7(d))**

7. For condensers 15091 and 4358, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. For condensers 15091 and 4358, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
9. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV501-018 ⁺	2 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV501-046 ⁺	1 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV501-047 ⁺	1 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV501-228 ⁺	2 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d)

⁺ This vent may discharge downward.

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU502-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methyldichlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 Spray Scrubber System or to the dry vent tank of the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the Site Scrubber System via the "Bulk Move Vent" described in EU502-07.

The most recent PTI for this emission unit is PTI No. 131-15.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber. This device is a CAM subject unit for VOCs.
- DV24425, IWS 1st Stage DV24427, IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	4.8 pph ²	Annual	EU502-01	SC VI.1	R336.1702(a)
2. VOC	2.5 tpy ²	12-month rolling time period*	EU502-01	SC VI.2	R336.1702(a)

* 12-month rolling time period as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner:² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

	Emission Control	Required Control Efficiency
a. EU502-01	i. 337 Spray Scrubbers or	99.4%
	ii. THROX System or	99.9%
	iii. Site Scrubber System	99.4%

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.² **(R 336.1702(a))**
2. The permittee shall calculate the VOC emission rate from EU502-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.116b)**

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 comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessel nos. DV100, DV102, DV150, DV151, DV208, DV20841, and DV25-100. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

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).

EU502-04 EMISSION UNIT CONDITIONS

DESCRIPTION

Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers.

The most recent PTI for this emission unit is PTI No PTI No. 18-18.

Flexible Group ID: FGSITEBLOWER, FGTHROX, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

EUTHROX for nitrogen purge

I. EMISSION LIMITS

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	300 lb/yr **2	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.2	R 336.1702(a)
2. Methylated siloxanes *	300 lb/yr **1	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.2	R 336.1224
3. Benzene (CAS Number + 71-43-2)	1 lb/yr **, ++1	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
4. Biphenyl (CAS Number 92-52-4)	0.2 lb/yr **, ++1	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
5. Methylallyl chloride (CAS number 563-47-3)	0.4 lb/yr **, ++1	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
Emission limits for TACs with a screening level based on a one-hour averaging time					
6. Each Category 1 TAC	3.36×10^{-7} lb/hr 1, **	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
7. Each Category 2 TAC	3.36×10^{-6} lb/hr 1, **	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
8. Each Category 3 TAC	3.36×10^{-5} lb/hr 1, **	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
9. Each Category 4 TAC	3.36×10^{-4} lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
10. Each Category 5 TAC	0.0036 lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
11. Each Category 6 TAC	0.036 lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
12. Each Category 7 TAC	0.336 lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
13. Each Category 8 TAC	3.36 lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225
Emission limits for TACs with a screening level based on an eight-hour averaging time					
14. Each Category 1 TAC	2.04×10^{-6} lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
15. Each Category 2 TAC	2.04×10^{-5} lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
16. Each Category 3 TAC	2.04×10^{-4} lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
17. Each Category 4 TAC	0.00204 lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
18. Each Category 5 TAC	0.0204 lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
19. Each Category 6 TAC	0.204 lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
20. Each Category 7 TAC	2.04 lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
21. Each Category 8 TAC	7.44 lb/hr ^{a, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
Emission limits for TACs with a screening level based on a 24-hour averaging time					
22. Each Category 1 TAC	6.10×10^{-6} lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
23. Each Category 2 TAC	6.10×10^{-5} lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
24. Each Category 3 TAC	6.10×10^{-4} lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
25. Each Category 4 TAC	0.00610 lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
26. Each Category 5 TAC	0.0610 lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
27. Each Category 6 TAC	0.610 lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
28. Each Category 7 TAC	6.10 lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
29. Each Category 8 TAC	7.44 lb/hr ^{b, 1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
Emission limits for TACs with a screening level based on an annual averaging time					
30. Each Category 1 TAC	0.000376 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
31. Each Category 2 TAC	0.00376 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
32. Each Category 3 TAC	0.0376 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
33. Each Category 4 TAC	0.376 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
34. Each Category 5 TAC	3.76 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
35. Each Category 6 TAC	37.6 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
36. Each Category 7 TAC	376 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
37. Each Category 8 TAC	1,700 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225, R 336.1227(2)
Emission limits for TACs that are not carcinogens and are not listed in Table 20 of Rule 226					
38. Each Category 226(a) TAC	Less than 0.14 lb/hr ^{1, **}	Hourly	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
39. Each Category 226(a) TAC	Less than 10 lb/month ^{1, **}	Calendar month	EU502-04	SC VI.5, VI.6, VI.8	R 336.1225

All references to “a screening level” refer to any applicable AQD-established initial threshold screening level (ITSL) or any applicable AQD-established initial risk screening level (IRSL). Secondary risk screening levels shall not be considered in these categories. This permit does not authorize emissions of any TAC with a screening level less than 0.001 microgram per cubic meter for any averaging time.

- Category 1 TACs are all TACs with a screening level ≥ 0.001 and < 0.01
- Category 2 TACs are all TACs with a screening level ≥ 0.01 and < 0.1
- Category 3 TACs are all TACs with a screening level ≥ 0.1 and < 1
- Category 4 TACs are all TACs with a screening level ≥ 1 and < 10
- Category 5 TACs are all TACs with a screening level ≥ 10 and < 100
- Category 6 TACs are all TACs with a screening level ≥ 100 and $< 1,000$
- Category 7 TACs are all TACs with a screening level $\geq 1,000$ and $< 10,000$
- Category 8 TACs are all TACs with a screening level $\geq 10,000$ and $< 100,000$
- Category 226(a) TACs are all TACs that are not carcinogens, are not listed in Table 20 of Rule 226 (R 336.1226) and have emissions < 0.14 lb/hr and < 10 lb/month

Screening levels and category criteria are in units of micrograms per cubic meter.

For any TAC that is a chlorosilane, its chlorine content shall also be converted to hydrogen chloride (HCl) equivalents as described in Appendix 7, and the total HCl equivalents from the TAC’s emissions shall be summed with other simultaneously emitted HCl equivalents and simultaneously emitted HCl to determine a total HCl equivalents emission rate. The emissions of the chlorosilane TAC must comply with all Category emission limits that apply to it, and the emissions of total HCl equivalents must comply with the Category emission limits that apply to HCl.

^a The average emission rate shall not be less than one-eighth of the maximum one-hour emission rate.

^b The average emission rate shall not be less than one-tenth of the maximum one-hour emission rate.

^{*} “Methylated siloxanes” refers to cyclic, branched, or linear completely methylated siloxanes. As provided in Rule 122, these compounds are not “volatile organic compounds.”

^{**} This emission limit applies to the total emissions occurring simultaneously from EU502-04 activities. This includes emissions from all vents listed in SC VIII.1-3 and the emissions from FGTHROX due to EU502-04 activities. The limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

⁺ “CAS Number” refers to the Chemical Abstracts Service Registry Number.

⁺⁺ This emission limit replaces the Category-based emission limit that would apply to this air pollutant based on its IRSL. If this air pollutant has one or more ITSLs, its emissions must also comply with all applicable Category-based emission limits for those ITSLs.

II. MATERIAL LIMITS

Material	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Total SiO ₂ equivalents ⁺ loading to EUTHROX	40.0 lb/hr ¹	Hourly	EU502-04	SC VI.3	R 336.1224
2. Total SiO ₂ equivalents loading to EUTHROX	6400 lb/yr ²	12-month rolling time period as determined at the end of each calendar month	EU502-04	SC VI.4	R 336.1224, 40 CFR 52.21(c)&(d)

⁺ SiO₂ equivalents shall be calculated as described in Appendix 7 and represent a surrogate for PM₁₀ loading to EUTHROX.

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not conduct nitrogen purging activities exhausted to EUTHROX unless EUTHROX is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of EUTHROX includes complying with the requirements of FGTHROX.² **(R 336.1224, R 336.1225, R 336.1702(a))**

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.² **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall calculate the VOC emission rate and methylated siloxanes emission rate from EU502-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1702(a))**
3. The permittee shall keep a record of the maximum total SiO₂ equivalents loading to EUTHROX from EU502-04 on a one-hour basis. The calculated loading shall be based on chemical and chemical engineering principles of vapor-liquid equilibrium and Appendix 1 or an alternate method acceptable to the AQD District Supervisor. The permittee shall update this record whenever a process change (such as a new material or new type or size of container is processed in EU502-04), or twelve months after the most recent previous update, whichever comes first. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1224)**
4. The permittee shall calculate the total SiO₂ equivalents loading to EUTHROX monthly, for the preceding 12-month rolling time period, using chemical and chemical engineering principles of vapor-liquid equilibrium and Appendix 1 or a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, 40 CFR 52.21 (c)&(d))**
5. The permittee shall keep a current description, in a manner acceptable to the AQD District Supervisor, of each activity carried out in EU502-04 that emits air contaminants. The description for each activity shall include all information needed to demonstrate that emissions, including HCl equivalents, if applicable, from the activity comply with the emission limits in EU502-04 SC I.1 through I.39. At a minimum the description shall include raw materials used and emission calculations for all air contaminants emitted and shall reference the source of production information used in emission calculations. The permittee shall keep all descriptions at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a))**
6. The permittee shall keep monthly records, in a manner acceptable to the AQD District Supervisor, of all activities carried out in EU502-04 that emit air contaminants, including the number of containers washed and the composition of materials involved. The permittee shall cross-reference these records with the activity-specific description required by EU502-04 SC VI.5 in a manner that demonstrates compliance with the emission limits in SC I.1 through I.39. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a))**

7. The requirements of SC VI.8 below apply when the permittee plans to process a TAC in EU502-04 for which the AQD has neither established a screening level nor identified which emission limits in SC I.1 through I.39 apply to the TAC, as follows:¹ **(R 336.1224, R 336.1225)**
- If the permittee does not choose to rely on an exemption from the Permit to Install requirement to process the TAC in EU502-04, all the provisions of SC VI.8 apply.
 - If the permittee chooses to rely on an exemption from the Permit to Install requirement to process the TAC in EU502-04, and the exemption involves determining a screening level for the TAC (e.g., R 336.1285(2)(b) when assessing “meaningful change” involves the use of a screening level), all the provisions of SC VI.8 apply.
 - If the permittee chooses to rely on an exemption from the Permit to Install requirement to process the TAC in EU502-04, and the exemption does not involve determining a screening level for the TAC, SC VI.8 does not apply.
8. Except as allowed by SC VI.7, before processing any TAC in EU502-04 for which the AQD has neither established a screening level nor identified which emission limits in SC I.1 through I.39 apply to the TAC, the permittee shall follow the procedure below.¹ **(R 336.1224, R 336.1225)**
- The permittee shall calculate the maximum emission rates for the TAC. Calculated emission rates shall include the maximum annual emissions and the maximum emissions for any one-hour period, any eight-hour period, or any 24-hour period. The maximum emissions shall be based on the maximum emissions-generating operating scenarios and on the nature of the activities that cause the emissions. For any TAC that is a chlorosilane, its chlorine content shall also be converted to HCl equivalents based on the portion of the TAC’s molecular weight consisting of chlorine atoms, and the total HCl equivalents from the TAC’s emissions shall be summed with other simultaneously emitted HCl equivalents and simultaneously emitted HCl to determine a total HCl equivalents emission rate.
 - If the TAC’s maximum emission rate is less than 0.14 pound per hour and less than 10 pounds per month, the permittee shall determine whether the TAC is a carcinogen or is listed in Table 20 of Rule 226 (R 336.1226). If the TAC is neither a carcinogen nor listed in Table 20 of Rule 226, the permittee shall classify the TAC as a provisional Category 226(a) TAC. The determination of whether a TAC is a carcinogen shall be based on the following¹:
 - If the TAC has at least one AQD-established screening level, but has no initial risk screening level, the TAC is not a carcinogen for the purpose of determining whether it can be considered a Category 226(a) TAC for this emission unit.
 - If the TAC has no AQD-established screening level, the determination shall be based on the definition of “carcinogen” in Rule 103 (R 336.1103).
 - If the permittee has not classified the TAC as a Category 226(a) TAC, the permittee shall determine provisional screening levels according to Rules 229, 231, 232, and 233 (R 336.1229, R 336.1231, R 336.1232, and R 336.1233).
 - The permittee shall record the following information for each TAC subject to this condition.
 - The provisional screening level(s) for the TAC or its provisional status in Category 226(a);
 - The TAC’s chemical name and either its Chemical Abstract Service Registry Number (CAS Number) or another publicly-available identifier specific to the substance. If no CAS Number or other publicly-available identifier is available, the chemical structure or partial chemical structure must be recorded in enough detail to adequately describe the compound;
 - The maximum annual and maximum one-hour, eight-hour, and 24-hour period emission rates for the TAC, with supporting calculations;
 - If the permittee has classified the TAC as a provisional Category 226(a) TAC, the basis for determining the TAC is not a carcinogen and is not listed in Table 20, including resources used and information retrieved about the TAC;
 - The applicable emission unit ID;
 - The active permit number;
 - The date when the permittee proposes to begin processing the TAC in EU502-04.
 - The permittee shall not process the TAC in EU502-04 until after one of the following has occurred:
 - The permittee has received an AQD response to the report required by SC VII.1 identifying which Category or Categories apply to the TAC;
 - Thirty days have passed since submitting the report required by SC VII.1.

9. The permittee shall keep a record of nitrogen purging activities for each calendar month, noting all occasions when nitrogen purging was interrupted because EUTHROX was not installed, maintained, and operated in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1224, R 336.1225, R 336.1702(a))**

VII. REPORTING

1. No less than 30 days before first processing in EU502-04 a TAC that was not identified in the application for Permit to Install No. 18-18, and only when the permittee does not choose to rely on an exemption from the Permit to Install requirement to process the TAC in EU502-04, the permittee shall submit all records required by SC VI.8.d to the AQD District Supervisor in an acceptable format. The AQD will do one of the following within 30 days of receipt of the submittal:¹ **(R 336.1225, R 336.1226(a))**
 - a. Communicate that the TAC shall be classified as a Category 226(a) TAC when emitted from EU502-04;
 - b. Communicate which Category and averaging time or Categories and averaging times shall apply to emissions of the TAC from EU502-04.
2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
5. The permittee shall submit any performance test reports including RATA 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 RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged to the ambient air as described below:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV502-009a (12G Tank Truck Wash Station)	Not restricted	4 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV502-009b (13G Tank Truck Wash Station)	Not restricted	4 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV502-009c (13G Rail Car Station)	Not restricted	4 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

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).

EU502-07

EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit consists of two sets of related equipment with different emission profiles and different vent control paths:

1. **Distillation Vents:** Trichlorosilane (TCS) distillation equipment for purifying crude TCS into various grades (electronic-, chemical-, and plant-grade) of TCS product as well as chemical-grade silicon tetrachloride.

Typically, the add-on control equipment for the Distillation Vents consists of the 304 Vent Recovery System followed by the dry vent tank at the THROX System. The dry vent tank is either sent to the THROX System burner or diverted to the Site Scrubber System. In the event both the THROX System and the Site Scrubber System are off-line, the Distillation Vents will be directed through the 337 Spray Scrubber System after 304 Vent Recovery. However, in the event 304 Vent Recovery System goes down, the Distillation Vents will be directed to the 325 Vent Recovery System. The 325 Vent Recovery System consists of two carbon bed banks (Nos. 1 and 2) and the 337 Venturi Scrubbers. Each one of the carbon beds (either No. 1 or No. 2) vent to one of the 337 Venturi Scrubbers (No. 1 or No. 2), or to the THROX System or the Site Scrubber System.

2. **Bulk Move Vents:** trichlorosilane (TCS), silicon tetrachloride (STC), and dichlorosilane (DCS) “bulk move” operations. These operations include the loading and unloading of storage tanks, railcars, and semi-trailers and occur primarily at Dow Corning’s 502 Building, supporting the distillation operations.

Typically, the add-on control equipment for the Bulk Move Vents is the Site Scrubber System. If the Site Scrubber System is down, the Bulk Move Vents have the capability to follow the vent path of the Distillation Vents as described above.

The 337 Spray Scrubber System discharges to the atmosphere through either SV337-001 or SV337-002. 337 Venturi Scrubber bank No. 1 discharges to the atmosphere through SV337-003. 337 Venturi Scrubber bank No. 2 discharges to the atmosphere through SV337-004. The THROX System discharges through SV2514-006. The Site Scrubber System discharge through either SV2512-001 or SV2512-002. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb.

The most recent PTI for this emission unit is PTI No. 185-07B.

Flexible Group ID: FG304VENTRECOVERY, FG337SCRUBBER, FG325-01, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- 304 Vent Recovery System comprised of interchangers HX1 2040 and HX2 2040 and condensers HX1 2044 and HX2 2044
- THROX System comprised of thermal incinerator burner DV24422, quencher DV24424, HCl Absorber DV24425, IWS 1st Stage DV24427, and IWS 2nd Stage DV 24428, vent SV2514-006
- Site Scrubber System comprised of two parallel spray tower scrubbers DV23709 and DV23710, vents SV2512-001/002
- 337 Spray Scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively)
- Tanker trailer vapor equalization
- 325 Vent Recovery System consisting of carbon beds (Bank No.1 - 20587, 20588, 20589 and Bank No. 2 - 22200, 22205, 22210) and the 337 Venturi Scrubbers (Bank No. 1 - 9956, 9957, 9958 operate in series and Bank No. 2 - 22245-1, 22245-2, 22245-3 operate in series) used as a backup control device for the emission unit in the event 304 Vent Recovery goes down.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Trichlorosilane & tetrachlorosilane combined	6.0 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	EU502-07	SC VI.2	R 336.1224

II. MATERIAL LIMIT(S)

1. The permittee shall not route more than 1,000 pounds of material per hour, based on a one-hour average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**
2. The permittee shall not route more than 600 pounds of material per hour, based on an annual average, from the Bulk Move Vents to the Site Scrubber System.¹ **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.¹ **(R 336.1225)**
2. The permittee shall not operate the equipment listed below unless the vent streams from the equipment are exhausted to the emission control devices listed below. For a storage tank, "operate" refers only to transfers into or out of the tank. The permittee shall not exhaust emissions from any equipment identified below to an associated device listed below unless the device is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1910)**

Equipment	First Emission Control	Required Control Efficiency	Second Emission Control	Required Control Efficiency
a. Distillation Vents	i. 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	ii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Venturi Scrubbers	99.4%

b. Bulk Move Vents	i. Site Scrubber System	99.4%	NA	
	ii. Or 304 Vent Recovery System followed by	88%-99%*	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Spray Scrubbers	99.4%
	iii. Or 325 Vent recovery System followed by	99.9%	1. THROX System or	99.9%
			2. Site Scrubber System or	99.4%
			3. 337 Venturi Scrubbers	99.4%
* Control efficiency depends on the chlorosilane – 96% for trichlorosilane, 99% for silicon tetrachloride, and 88% for dichlorosilane				

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, when the Bulk Move Vents are operating, the mass flow rate of the vapor from the Bulk Move Vents to the Site Scrubber System on a continuous basis. Monitoring and recording of data “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event.¹ **(R 336.1225)**
2. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the Distillation Vents for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission limits specified in the table listed in Section I of this permit. These records shall be made available to the AQD upon request.¹ **(R 336.1224)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 60.116b (Monitoring of Operations) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. **(40 CFR Part 60, Subpart Kb, Section 60.116b)**

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 comply with the applicable requirements of 40 CFR Part 60, Subpart Kb, Section 61.115b (Reporting and recordkeeping requirements) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. **(40 CFR Part 60, Subpart Kb, Section 60.115b)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	90 ²	R 336.1225, R 336.2803, R 336.2804
2. SV2512-001	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
3. SV2512-002	6 ²	65 ²	R 336.1225, R 336.2803, R 336.2804
4. SV337-003	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804
5. SV337-004	10 ²	30 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subparts A (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) for storage vessels DV153, DV155, DV252, DV25-102, DV25-105, and DV25-107. The applicable sections of Subpart Kb include, but are not necessarily limited to: **(40 CFR Part 60, Subparts A and Kb)**
- 60.112b (Standard of VOCs)
 - 60.113b (Testing and procedures)
 - 60.114b (Alternative means of emission limitation)

Footnotes:

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

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

EU502-09

EMISSION UNIT CONDITIONS

DESCRIPTION

Chlorosilane waste tank 25403 for phenyl supply chain located in the 502 tank farm.

The most recent PTI for this emission unit is PTI No. 91-14.

Flexible Group ID: FGTHROX, FGSITESCUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

This emission unit vents to the site THROX and, when the THROX is not operating, the site scrubbers. Emissions from transfers from the tank to tank trucks and rail cars will be controlled by the THROX or vapor balance back to the tank.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not load any tank truck or railcar from EU502-09 unless the THROX or the vapor balance system is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-09 unless the emissions are routed to FGTHROX or FGSITESCUBBERS and the control device (FGTHROX or FGSITESCUBBERS) is installed, maintained, and operated in a satisfactory manner, as described in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions).² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

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).

EU502-11 EMISSION UNIT CONDITIONS

DESCRIPTION

Chlorosilane waste tank 256 in the 2502 tank farm, with nominal capacity of 20,000 gallons. The tank receives liquid waste from various emission units at the facility and can be unloaded to either tank trucks or railcars. The tank typically vents to the site thermal oxidizer (THROX). In the event the THROX is offline, the tank vents to one of the parallel site scrubbers. If both the THROX and the site scrubbers are unavailable, the tank vents to one of the 337 tower scrubbers.

The most recent PTI for this emission unit is PTI No. 132-15.

Flexible Group ID: FGTHROX, FGSITESCRRUBBERS, FG337SCRUBBER

POLLUTION CONTROL EQUIPMENT

- THROX: thermal incinerator (24422 - burner, quench, and scrubber system), vent SV2514-006
- Site scrubber system: two parallel spray tower scrubbers (23709 and 23710), vents SV2512-001/002
- 337 Spray Scrubber System: (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively.)

I. EMISSION LIMITS

Pollutant	Limit	Time Period /Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.9 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU502-11	SC VI.4	R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only transfer the 3295 vessel and column bottoms stream from 311 building to EU502-11 when emissions from the transfer are being exhausted to the THROX and the THROX is installed, maintained, and operated in a satisfactory manner.¹ (R 336.1224, R 336.1225)

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU502-11 unless all emissions are vented to one of the emission control devices listed below and the emission control device is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1702(a), R 336.1910)
 - a. THROX
 - b. Site scrubber system
 - c. 337 Spray Scrubber System
2. The permittee shall not transfer material from EU502-11 to DV15G railcar station or to DVST-61 trailer station unless the transfer is vapor balanced and the vapor balance equipment is installed, maintained, and operated in a satisfactory manner.² (R 336.1224, R 336.1702(a), R 336.1910)

V. TESTING/SAMPLING

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

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 and records 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 336.1702(a))**
2. The permittee shall keep a monthly record of the time periods when emissions from EU502-11 are vented to each emission control device listed in SC IV.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
3. The permittee shall keep a monthly record of the identity and source of waste streams transferred to EU502-11. For the 3295 vessel and column bottoms stream from 311 building, the record shall also include the date and time during which the stream was transferred to EU502-11. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1224, R 336.1225)**
4. The permittee shall calculate the VOC emission rate from EU502-11 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR 60.115b (Reporting and recordkeeping requirements), as they apply to EU502-11. **(40 CFR 60.115b)**

See Appendix 8

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

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 (General Provisions) and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), as they apply to EU502-11. The applicable sections of Subpart Kb include, but are not necessarily limited to, the following: **(40 CFR Part 60, Subparts A & Kb)**
 - a. 60.112b (Standard of VOCs)
 - b. 60.113b (Testing and procedures)
 - c. 60.114b (Alternative means of emission limitation)

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).

EU505-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Resin and coating manufacturing including reactors, kettles, NSPS storage tanks, condensers, scrubber, drum off, vacuum system, and related equipment. This emission unit is subject to the requirements of 40 CFR Part 60, Subpart Kb and, 40 CFR Part 61, Subparts A, J, and V, 40 CFR Part 63, Subpart EEEE and FFFF. EU505-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 169-12.

Flexible Group ID: FGOLDFACILITY, FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Chilled condensers (16092, 25094, 6553, 5-510). These devices are CAM subject units for VOC.
- Condenser 16092 is a backup to condenser 25094
- Vapor balance system
- Water scrubber (6547)
- Carbon adsorbers
- FGTHROX
- FGSITESCRUBBERS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	70.4 pph ²	Hourly	EU505-01	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	11.1 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU505-01	SC VI.1, VI.2, & VI.4	R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Except as allowed in SC III.6, the permittee shall not operate equipment in EU505-01 that exhausts to one of the chilled condensers listed below unless the chilled condenser is installed, maintained, and operated in a satisfactory manner.² (R 336.1910, R 336.1225, R 336.1702(a))
 - a. Condenser 6553
 - b. Condenser 5-510
 - c. Either condenser 16092 or 25094, whichever is in use.
2. Unless the exception in SC III.6 applies, the coolant exit temperature of each of the condensers listed below shall not exceed 7°C. An excursion of the coolant exit temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant exit temperature limit, the permittee shall restore operation of condensers 16092, 25094, and/or 6553 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air

pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1225, R 336.1702(a))**

- a. Either condenser 16092 or 25094, whichever is in use
- b. Condenser 6553

3. Unless the exception in SC III.6 applies, the coolant return temperature of condenser 5-510 shall not exceed 7°C. An excursion of the coolant return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the coolant return temperature limit, the permittee shall restore operation of condenser 5-510 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d)).**
4. If the liquid flow rate of scrubber 6547 is less than 5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. A flow rate less than 5 gallons per minute is an exceedance. Exceeding this parameter is an excursion. **(R 336.1910, 40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1702(a))**
5. The permittee shall not operate storage tanks 5-508 and 5-509 unless either the vapor balance system or the carbon control system is installed, maintained, and operated in a satisfactory manner.² **(R 336.1702(a), R 336.1910, 40 CFR 63.2346(a))**
6. The permittee may operate equipment in EU505-01 that exhausts to one of the chilled condensers (condenser 6553, 5-510, and either 16092 or 25094) when the chilled condenser to which the equipment exhausts is not operating in a satisfactory manner, as long as all of the following conditions are true.² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
 - a. The equipment exhaust is routed to FGTHROX.
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.
7. The permittee shall calibrate the temperature measuring device for condensers 16092, 25094, 6653, and 5-510 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each of the condensers listed below with a device to continuously indicate and record the condenser's coolant exit temperature.² **(R 336.1910, R 336.1225, R 336.1702(a), 40 CFR 64.6(c)(1)(i), (ii))**
 - a. Condenser 16092
 - b. Condenser 25094
 - c. Condenser 6553
2. The permittee shall equip and maintain condenser 5-510 with a device to continuously indicate and record the condenser's coolant return temperature.² **(R 336.1910, 40 CFR 64.6(c)(1)(i), (ii))**
3. The permittee shall equip and maintain scrubber 6547 with a device to continuously indicate and record the scrubber's liquid flow rate.² **(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, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The coolant exit temperature of condenser 6553

- b. The coolant exit temperature of condenser 16092
- c. The coolant exit temperature of condenser 25094
- d. The coolant return temperature of condenser 5-510.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be made available to the AQD upon request. **(40 CFR 64.6(c)(1), R 336.1213(3))**

- 2. The permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The liquid flow rate of scrubber 6547.For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
- 3. Production records on a monthly basis and other records necessary to demonstrate compliance with the emission rate limits listed in SC I.1 and I.2 shall be kept on file and made available to the AQD upon request.² **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
- 4. A record of tank dimensions and capacity for tanks 5-508 and 5-509 is required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b). Each record shall be kept on file for the lifetime of the tank and made available to the AQD upon request. Tanks 5-508 and 5-509 are exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb.² **(40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b))**
- 5. The permittee shall calculate the VOC emission rate from EU505-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
- 6. The permittee shall monitor and record, on a monthly basis, the weight of the carbon drums associated with storages tanks 5-508 and 5-509, to detect breakthrough of the associated carbon totes. **(40 CFR 63.2390(b))**
- 7. For condensers 16092, 25094, 6553, and 5-510, 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 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). **(40 CFR 64.7(d))**
- 8. For condensers 16092, 25094, 6553, and 5-510, 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 40 CFR Part 64 compliance, 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, in frequent, 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))**
- 9. For condensers 16092, 25094, 6553, and 5-510, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

10. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-001	2.0 ²	60.0 ²	R 336.1225, R 336.2803, R 336.2804
2. SV505-011	15.0 ²	43.0 ²	R 336.1225, R 336.2803, R 336.2804
3. SV505-015	2.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
4. SV505-016	2.0 ²	21.0 ²	R 336.1225, R 336.2803, R 336.2804
5. SV505-018	2.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
<i>The stacks listed below are not required to discharge unobstructed vertically upwards to the ambient air.</i>			
6. SV505-002	1.0 ²	21.0 ²	R 336.1225, R 336.2803, R 336.2804
7. SV505-004	2.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
8. SV505-005	1.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
9. SV505-006	1.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
10. SV505-008	1.0 ²	23.0 ²	R 336.1225, R 336.2803, R 336.2804
11. SV505-009	3.0 ²	34.0 ²	R 336.1225, R 336.2803, R 336.2804
12. SV505-010	3.0 ²	34.0 ²	R 336.1225, R 336.2803, R 336.2804
13. SV505-012	2.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
14. SV505-014	1.0 ²	40.0 ²	R 336.1225, R 336.2803, R 336.2804
15. SV505-032	3.0 ²	47.0 ²	R 336.1225, R 336.2803, R 336.2804
16. SV505-033	1.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804
17. SV505-034	1.0 ²	41.0 ²	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. 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))**
2. For each storage tank listed below, the permittee shall replace the activated carbon for the storage tank within three days after breakthrough of the carbon tote is detected in the carbon drum. **(40 CFR 63.2346(a)(1))**
 - a. Storage tank 5-508
 - b. Storage tank 5-509
3. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**
4. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart EEEE for Organic Liquid Distribution by the initial compliance date. **(40 CFR Part 63, Subparts A and EEEE)**

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).

EU505-04 EMISSION UNIT CONDITIONS

DESCRIPTION

Silicone fluids manufacturing process using 23390 reaction kettle. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

The most recent PTI for this emission unit is PTI No. 200-15.

Flexible Group ID: FGMONMACT, FGHP2012A2A, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- 23412 service water condenser
- 23414 glycol condenser
- 23401 packed tower scrubber
- 5-510 glycol condenser

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.2 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU505-04	SC VI.3	R 336.1702(a)
2. Hexamethyl-disiloxane	7.3 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU505-04	SC VI.4	R 336.1224

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU505-04 unless the emission control devices listed below are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each emission control device includes meeting the operating parameters listed below for the device.² (**R 336.1224, R 336.1225, R 336.1702(a), R 336.1910**)

	Required control device	Indicator of satisfactory operation
a.	23401 scrubber	Scrubber liquid flow rate not less than 3.1 gallons per minute (gpm)
b.	23412 service water condenser and 23414 glycol condenser	Glycol return temperature from 23414 condenser no higher than 15°C
c.	5-510 glycol condenser	Glycol return temperature no higher than 7 °C

2. The permittee shall equip and maintain the equipment listed below with the devices listed below:² **(R 336.1910)**

	Equipment	Device to be equipped and maintained
a.	23401 scrubber	Liquid flow rate indicator
b.	23414 glycol condenser	Glycol return temperature indicator
c.	5-510 glycol condenser	Glycol return temperature indicator

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.² **(R 336.1702(a))**
2. The permittee shall monitor and record, in a satisfactory manner, the following operational parameters for the listed equipment at the specified frequency.

	Equipment	Operational parameter	Frequency of monitoring
a.	23401 scrubber	Liquid flow rate	Continuous
b.	23414 glycol condenser	Glycol return temperature	Once per shift
c.	5-510 glycol condenser	Glycol return temperature	Continuous

For the purpose of this condition, “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of the event. This record shall also include actions taken to correct and prevent a reoccurrence of the event.² **(R 336.1910)**

3. The permittee shall calculate the VOC emission rate from EU505-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1702(a))**
4. The permittee shall calculate the hexamethyldisiloxane emission rate from EU505-04 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1224)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV505-007 ^A	1 ²	40 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV505-008 ^A	1 ²	23 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV505-025 ^A	1 ²	18 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV505-026 ^A	1 ²	18 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV505-027 ^A	2 ²	49 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV505-030 ^A	1 ²	35 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV505-DRUMOFF ^A	2 ²	3 ²	R 336.1225, 40 CFR 52.21(c) & (d)
^A This vent is not required to discharge unobstructed vertically upwards.			

IX. OTHER REQUIREMENT(S)

NA

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).

EU508-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Phenyltrichlorosilane and diphenyldichlorosilane recovery process, including reactors, columns, condensers, tanks, and related equipment. Included in this emission unit is the phenylchlorosilane distillation process which is defined in the conditions for this emission unit. This permit covers all PINTO vents associated with these processes. EU508-01 includes a 60,000 gallon benzene storage tank (i.e. tank T-60). This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb, 40 CFR Part 61, Subparts A, J, and V, and 40 CFR Part 63, Subparts A, EEEE, and FFFF. Note: all equipment from EU304-03, EU308-02, and EU308-03 has been incorporated into EU508-01 and these three emission units no longer exist.

The most recent PTI for this emission unit is PTI No. 84-08B.

Flexible Group ID: FGOLDFACILITY, FGLEAKDETECTION, FG304VENTRECOVERY, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Benzene absorber
- FG304VENTRECOVERY - 304 vent recovery system comprised of two interchangers (HX1 2040 and HX2 2040) and 2 condensers (HX1 2044 and HX2 2044) followed by one of the following:
 - FGTHROX - Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
 - FG337SCRUBBER - 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation, but can operate in-parallel and vent to SV337-001/002, respectively); or
 - FGSITESCRUBBERS - Site wide water scrubber system that removes HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide thermal oxidizer system is not operating properly.
 - Service water condenser HX-10642, for the phenylchlorosilane distillation process only, in limited circumstances

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Benzene	3.35 pph ¹	Hourly	Equipment venting from SV516-002 via HX-10642 condenser	SC VI.3 & VI.4	R 336.1225
2. Dichlorosilane	4.0 pph ¹	Hourly	Equipment venting from SV516-002 via HX-10642 condenser	SC VI.3 & VI.4	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Except as allowed by EU508-01 SC IV.5 and by EU508-01 IV.6, the permittee shall not operate EU508-01 if the exit gas temperate from the benzene absorber exceeds 10°C.² (**R 336.1225, R 336.1702, R 336.1910**)

2. While operating as allowed in EU508-01 SC IV.5, if the liquid flow rate of condenser HX-10642 is less than 5 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Except as allowed by EU508-01 SC IV.5 and by EU508-01 IV.6, the permittee shall not operate EU508-01 unless the benzene absorber is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
2. Except as allowed by EU508-01 SC IV.5 and by EU508-01 IV.6, the permittee shall not operate EU508-01 unless the FG304VENTRECOVERY is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
3. Except as allowed by EU508-01 SC IV.4 and by EU508-01 IV.5, the permittee shall not operate EU508-01 unless emissions are routed to FGTHROX and FGTHROX is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
4. The permittee may operate EU508-01 for up to a total of 1,500 hours per 12-month rolling time period, as determined at the end of each calendar month, when FGTHROX is not operating in a satisfactory manner, as long as the following conditions are true:² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
 - a. FG304VENTRECOVERY and the benzene absorber are operating in a satisfactory manner;
 - b. The FG304VENTRECOVERY exhaust is routed to FG337SCRUBBER or FGSITESCUBBERS;
 - c. The control device (FG337SCRUBBER or FGSITESCUBBERS) is installed, maintained, and operated in a satisfactory manner.
5. The permittee may operate the phenylchlorosilane distillation process for up to 800 hours in any 12-month rolling time period, as determined at the end of each calendar month, while the benzene absorber and FG304VENTRECOVERY are not installed, maintained, and operated in a satisfactory manner, hereinafter "with 10642 control only." During operation with 10642 control only, permittee shall not operate the phenylchlorosilane distillation process unless the service water condenser (HX-10642) is installed, maintained, and operated in a satisfactory manner. For this Special Condition, a storage tank that is part of the phenylchlorosilane distillation process is not considered to "operate" except when emissions exhaust from the tank. The phenylchlorosilane distillation process consists of the following equipment and their associated heat exchangers and tanks:² **(R 336.1910)**
 - DV10670
 - DV10675
 - DV10680
 - DV10685
 - DV10690
 - DV10695
 - DV10642
6. The permittee may operate EU508-01 when the benzene absorber is not operating in a satisfactory manner, as long as all of the following conditions are true:² **(R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
 - a. The EU508-01 exhaust is routed to FGTHROX;
 - b. FGTHROX is installed, maintained, and operated in a satisfactory manner.

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 records required by EU508-01 SC VI.2 through VI.5 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 336.1225, R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The exit gas temperate of the benzene absorber;
 - b. The coolant flow rate of condenser HX-10642.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1225, R 336.1702, R 336.1910)**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period, as determined at the end of each calendar month, records of the hours that EU508-01 operated while the FG304VENTRECOVERY exhaust was not routed to FGTHROX.² **(R 336.1225, R 336.1910)**
4. The permittee shall maintain the following records for the phenylchlorosilane distillation process. These records shall be made available to the AQD upon request.² **(R 336.1225, R 336.1910)**
 - a. For each calendar month, the number of hours of operation with 10642 control only.
 - b. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours of operation with 10642 control only.

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV516-002	2 ¹	91 ¹	R 336.1225
Note: The following vent does not discharge unobstructed vertically upwards: SV516-002			

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 EEEE, as they apply to Tank T-60. **(40 CFR Part 63, Subparts A & EEEE)**

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).

EU515-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Grignard process for production of chlorosilanes and related materials including reactors, distillation, filtration, drying, vacuum system, condensers, hoppers, dust collectors, scrubber, and related equipment. EU515-01 is subject to the requirements of 40 CFR Part 60, Subpart Kb, 40 CFR Part 61, Subparts A, J, and V, 40 CFR Part 63, Subpart FFFF, and 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 812-91C.

Flexible Group ID: FGOLDFACILITY, FGLEAKDETECTION, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Packed tower scrubber (10530). This CAM subject device for VOC.
- Glycol condensers (10453, 10541). This is a CAM subject device for VOC.
- Service water condensers (HX-10657). This is a CAM subject device for VOC.
- Bag filters (22979, 22981)
- THROX
- Site scrubbers

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	94.6 pph ²	Hourly	EU515-01	SC VI.1 & VI.2	R 336.1702(a)
2. VOC	61.23 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU515-01	SC VI.1	R 336.1702(a), R 336.1205(3)
3. Benzene	0.418pph ¹	Hourly	EU515-01 Equipment venting from SV515-001	SC VI.1, VI.2, VI.4, VI.5, & VI.6	R 336.1225
4. Benzene	0.409 pph ¹	Hourly	EU515-01 Equipment venting from SV515-003	SC VI.1, VI.2, VI.4, VI.5, & VI.6	R 336.1225

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the exit air temperature of packed tower scrubber 10530 exceeds -5°C while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the exit air temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the exit air temperature limit, the permittee shall restore operation of scrubber 10530 to its normal or usual manner

of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**

2. If the liquid flow rate of condenser HX-10657 is less than 100 gallons per minute while the scrubber exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion is a liquid flow rate less than 100 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of condenser HX-10657 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
3. When venting to the atmosphere, if the pressure drop across bag filter 22979 is less than 0.5 inches of water gauge or greater than 75 inches of water gauge, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
4. When venting to the atmosphere, if the pressure drop across bag filter 22981 is less than 0.5 inches of water gauge or greater than 75 inches of water gauge, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
5. If the main coolant supply temperature for condensers 10453 and 10541 exceeds -5°C, respectively, while the condenser exhaust is not routed to the THROX, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the main coolant supply temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the main coolant supply temperature limit, the permittee shall restore operation of condensers 10453 and 10541 to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**
6. The permittee shall calibrate the temperature gauge for scrubber 10530 and condensers 10453 and 10541, and the liquid flow indicator for condensers 10453 and 10541 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the following equipment in EU515-01 unless the emissions are routed to the THROX and the THROX is installed, maintained, and operated in a satisfactory manner, except as allowed by SC IV.2, IV.3, and IV.4: the reactors; filters 421, 422, and 423; all distillation columns; all raw/crude material tanks; and all dryers.² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee may dry magnesium chloride in EU515-01 for up to 336 hours per 12-month rolling time period, as determined at the end of each calendar month, while toluene scrubber 10530 is not installed and operating properly and the THROX is shut down or experiencing a malfunction. During operation without toluene scrubber 10530 and the THROX, the permittee shall not dry magnesium chloride unless condensers 10453 and 10541 are installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee may operate the following equipment in EU515-01 up to 336 hours per 12-month rolling time period, as determined at the end of each calendar month, while toluene scrubber 10530 is not installed and operating properly and the THROX is shut down or experiencing a malfunction: the reactors; filters 421, 422, and 423; all distillation columns; and all raw/crude material tanks. During operation without toluene scrubber 10530 and the THROX, the permittee shall not operate the listed equipment in EU515-01 unless condensers 10453 and 10541 and the site scrubbers are installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee may operate the following equipment in EU515-01 up to 1,600 hours per 12-month rolling time period, as determined at the end of each calendar month, including the 336 hours allowed in SC IV.2 and IV.3, while the THROX is shut down or experiencing a malfunction: the reactors; filters 421, 422, and 423; all distillation columns; all raw/crude material tanks; and all dryers. During operation without the THROX, the permittee shall not operate the listed equipment in EU515-01 unless condensers 10453 and 10541, toluene scrubber 10530,

and the site scrubbers are installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

5. The permittee shall not operate the ether purification column while the THROX is shut down or experiencing a malfunction unless the service water condenser HX-10657 is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
6. When hexadiene is being produced in EU515-01, the permittee shall not operate 614 Tank unless the emissions from 614 Tank are controlled by condenser 10541 and toluene scrubber 10530 in series.² **(R 336.1225, 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 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 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
2. The permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The exit air temperature of toluene scrubber 10530 while the scrubber is operating, and the exhaust is not routed to the THROX;
 - b. The main coolant supply temperature for condensers 10453 and 10541, while the condensers are operating and the exhaust is not routed to the THROX;
 - c. The liquid flow rate of condenser HX-10657, while the THROX is shut down or experiencing a malfunction;
 - d. The pressure drop across bag filters 22979 and 22981, respectively.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be made available to the AQD upon request. **(R 336.1213(3))**

3. A record of tank 612 dimensions and an analysis showing its capacity is required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart Kb, Section 60.116(a) and (b). This record shall be kept on file for the life of the tank and made available to the AQD upon request. Tank 612 is exempt from the General Provisions (Subpart A) of 40 CFR Part 60 and from the provisions of Subpart Kb except for Section 60.116b(a) and (b) of Subpart Kb. **(40 CFR Part 60, Subpart Kb, Section 60.116b(a) and (b))**
4. The permittee shall maintain the following records for the drying of magnesium chloride in EU515-01 in order to demonstrate compliance with SC IV.2. All records shall be kept on file at the facility and made available to the AQD upon request:² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
 - a. For each calendar month, the number of hours of drying without the toluene scrubber 10530 and the THROX;
 - b. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours of drying without toluene scrubber 10530 and the THROX.
5. The permittee shall maintain the following records for EU515-01 in order to demonstrate compliance with SC IV.3. All records shall be kept on file at the facility and made available to the AQD upon request:² **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**
 - a. For each calendar month, the number of hours of operation of the reactors, filters 421, 422, and 423, all distillation columns, and all raw/crude material tanks without toluene scrubber 10530 and the THROX.
 - b. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours of operation of the reactors, filters 421, 422, and 423, all distillation columns, and all raw/crude material tanks without toluene scrubber 10530 and the THROX.

6. The permittee shall maintain the following records for EU515-01 in order to demonstrate compliance with SC IV.4. All records shall be kept on file at the facility and made available to the AQD upon request.² **(R 336.1205(3), R 336.1225, R 336.1702(a))**
 - a. For each calendar month, the number of hours of operation of the reactors, filters 421, 422, and 423, all distillation columns, all raw/crude material tanks, and all dryers without the THROX.
 - b. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours of operation the reactors, filters 421, 422, and 423, all distillation columns, all raw/crude material tanks, and all dryers without the THROX.
7. The permittee shall calculate the VOC emission rate from EU515-01 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the AQD upon request.² **(R 336.1205(3), R 336.1702(a))**
8. The permittee shall keep, in a satisfactory manner, production records for EU515-01. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**
9. For scrubber 10530, and condensers 10453, 10541, HX-10657, 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 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). **(40 CFR 64.7(d))**
10. For scrubber 10530, and condensers 10453, 10541, HX-10657, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
11. For scrubber 10530, and condensers 10453, 10541, HX-10657, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
12. 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 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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: Exhaust gases from the following vents do not vent discharged unobstructed vertically upwards: SV515-001, SV515-002, SV515-003, SV 515-004, SV15-006, SV515-007, and SV515-008.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV515-001	2 ¹	70 ¹	R 336.1225
2. SV515-002	3 ¹	42 ¹	R 336.1225
3. SV515-003	2 ¹	88 ¹	R 336.1225
4. SV515-004	2 ¹	3 ¹	R 336.1225
5. SV515-006	2 ¹	45 ¹	R 336.1225
6. SV515-007	1 ¹	54 ¹	R 336.1225
7. SV515-008	1 ²	54 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU601-01 EMISSION UNIT CONDITIONS

DESCRIPTION

Alkoxylation process including kettle, condensers, storage tanks, distillation columns, drum off station equipment, scrubbers, and other related equipment. Includes filler handling and loading for alkoxylation manufacturing. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU601-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 534-77G.

Flexible Group ID: FGTHROX, FGSITEBLOWER, FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Venturi scrubber 24683 This is a CAM subject device for VOC and Methyl Chloride.
- Emergency vent scrubber 5309. This is a CAM subject device for VOC and Methyl Chloride.
- Filters (1-5382, 2-5382, 3-538, and 4-5382)
- FGTHROX

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	208 pph ²	Hourly	EU601-01	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
2. VOC	7.3 pph ²	Hourly	Equipment venting to SV601-009	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
3. VOC	0.7 pph ²	Hourly	Equipment venting to SV601-022	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
4. VOC	19.0 tpy ²	12-month rolling time period*	EU601-01	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201
5. Hydrogen chloride	2.1 pph ¹	Hourly	EU601-01	SC VI.1, VI.2, VI.3, & VI.4	R 336.1224
6. Hydrogen chloride	2.0 pph ¹	Hourly	Equipment venting to SV601-005	SC VI.1, VI.2, VI.3, & VI.4	R 336.1224
7. Hydrogen chloride	2.1 pph ¹	Hourly	Equipment venting to SV601-009	SC VI.1, VI.2, VI.3, & VI.4	R 336.1224
8. Hydrogen chloride	0.36 tpy ¹	12-month rolling time period*	EU601-01	SC VI.1, VI.2, VI.3, & VI.4	R 336.1224
9. Methyl chloride	200.0 pph ²	Hourly	Equipment venting to SV601-005	SC VI.1, VI.2, VI.3, & VI.4	R 336.1702(a), R 336.1201

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The upper liquid flow rate of scrubber 24683 shall be at least 8 gallons per minute and the lower liquid flow rate of scrubber 24683 shall be at least 3 gallons per minute. An excursion is a liquid flow rate less than the parameters defined in this condition or demonstrated during testing. Upon detecting an excursion of the liquid

flow rates limits, the permittee shall restore operation of scrubber 24683 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1702(a), R 336.1201)**

2. The liquid flow rate of scrubber 5309 shall be at least 18.0 gallons per minute during startup, shutdown, or emergency shutdown episodes. An excursion is a liquid flow rate less than 18.0 gallons per minute defined in this condition, or demonstrated during testing. Upon detecting an excursion of the liquid flow rate limit, the permittee shall restore operation of scrubber 5309 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1224, R 336.1702(a), R 336.1201)**
3. The permittee shall not operate the MeViDES production operation for more than 5610 hours per year. Annual hours of operation shall be based upon a 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1702(a), R 336.1201)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU601-01 unless scrubber 24683 is installed, maintained, and operated in a satisfactory manner, and unless backup scrubber 5309 is maintained and, when necessary, operated in a satisfactory manner.² **(R 336.1224, R 336.1702(a), R 336.1201)**
2. The permittee shall not operate the startup/shutdown/emergency shutdown scrubber vent (601-005) unless scrubber 5309 is installed, maintained, and operated in a satisfactory manner.² **(R 336.1224, R 336.1702(a), R 336.1201)**
3. The permittee shall equip and maintain scrubbers 24683 and 5309 with a liquid flow indication device.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the liquid flow indicator for scrubbers 24683 and 5309 in a satisfactory manner. **(40 CFR 64.6(6)(c)(1)(iii))**

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, on a continuous basis, the liquid flow rate of scrubber 24683 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1702(a), R 336.1201)**
2. The permittee shall monitor and record the scrubber liquid flow rate of scrubber 5309 with instrumentation acceptable to the AQD at least once during an emergency shutdown episode, during a startup, or during a normal shutdown. These records shall be made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1224, R 336.1702(a), R 336.1201)**
3. A written or computer-generated log of the hours of operation of the methylvinyl-diethoxysilane (MeViDES) production operations shall be made available to the AQD upon request.² **(R 336.1702(a), R 336.1201)**
4. The permittee shall keep records as required to demonstrate compliance with the emission limits of this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.11. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days, following the end of each calendar month, the applicant shall calculate and record emissions from the process for the previous calendar

month to demonstrate compliance with the 12-month rolling time period emission totals of this table.² **(R 336.1224, R 366.1702(a), R 336.1201)**

5. The permittee shall maintain records of normal startups, shutdowns, and emergency shutdowns including the dates on which these episodes occurred and their duration.² **(R 336.1224, R 336.1702(a), R 336.1910, R 336.1201)**
6. The permittee shall conduct a daily visible emissions check of vents SV601-020 and SV601-021 during routine operating conditions. For the purposes of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from either vent, the permittee shall inspect its associated filters (i.e., Filters 1-5382 and 3-5382 vent to SV601-020 and filters 2-5382 and 4-5382 vent to SV601-021) and perform any maintenance required to eliminate visible emissions. The permittee shall keep records of the results of the daily visible emissions check and of any maintenance performed after visible emissions are observed. These records shall be made available to the AQD upon request. **(R 336.1213(3))**
7. For scrubbers 24683 and 5309, 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 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). **(40 CFR 64.7(d))**
8. For scrubbers 24683 and 5309, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
9. For scrubbers 24683 and 5309, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
10. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. Each semiannual report of monitoring 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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: Exhaust gases shall be discharged unobstructed vertically upwards except for SV601-022.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV601-005	6.0 ²	35.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201
2. SV601-009	2.0 ²	25.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201
3. SV601-020	6.0 ²	28.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201
4. SV601-022	8.0 ²	90.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201
5. SV601-021	6.0 ²	39.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201
6. SV601-026	4.0 ²	30.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.2803, R 336.2804, R 336.1201

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU604-08 EMISSION UNIT CONDITIONS

DESCRIPTION

Fluoro Cyclics Process. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EU604-08 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 466-73E.

Flexible Group ID: FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Freon-cooled condenser (7791). This is a CAM subject device for VOC.
- Spray tower scrubber (22753)
- Service water condenser (22713). This is a CAM subject device for VOC.
- Vent vapor equalization during railcar unloading operations when not venting to atmosphere through condenser 7791

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	16.7 pph ²	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
2. VOC	11.8 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1702(a), R 336.1201
3. Hydrogen Chloride	0.3 pph ¹	Hourly	EU604-08	SC VI.1, VI.2, VI.3, VI.4, & VI.5	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. During railcar unloading operations if venting to the atmosphere, the condensate temperature from condenser 7791 shall not exceed 40.6°F. An excursion of the condensate temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the condensate temperature limit, the permittee shall restore operation of condenser 7791 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1702(a), R 336.1201)**
2. The liquid flow rate of the spray tower scrubber (22753) shall be at least 3.0 gallons per minute. Exceeding this parameter is an excursion.¹ **(R 336.1224)**
3. If the service water return temperature for condenser 22713 exceeds 105°F, the permittee shall implement corrective action and maintain a record of action taken to prevent recurrence. An excursion of the service water return temperature is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the service water return temperature limit, the permittee shall restore operation of condenser 22713 to its normal or usual manner of operation as

expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1213(3))**

4. The permittee shall not conduct unloading operations from Emission Group EU604-08 which vent to atmosphere unless the freon-cooled condenser (7791) is installed and operating properly.² **(R 336.1702(a), R 336.1201)**
5. The permittee shall not operate the Emission Group EU604-08 unless the spray tower scrubber (22753) is installed and operating properly.¹ **(R 336.1224)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the freon-cooled condenser (7791) with an indication device for measuring the temperature of the condenser condensate.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i), (ii))**
2. The permittee shall equip and maintain the spray tower scrubber (22753) with a liquid flow indicator.² **(R 336.1910, R 336.1201)**
3. The permittee shall equip and maintain the service water condenser (22713) with an indication device for measuring the service water return temperature. **(40 CFR 64.6(c)(1)(i), (ii))**
4. The permittee shall calibrate the temperature indicator for condensers 7791 and 22713 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

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

1. Within 360 days or ROP reissuance, the permittee shall verify VOC and hydrogen chloride emission rates from EU604-08 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
Hydrogen Chloride	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the VOC and hydrogen chloride emission rates from EU604-08 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)**
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))**

VI. MONITORING/RECORDKEEPING

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

1. During railcar unloading, the permittee shall monitor and record, on a continuous basis, the condensate temperature of Freon-cooled condenser 7791 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**
2. The permittee shall monitor and record, on a per shift basis, the spray tower scrubber (22753) liquid flow rate with instrumentation acceptable to the AQD.¹ **(R 336.1224)**

3. The permittee shall monitor and record, on a per shift basis, the service water return temperature of condenser 22713 with instrumentation acceptable to the AQD. **(40 CFR 64.6(c)(1), R 336.1213(3))**
4. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.12. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**
5. The permittee shall maintain a record of all railcar unloading operations. At a minimum, this record shall include the date, time and duration of all railcar unloading operations. **(R 336.1213(3))**
6. For condensers 7791 and 22713, 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 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). **(40 CFR 64.7(d))**
7. For condensers 7791 and 22713, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. For condensers 7791 and 22713, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
9. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

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. Each semiannual report of monitoring 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 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 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted. SV604-014 and SV604-020 vent downward. SV604-015 vents horizontally. SV604-012, SV604-016, SV604-045, SV604-046, SV604-047, SV604-017, SV604-049, and SV604-053 vent upward with a kettle cap.

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV604-012	1.5 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
2. SV604-043	2.0 ²	80 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
3. SV604-013	3.0 ²	11.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
4. SV604-014	2.0 ²	0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
5. SV604-015	2.0 ²	51 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
6. SV604-016	2.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
7. SV604-044	6.0 ²	12.0 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
8. SV604-045	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
9. SV604-046	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
10. SV604-047	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
11. SV604-017	4.0 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
12. SV604-020	2.0 ²	55 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
13. SV604-049	4.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201
14. SV604-053	2.0 ²	41.5 ²	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1201

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

EU800-01 EMISSION UNIT CONDITIONS

DESCRIPTION

800 block tank farm consisting of storage and transfer operations for on-site waste liquids.

The most recent PTI for this emission unit is PTI No. 334-88C.

Flexible Group ID: FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Nitrogen (N2) blanket

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Allyl Chloride	1.23 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
2. Cyclopentene	1.109 pph ¹	Hourly	EU800-01	SC VI.1, VI. 2, & VI.3	R 336.1224
3. Ethyltrichloro-silane	0.016 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
4. Methallyl Chloride	0.370 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
5. Propyltrichloro-silane	0.034 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
6. VOC	21.6 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
7. VOC	0.67 tpy ²	12-month rolling time period*	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1702(a), R 336.1201
8. Non-VOC	1.23 pph ¹	Hourly	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224
9. Non-VOC	0.04 tpy ¹	12-month rolling time period*	EU800-01	SC VI.1, VI.2, & VI.3	R 336.1224

*as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- A properly operating N2 pressure blanket will have a pressure differential of not less than 5 psig between the N2 inlet and tank exhaust regulator pressures.² (R 336.1702(a), R 336.1910, R 336.1201)
- The permittee shall not operate the facility unless the storage tanks are kept under a nitrogen pressure blanket which is installed and operating properly.² (R 336.1702(a), R 336.1910, R 336.1201)

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 monitor and record, on a per shift basis, the following operational parameters with instrumentation acceptable to the AQD: **(R 336.1213(3))**
 - a. The N2 pressure blanket differential (i.e., difference between the N2 inlet and tank exhaust regulator pressures).
2. The permittee shall record the date, amount of liquid waste transferred, and the type of transfer (e.g. dempster, tank truck, drum, vacuum transfer, etc.) for each transfer of liquid waste to and from each storage tank and for each dempster depressurization. All such records shall be kept on file and made available to the AQD upon request.² **(R 336.1224, R 336.1702(a), R 336.1201)**
3. The permittee shall keep records as required to demonstrate compliance with the emission limits of this table. Emission totals shall be calculated using the method described in Appendix 7, Section 7.13. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1224, R 336.1702(a), R 336.1201)**

See Appendix 7

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV800-001	NA	30 ¹	R 336.1225
2. SV800-002	NA	30 ¹	R 336.1225
3. SV800-003	NA	30 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

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).

EUBOILER2515

EMISSION UNIT CONDITIONS

DESCRIPTION

25.1 MMBTU/hr boiler capable of burning natural gas, synthesis gas, or a blended mixture of both. This boiler is located in 2515 building and decommissioned but not dismantled. 40 CFR Part 63, Subpart DDDDD may be applicable to EUBOILER2515 if EUBOILER2515 is operated.

Flexible Group ID: FGPEM&BLR

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	7.0 pph ²	Hourly	EUBOILER2515	SC V.1	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	2.8 pph ²	Hourly	EUBOILER2515	SC V.1	R 336.1205

II. MATERIAL LIMIT(S)

1. The permittee shall burn only synthesis gas and/or natural gas in EUBOILER2515. The permittee shall burn the synthesis/natural gas blended fuel only up to the maximum synthesis-to-natural gas percentage blend tested for during the most recent validated performance (stack) test.² (R 336.1201(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate EUBOILER2515 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction.² (R 336.1912)
2. 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 EUBOILER2515.² (40 CFR Part 60, Subparts A & Dc)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device/devices to monitor and record both the synthesis gas and natural gas fuel use for EUBOILER2515 on a daily basis.² (R 336.1201)

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of trial operation, verification of NOx and CO emission rates from EUBOILER2515, by testing at owner's expense, in accordance with Department requirements, will be required. The permittee must complete the test once every five years of operation. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must describe the normal operating range for the boiler and must be approved by the AQD prior to testing. Verification of emission rates includes the submittal

of a complete report of the test results to the AQD within 60 days following the last date of the test.² **(R 336.1201, 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 keep, in a satisfactory manner, daily, monthly and 12-month rolling time period synthesis and natural gas fuel use records for EUBOILER2515. All records shall be kept on file at the facility and made available to the Department upon request.² **(R 336.1201)**

See Appendix 7

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. EUBOILER2515	26 ²	50 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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).

EU2515-01

EMISSION UNIT CONDITIONS

DESCRIPTION

An electrically powered plasma arc gasifier known as a “plasma enhanced melter (PEM)” with ancillary equipment.

The most recent PTI for this emission unit is PTI No. 175-09A.

Flexible Group ID: FGPEM&BLR, FGTHROX

POLLUTION CONTROL EQUIPMENT

- FGTHROX
- Flare
- Control train consisting of a partial quench column (Q-0630)
- Baghouse (F-0640)
- HCl production system
- Synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall immediately cease the input feed to EU2515-01, consistent with safe operating procedures, if the flare, FGTHROX, and boiler are not available. Input feed to EU2515-01 shall not restart until one of the devices is available to burn the synthesis gas.² (**R 336.1224, R 336.1205(3)**)
2. The permittee shall not process materials in EU2515-01 other than the following: Q8-6011 (waste chlorosilane), Q8-6017 (waste solvent / siloxane), Q8-6061 (waste SiH siloxane), Q8-6064 (waste tetramethoxysilane), Q8-6116 (waste ethylenediamine monohydrochloride), Q8-6118 (waste vinylchlorosilanes), Q8-6227 (waste methyl chloride), Q8-6228 (waste propene chlorosilane), Q8-6062 (waste alkoxysilane), and any additional waste stream(s), provided the permittee meets both of the following provisions:² (**R 336.1207(1)(a), R 336.1224, R 336.1225, R 336.285(b), R 336.1702(a), R 336.1901**)
 - a. The synthesis gas produced by the permittee satisfies the “exclusion criteria” of Rule 230 of State of Michigan Part 111 Administrative Rules, specifically R 299.9230(2);
 - b. Processing the additional waste stream(s) does not cause a meaningful change in the quality and nature or a meaningful increase in the quantity of emissions from FGTHROX, or any other unit permitted by the Department to use synthesis gas.
3. The permittee shall not burn synthesis gas in the flare for more than 5,000 hours per 12-month rolling time period as determined at the end of each calendar month.² (**R 336.1205(3)**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU2515-01 unless the flare is installed, maintained, and operated in a satisfactory manner.² (**R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910**)

2. The permittee shall equip and maintain the flare with a device for continuously monitoring whether or not the pilot flame is operating.² (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)
3. The permittee shall operate a continuously burning pilot flame at the flare when inputting waste feed to EU2515-01.² (R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, 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 complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1201(3))
2. The permittee shall keep, in a satisfactory manner, a record of the identity of the wastes processed in EU2515-01 each year. For each waste processed, the record shall also include the reason that the waste is acceptable under SC III.2, with supporting documentation for any waste added pursuant to SC III.2.a and III.2.b. The permittee shall keep all records on file at the facility for a period of at least five years after the waste is last processed and make them available to the Department upon request.² (R 336.1205(3), R 336.1225)
3. The permittee shall keep, in a satisfactory manner, records of the hours the flare is operated on synthesis gas on a monthly basis and 12-month rolling time period basis, as determined at the end of each calendar month. 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))

See Appendix 7

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2515-01	48 ²	36 ²	R 336.1225, R 336.1201

IX. OTHER REQUIREMENT(S)

NA

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).

D. FLEXIBLE GROUP CONDITIONS

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

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

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGBOILERS2701-01	Boiler No. 8 and No.9, natural gas or liquid fuel fired boilers. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD. The most recent PTI for this emission unit is PTI No. 209-73A.	EU2701-01, FGBOILERMACT-NG, FGHAP2012A2A
FGLEAKDETECTION	Emission units subject to the requirements of 40 CFR Part 61, Subpart A, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).	EU303-01, EU303-06, EU303-11, EU340-01, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EURULE290, FG337SCRUBBER, FGSITESCRUBBERS, EU800-01
FG304VENTRECOVERY	304 vent recovery system comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. Emissions are controlled by the THROX, the 337 wet scrubber, or the site scrubbers. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC. The most recent PTI for this emission unit is PTI No. 84-08B.	EU502-01, EU502-07, EU508-01, EURULE290
FG337SCRUBBER	337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubber nos. 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup.	EU303-01, EU304-02, EU325-01, EU502-01, EU502-07, EU502-11, EU508-01, FGSITESCRUBBERS, FGTHROX, FGLEAKDETECTION

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	The most recent PTI for this emission unit is PTI No. 84-08.	
FGRULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	EURULE290, EU340-03, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 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.	EUCOLDCLEANER
FGRULE604	Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.	EURULE604
FGRULE605	Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.	EURULE605
FGRULE703	Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000 gallon capacity located at any gasoline dispensing facility.	EURULE703
FG325-01	Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system. The most recent PTI for this emission unit is PTI No. 44-06B.	EU325-01, EU502-01, EU502-07
FG432BOILERS	Three natural gas-fired boilers: EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD. The most recent PTI for this emission unit is PTI No. 112-06.	EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERMACT-NG
FG322-01	This flexible group incorporates all three individual vinyl chlorosilane production processes and associated scrubber to allow for operational flexibility. The VOC emission limits are for the	EU322-01, EU322-02, EU322-04, FGMONMACT, FGHAP2012A2A

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	<p>combination of all three processes as measured coming out of FG322-01 at stack/vent SV322-04. Scrubber no. 22452 is used to control emissions from EU322-01, EU322-02, and EU322-04. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FG322-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 242-07.</p>	
FGSITEBLOWER	<p>Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (EUTHROX) or to a site-wide water scrubber system. There are two parts to the site vent consolidation and blower system: a dry vent header system for water reactive vents and a wet vent header system for vents that can contain water.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU505-01, EU508-01, EU515-01, EU601-01, EU2703-01, EU2703-03, EU2703-17, EURULE290</p>
FGSITESCRUBBERS	<p>Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere when the site-wide thermal oxidizer system is not operating properly.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EURULE290, FGHAP2012A2A, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER, FGLEAKDETECTION</p>
FGTHROX	<p>Site-wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, Hydrogen Chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vents system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	<p>These emission units include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EU601-01, EU2515-01, EU2703-01, EU2703-03, EU2703-17, EURULE290, FGHAP2012A2A, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER</p>
FGOLDFACILITY	<p>The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of</p>	<p>EU311-01, EU505-01, EU508-01, EU515-01, EU2703-03, EU 340-03, EURULE290</p>

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
	storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).	
FGHCLMACT	HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).	EU356-01, EU356-02
FGHAP2012A2A	<p>This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEntec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules R 336.1118, modified, renamed, or re-permitted. This flexible group was established for purposes of keeping records for the actual to projected actual PSD applicability determination.</p> <p>The most recent PTI for this emission unit is PTI No. 91-07E.</p>	EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-01, EU207-02, EU207-04, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU311-01, EU321-01, EU321-02, EU321-05, EU321-07, EU321-08, EU321-10, EU321-11, EU321-13, EU321-14, EU321-16, EU321-17, EU322-01, EU322-02, EU322-03, EU322-05, EU322-09, EU322-10, EU322-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10,

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
		EUSITE-05, EUSITE-08, FG322-01, FGBOILERS2701-01, FGSITESCRUBBERS, FGTHROX
FGEMERGENCIRICE <500HP	Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g)	EUEMERGENCIRICE<500HP
FGPEM&BLR	Plasma enhanced melter (PEM) and 25.1 MMBTU/hour boiler.	EU2515-01, EUBOILER2515
FGBOILERMACT-NG	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources) that burn only natural gas.	EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10, FGBOILERS2701-01, FG432BOILERS
FGMONMACT	Emission units subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart FFFF (National Emission Standard for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing).	EU108-01, EU207-01, EU207-02, EU207-03, EU212-01, EU212-03, EU212-12, EU2703-01, EU2703-03, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU304-02, EU311-01, EU321-01, EU322-03, EU322-11, EU324-01, EU340-01, EU340-03, EU501-01, EU501-02, EU501-49, EU505-01, EU505-04, EU508-01, EU515-01, EU601-01, EU604-08, EURULE290, FG322-01

FGBOILERS2701-01 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Boiler No. 8 and No. 9 each have a maximum rated capacity of 72 million BTU per hour (or 60,000 lbs. of steam per hour). Each boiler is capable of firing either natural gas or liquid fuel. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD.

The most recent PTI for this emission unit is PTI No. 209-73A.

Emission Unit: EU2701-01

Flexible Group ID: FGBOILERMACT-NG, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Sulfur Dioxide	1.67 pounds per million BTU heat input. ²	Based on a 12-month rolling time period as determined at the end of each calendar month.	FGBOILERS2701-01	SC V.1, VI.1	R 336.1401(1), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The maximum sulfur content in fuel (% by weight) shall not exceed 1.5%. The sulfur content shall be calculated on the basis of 18,000 BTU per pound for liquid fuels. The "maximum sulfur content" is defined as the average sulfur content in all fuels burned at any one time in a power plant (i.e. boiler Nos. 8 & 9). Liquid fuels include distillate oil (No. 1 and No. 2), heavy oil (No. 4, No. 5, and No. 6) and crude oil.² **(R 336.1401(1), R 336.1201)**

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. For each delivery of fuel oil, the permittee shall verify the sulfur content. Purchase records for ASTM specification fuel oil, specifications or analyses provided by the vendor at the time of delivery, analytical results from laboratory testing or any other records adequate to demonstrate compliance with the percent sulfur limit in fuel. **(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. Within 30 days following the end of each calendar month, the permittee shall calculate and record the average SO₂ emission rate for the previous calendar month to demonstrate compliance with SC I.1. These records shall be made available to the AQD upon request. **(R 336.1213(3))**

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)

1. When burning natural gas, the permittee shall burn only pipeline quality natural gas. **(R 336.1213(3))**

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).

FGLEAKDETECTION FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Emission units subject to the requirements of 40 CFR Part 61, Subpart A (General Provisions), Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene), and Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)).

Emission Units: EU303-01, EU303-06, EU303-11, EU340-01, EU502-04, EU505-01, EU505-04, EU508-01, EU515-01, EURULE290, FG337SCRUBBER, FGSITESCRUBBERS, EU800-01

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

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 comply with the applicable requirements of 40 CFR Part 61, Subpart V (National Emission Standard for Equipment Leaks (Fugitive Emission Sources)), Section 61.246 (Recordkeeping requirements). **(40 CFR Part 61, Subpart V)**

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 comply with the applicable requirements of 40 CFR Part 61, Subpart V, Section 61.247 (Reporting Requirements). **(40 CFR Part 61, Subpart V)**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subparts A (General Provisions). **(40 CFR Part 61, Subpart A)**
2. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart J (National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene). The applicable sections of Subpart J include, but are not necessarily limited to: 61.112 (Standards). **(40 CFR Part 61, Subpart J)**
3. The permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart V. The applicable sections of Subpart V include, but are not necessarily limited to: **(40 CFR Part 61, Subpart V)**
 - a. 61.242-1 (Standards: General)
 - b. 61.242-2 (Standard: Pumps)
 - c. 61.242-4 (Standards: Pressure relief devices in gas/vapor service)
 - d. 61.242-7 (Standards: Valves)
 - e. 61.242-8 (Standards: Pressure relief devices in liquid service and flanges and other connectors)
 - f. 61.242-10 (Standards: Delay of repair)
 - g. 61.243-1 (Alternative standards for valves in VHAP service – allowable percentage of valves leaking)
 - h. 61.245 (Test methods and procedures)

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).

FG304VENTRECOVERY FLEXIBLE GROUP CONDITIONS

DESCRIPTION

304 Vent Recovery System comprised of two interchangers (HX1 2040 and HX2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminants from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOC.

The most recent PTI for this emission unit is PTI No. 84-08b.

Emission Units: EU502-01, EU502-07, EU508-01, EURULE290

Flexible Group ID: FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, FGSITEBLOWER

POLLUTION CONTROL EQUIPMENT

- FGTHROX: Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, and two two-stage ionizing wet scrubbers (IWS) in series; or
- FG337SCRUBBER: 337 wet scrubber (9950, 9960-scrubbers typically alternate in operation, but can operate in parallel and vent to SV337-001/002, respectively); or
- FGSITESCRUBBERS: Site wide water scrubber system that removes HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide thermal oxidizer system is not operating properly.
- Condensers HX1 2044 and HX2 2044

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC ^a	30.0 pph ²	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
2. VOC ^a	22.5 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG304VENTRECOVERY	SC VI.1	R 336.1702(a), R 336.1225
3. Benzene ^a	0.46 pph ¹	Hourly	FG304VENTRECOVERY	SC VI.1	R 336.1225

^a Note these emission limits apply to the outlet of the 304 vent recovery system prior to mixing with any other vent streams. Emission testing would be conducted in the vent header rather than at an exhaust stack.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Except as allowed by FGSITEBLOWER, SC IV.1.a, the permittee shall not operate any emission unit vented to the 304 vent recovery system if the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) exceeds -76°C. Exceeding this parameter is an excursion. An excursion of the HX1 2044 and HX2 2044 condensers exit gas temperature is exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of the HX1 2044 and HX2 2044

condensers exit gas temperature, the permittee shall restore operation of 304 Vent Recovery System to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1225, R 336.1702, R 336.1910, 40 CFR 64.6(c)(2))**

2. The permittee shall install and calibrate a temperature indicator for condensers HX1 2044 and HX2 2044 in a satisfactory manner. **(40 CFR 64.6(c)(1)(ii), (iii))**

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. Within 240 days or ROP reissuance, the permittee shall verify VOC and benzene emission rates from FG304VENTRECOVERY 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
Benzene	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the VOC and benzene emission rates from, 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)**
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))**
4. No later than April 30, 2013, the permittee shall verify the VOC and benzene emission rates from FG304VENTRECOVERY by testing at owner's expense, in accordance with department requirements. 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. Verification of emission rates includes the submittal of a complete report of the test results to the AQD technical programs unit and district office within 60 days following the last date of the test.² **(R 336.1225, R 336.1702)**

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, on a continuous basis, the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(R 336.1225, R 336.1910, 40 CFR 64.6(c)(1), R 336.1213(3))**
2. For FG304VENTRECOVERY, 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 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). **(40 CFR 64.7(d))**

3. For FG304VENTRECOVERY, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
4. For FG304VENTRECOVERY, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
5. 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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

FG337SCRUBBER FLEXIBLE GROUP CONDITIONS

DESCRIPTION

337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubbers 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup.

The most recent PTIs for this flexible group are PTI Nos. 131-15 and 185-07B.

Emission Units: EU303-01, EU304-02, EU325-01, EU502-01, EU502-07, EU502-11, EU508-01

Flexible Group ID: FGSITESCRRUBBERS, FGTHROX, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Water Scrubbers.9950 and 9960
- FGTHROX (Backup)
- FGSITESCRRUBBERS (Backup)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Prior to discharge of process emissions through vent no. SV337-001, process emissions shall pass through scrubber 9950. If the liquid flow rate of scrubber 9950 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. Prior to discharge of process emissions through vent SV337-002, process emissions shall pass through scrubber 9960. If the liquid flow rate of scrubber 9960 is less than 45 gallons per minute while process gas is passing through it, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 9950 and 9960 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. This record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
2. The permittee shall install and maintain a color camera and monitor system to monitor the visual emissions from the 337 wet scrubber. **(R 336.1213(3))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-001 (scrubber 9950)	10 ²	30 ²	R 336.1201(3)
2. SV337-002 (scrubber 9960)	10 ²	30 ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

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).

FGRULE290

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units: EURULE290, EU340-03, FGMONMACT, FGOLDFACILITY, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO₂ equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
 - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively; **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter; **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016; **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**
 - a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute; **(R 336.1290(2)(a)(iii)(A))**
 - b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303; **(R 336.1290(2)(a)(iii)(B))**
 - c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device;
 - ii. Wet scrubbers equipped with a liquid flow rate monitor;
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in the DEQ, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor: **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted; **(R 336.1213(3))**
 - b. Records identifying if each air contaminant is controlled or uncontrolled; **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic; **(R 336.1213(3))**
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii); **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor; **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent two-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information: **(R 336.1213(3))**
 - a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit; **(R 336.1290(2)(c), R 336.1213(3))**

- b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

See Appendix 4

VII. REPORTING

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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).

FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 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(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:

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).

FGRULE604

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1604 (Rule 604). Storage vessels subject to AQD Rule 604 are those which store any organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions in any fixed roof stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE604

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

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 maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 604. **(R 336.1213(3))**

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)

1. The permittee shall not operate storage vessels subject to AQD Rule 604 unless one of the following conditions is met: **(R 336.1604(1)(a), (b) & (c), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a floating cover or roof which rests upon, and is supported by, the liquid being contained and has a closure seal or seals to reduce the space between the cover or roof edge and the vessel wall. The seal or any seal fabric shall have no visible holes, tears, or other nonfunctional openings;
 - c. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted to the atmosphere.
2. All openings, except stub drains, in any stationary vessel subject to AQD Rule 604 shall be equipped with covers, lids, or seals such that all of the following conditions are met: **(R 336.1604(2)(a), (b) and (c), R 336.1702(d))**
 - a. The cover, lid, or seal is in the closed position at all times, except when in actual use;
 - b. Automatic bleeder vents are closed at all times, except when the rood if floated off, or landed on, the roof leg supports;
 - c. Rim vents, if provided are set at the manufacturer's recommended setting or are set to open when the roof is being floated of the roof leg supports.

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).

FGRULE605

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any existing or future storage vessels subject to the requirements of R 336.1605 (Rule 605). Storage vessels subject to AQD Rule 605 are those which store any organic compound having a true vapor pressure of 11 or more psia at actual storage conditions in any stationary vessel of more than 40,000 gallon capacity.

Emission Unit: EURULE605

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

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 maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 605. **(R 336.1213(3))**

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)

1. The permittee shall not operate storage vessels subject to AQD Rule 605 unless one of the following conditions is met: **(R 336.1605(1)(a) & (b), R 336.1702(d))**
 - a. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions;
 - b. The vessel is equipped and maintained with a vapor recovery system, or other control system approved by the Director of the AQD or the Assistant Director of the AQD, which recovers not less than 90% by weight of the uncontrolled organic vapor that would otherwise be emitted into the atmosphere.
2. All openings in any stationary vessel subject to the provisions of AQD Rule 605 shall be equipped with covers, lids, or seals such that the covers, lids, or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2), R 336.1702(d))**

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).

FGRULE703

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any new or future storage vessels subject to the requirements of R 336.1703 (Rule 703). Storage vessels subject to AQD Rule 703 are those which receive gasoline from a delivery vessel into any new stationary vessel of more than 2000-gallon capacity located at any gasoline dispensing facility.

Emission Unit: EURULE703

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

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 maintain an up-to-date record of all storage vessels subject to the requirements of AQD Rule 703. **(R 336.1213(3))**

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)

1. The permittee shall not load or allow the loading of gasoline from a delivery vessel into any new stationary vessel or more than 2000-gallon capacity located at any gasoline dispensing facility, unless such stationary vessel is equipped with a permanent submerged fill pipe. **(R 336.1703(1))**
2. A new stationary vessel at a gasoline dispensing facility shall be constructed in a manner that will allow the vessel to be retrofitted according to AQD Rule 703(2) and (3). **(R 336.1703(5))**

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).

FG325-01 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01, and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system.

The most recent PTI for this emission unit is PTI No. 44-06B.

Emission Units: EU325-01, EU502-01, EU502-07

POLLUTION CONTROL EQUIPMENT

- Carbon bed bank No. 1 (regenerative) comprised of carbon beds 20587, 20588, and 20589. Carbon bed bank No. 1 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 1 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Carbon bed bank No. 2 (regenerative) comprised of carbon beds 22200, 22205, and 22210. Carbon bed bank No. 2 vents to either venturi scrubber bank No. 1, venturi scrubber bank No. 2, or the 337 scrubber. The typical mode of operation for carbon bed bank No. 2 is: one bed receives process exhaust, one bed is regenerating, and one bed is on standby with an alternating schedule every 6 hours.
- Venturi scrubber bank No. 1 comprised of venturi scrubbers 9956, 9957, and 9958 (operate in series). Venturi scrubber bank No. 1 vents to vent No. SV337-003.
- Venturi scrubber bank No. 2 comprised of venturi scrubbers 22245-1, 22245-2, and 22245-3 (operate in series). Venturi scrubber bank No. 2 vents to vent No. SV337-004.
- 337 wet scrubber (9950, 9960 – scrubbers typically alternate in operation but can operate in parallel and vent to SV337-001/002, respectively). NOTE: 337 scrubber acts as a backup to venturi scrubber bank Nos. 1 and 2.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the concentration of chlorosilanes from carbon bed bank No. 1 and 2 exceeds 100 ppm by volume, respectively, except during startup or shutdown periods, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
2. While venting to venturi scrubber bank No. 1, if the combined liquid flow rate of venturi scrubber Nos. 9956, 9957 and 9958 is less than 30 gallons per minute, or the individual liquid flow rate of No. 9958 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
3. While venting to venturi scrubber bank No. 2, if the combined liquid flow rate of venturi scrubber Nos. 22245-1, 22245-2 and 22245-3 is less than 30 gallons per minute, or the individual liquid flow rate of No. 22245-3 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. **(R 336.1213(3))**
4. The concentration of HCl in the outlet water from venturi scrubber Nos. 9958 and 22245-3 shall not exceed 10 percent by weight, respectively.² **(R 336.1910)**

5. In the event of a malfunction of venturi scrubber bank Nos. 1 and 2, emissions from the process (after the carbon bed system) shall be controlled by the 337 main scrubber. The HCl emission rate from the process before entering the 337 main scrubber shall not exceed 1,490 pounds per hour. Applicant shall not operate the process in this mode for more than 48 hours per calendar month, nor 144 hours per 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Permittee shall equip and maintain the carbon bed system (carbon bed bank Nos. 1 and 2) with a monitor capable of detecting carbon breakthrough, which has been defined as greater than 100 ppm. The monitor shall be calibrated according to the manufacturer's specifications. If breakthrough is detected, except during startup or shutdown periods, permittee shall record the date, time, duration, corrective action taken, and actions taken to prevent reoccurrence. These records shall be kept on file and made available to the AQD upon request.² **(R 336.1910, R 336.1201)**
2. Permittee shall equip and maintain each venturi scrubber (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2, and 22245-3) with a liquid flow indicator.² **(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. While venting to carbon bed bank No. 1, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 1 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
2. While venting to carbon bed bank No. 2, permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank No. 2 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**
3. While venting to venturi scrubber bank No. 1, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD:
 - a. The liquid flow rate for venturi scrubber Nos. 9956, 9957 and 9958, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 9958.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and

recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

4. While venting to venturi scrubber bank No. 2, permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD.
 - a. The liquid flow rate for venturi scrubber Nos. 22245-1, 22245-2 and 22245-3, respectively;
 - b. The concentration of HCl in the outlet water from venturi scrubber No. 22245-3.

For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. In the event the continuous monitoring and recording system is inoperable, the permittee shall record at least one data point per shift for each data point that is required to be monitored on a continuous basis. For each event in which the continuous monitoring and recording system is inoperable, the permittee shall maintain a record of the date, time and duration of each event. With the exception of calibration, quality assurance, and maintenance activities, this record shall also include actions taken to correct and prevent a reoccurrence of each event. **(R 336.1213(3))**

5. Permittee shall maintain the following records and make them available to the AQD upon request: **(R 336.1213(3))**
 - a. A record of process streams vented to the 337 scrubber during malfunction of the venturi scrubbers (venturi scrubber Nos. 9956, 9957, 9958, 22245-1, 22245-2 and 22245-3);
 - b. For each calendar month, the number of hours process exhaust gas steams vent to the 337 scrubber;
 - c. For the 12-month rolling time period, as determined at the end of each calendar month, the total number of hours process exhaust gas streams vent to the 337 scrubber.

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV337-003	10 ¹	30 ¹	R 336.1224, R 336.1225
2. SV337-004	10 ¹	30 ¹	R 336.1224, R 336.1225
3. SV337-001	10 ¹	30 ¹	R 336.1224, R 336.1225
4. SV337-002	10 ¹	30 ¹	R 336.1224, R 336.1225

IX. OTHER REQUIREMENT(S)

NA

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).

FG432BOILERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three natural gas-fired boilers, EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is also subject to the requirements of 40 CFR Part 63, Subpart A (General Provisions) and Subpart DDDDD (National Emission Standard for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers and Process Heaters – Major Sources).

The most recent PTI for this emission unit is PTI No. 112-06.

Emission Units: EUBOILER12, EUBOILER13, EUBOILER14

Flexible Group ID: FGBOILERMACT-NG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.041 lb/MMBTU ²	24-hour rolling average as determined each hour	Each boiler included in FG432BOILERS	SC VI.3 & VI.5, and measurements obtained by the certified CEM, as specified in VI.2	R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.44b(a)(1)
2. CO	81.2 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG432BOILERS	SC V.1, VI.6, and See "Compliance Method" below	R 336.1205(3)

Compliance Method: Test results from the most recent test for CO shall be used to develop an emission factor in terms of pounds of pollutant per million cubic feet of natural gas for the three normal operating load scenarios for the boilers. The permittee shall use the worst-case emission factor from the most recent stack test. The emission factors shall be applied to the monthly fuel use to ensure compliance with the 12-month rolling average.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate FG432BOILERS unless a plan that describes how emissions will be minimized during startup(s), shutdown(s) and malfunction(s) has been approved by the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Modifications to this plan may be made by the permittee and must be submitted to the AQD District Supervisor for approval. A copy of the current plan must also be maintained at the facility. Unless notified by the District Supervisor within 30 business days, the original plan and any future modified plans shall be deemed approved.² **(R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each boiler included in FG432BOILERS with a low-NOx burner.² **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

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

1. The permittee shall verify CO emission rates from each boiler (or one representative boiler as approved by the AQD in an approved test plan) included in FG432BOILERS 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
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² **(R 336.1201(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the CO emission rates from FG432BOILERS, at a minimum, every five years from the date of the last test.² **(R 336.1201(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.² **(R 336.1201(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 install, calibrate, maintain and operate in a satisfactory manner a device to monitor the fuel usage for each of the three boilers included in FG432BOILERS on a continuous basis.² **(R 336.1205(1))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NOx emissions for each of the three boilers included in FG432BOILERS on a continuous basis and according to the procedures outlined in Appendix 3 attached and 40 CFR 60.48b(b)(1), (c), (d), (e), (f).² **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.48b)**
3. The permittee shall keep, in a satisfactory manner the following records for each boiler included in FG432BOILERS, for each calendar day pursuant to the requirements of 40 CFR 60.49b:
 - a. Calendar date;
 - b. Average hourly NOx emission rate in lb/MMBTU heat input;
 - c. 30-day average NOx emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the hourly NOx emission rates for the preceding 30-days;
 - d. Excess emissions, reasons for excess emissions, and description for corrective actions taken;
 - e. Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - g. Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted;
 - h. Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;

- i. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

All records shall be kept on file for a period of at least five years and made available to the Department upon request. Reports of the above information shall be submitted to the EPA Administrator and the AQD District Supervisor every six months in accordance with 40 CFR 60.49b(v) and (w).² **(40 CFR 60.49b(g), (i), (o), (v), (w))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average fuel use records and the annual capacity factor for each boiler included in FG432BOILERS. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each month. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3), 40 CFR 60.49b(d))**
5. The permittee shall keep, in a satisfactory manner, 24-hour rolling average NOx emission records for each boiler included in FG432BOILERS, as required by SC I.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR Part 60, Subpart Db)**
6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average CO calculation records for FG432BOILERS, as required by SC I.2. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**
7. The permittee shall keep, in a satisfactory manner, annual records of the normal operating range for each of the three boilers included in FG432BOILERS. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R 336.1205(3))**

See Appendix 3

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 notification to the AQD District Supervisor of the design heat input capacity, the identification of fuels to be combusted and the annual capacity factor for each boiler included in FG432BOILERS as required by 40 CFR 60.7 and 40 CFR 60.49b(a).² **(40 CFR 60.49b(a))**
5. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER12	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVBOILER13	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVBOILER14	42 ²	50 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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).

FG322-01 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group incorporates all three individual vinyl chlorosilane production processes and associated scrubber to allow for operational flexibility. The VOC emission limits are for the combination of all three processes as measured coming out of FG322-01 at stack/vent SV322-004. Scrubber 22452 is used to control emissions from EU322-01, EU322-02, and EU322-04. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FG322-01 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

The most recent PTI for this emission unit is PTI No. 242-07.

Emission Units: EU322-01, EU322-02, EU322-04

Flexible Group ID: FGMONMACT, FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Scrubber 22452. This is a CAM subject device for VOC and xylene.
- Condenser 6379 on EU322-01 only. This is a CAM subject device for VOC and xylene.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	65.1 pph ²	Hourly	FG322-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
2. VOC	59.6 pph ²	Hourly	EU322-04	SC VI.1 & VI.2	R 336.1702(a), R 336.1201
3. xylene(s)	2.6 pph ²	Hourly	EU322-04	SC VI.1 & VI.2	R 336.1201 R 336.1225 ¹
4. VOC	86.6 tpy ²	12-month rolling time period as determined at the end of each calendar month	FG322-01	SC VI.1 & VI.2	R 336.1702(a), R 336.1201

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The exit coolant temperature of condenser 6379 associated only with the EU322-01 process shall not exceed 5°C. Exceedance of this parameter is an excursion. An excursion of the exit coolant temperature of condenser 6379 is the exceedance of the operational parameter limit or acceptable range defined in this condition, or demonstrated during testing. Upon detecting an excursion of exit coolant temperature of condenser 6379 limit, the permittee shall restore operation of condenser 6379 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² (40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1910, R 336.1201)
2. The liquid flow rate of scrubber 22452 shall not be less than 10.0 gallons per minute. An excursion is a liquid flow rate less than 10.0 gallons per minute defined in this condition or demonstrated during testing. Upon detecting an excursion of liquid flow rate of scrubber 22452 limit, the permittee shall restore operation of liquid

scrubber 22452 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c), 40 CFR 64.7(d), R 336.1702(a), R 336.1201)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU322-01 unless scrubber 22452 and condenser 6379 are installed and operating properly.² **(R 336.1910, R 336.1201)**
2. The permittee shall not operate EU322-02 (including product receiver tank 7664) unless scrubber 22452 is installed and operating properly.² **(R 336.1910, R 336.1201)**
3. The permittee shall not operate EU322-04 unless scrubber 22452 is installed and operating properly.² **(R 336.1702(a), R 336.1201, 40 CFR 64.6(c)(1)(i),(ii))**
4. The permittee shall equip and maintain condenser 6379 with an exit coolant temperature device.² **(R 336.1910, R 336.1201)**
5. The permittee shall equip and maintain scrubber 22452 with a liquid flow indicating device.² **(R 336.1910, R 336.1201, 40 CFR 64.6(c)(1)(i),(ii))**
6. The permittee shall calibrate the liquid flow indicating device for scrubber 22452 and the temperature device for condenser 6379 in a satisfactory manner. **(40 CFR 64.6(c)(1)(iii))**

V. TESTING/SAMPLING

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

1. Within 120 days of ROP reissuance, the permittee shall verify the VOC emission rates from FG322-01 and the VOC and xylene emission rates from EU322-04 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
Xylene	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify the VOC emission rates from FG322-01 and the VOC and xylene emission rates from EU322-04, 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)**
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))**

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, on a continuous basis, the exit coolant temperature of condenser 6379 with instrumentation acceptable to the AQD. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be kept on file for a period of five years and made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**

2. The permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber 22452 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be kept on file for a period of five years and made available to the AQD upon request.² **(40 CFR 64.6(c)(1), R 336.1702(a), R 336.1201)**
3. The permittee shall keep records as required to demonstrate compliance with the emission limits specified in this table. A monthly summary of these emissions shall be made available to the AQD upon request. Within 30 days following the end of each calendar month, the permittee shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this table.² **(R 336.1702(a), R 336.1201)**
4. For scrubber 22452 and condenser 6379 on EU322-01 only, 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 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). **(40 CFR 64.7(d))**
5. For scrubber 22452 and condenser 6379 on EU322-01 only, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
6. For scrubber 22452 and condenser 6379 on EU322-01 only, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**
7. The permittee shall properly maintain the monitoring system including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

See Appendix 3

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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV322-004	3.0 ²	67 ²	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

FGSITEBLOWER FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (EUTHROX) or to a site-wide water scrubber system. There are two parts to the site vent consolidation and blower system: a dry vent header system for water reactive vents and wet vent header system for vents that can contain water.

The most recent PTI for this emission unit is PTI No. 91-07E.

Emission Units: Include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU505-01, EU508-01, EU515-01, EU601-01, EU2703-01, EU2703-03, EU2703-17, EURULE290

Flexible Group ID: FGTHROX, FGSITESCRUBBERS

POLLUTION CONTROL EQUIPMENT

- Site wide thermal oxidizer system (THROX) or site-wide water scrubber system.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the emission units in FGSITEBLOWER unless they are routed to EUTHROX or the site wide water scrubbers, except as provided below, and the control device is installed, maintained and operated in a satisfactory manner or the system is operated in accordance with the malfunction abatement plan (MAP) described in SC III.1 of FGFACILITY section of this permit.² **(R 336.1205(2), R 336.1910, R 336.1225, R 336.1911, R 336.1912)**
 - a. When EUTHROX is operating properly, any emission vents at Midland Plant that are part of FGSITEBLOWER, which is routed to EUTHROX, and that have air pollution control equipment in addition to EUTHROX, shall have the ability to bypass the additional air pollution control equipment or operate the additional air pollution control equipment with parameters at levels or ranges outside of the specified parametric ranges or levels in their individual ROP tables. When EUTHROX is not operating or is not operating properly as defined in the MAP, any emission vents at Midland Plant that are part of FGSITEBLOWER and that have air pollution control equipment in addition to EUTHROX shall be handled as described in the MAP.

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 record the time and duration of each bypass episode wherein the vents comprising FGSITEBLOWER are not routed to EUTHROX. The permittee shall keep all records of these bypass episodes on file at the Dow Corning facility for a period of five years and make them available to the Department upon request.² **(R 336.1205(1)(a))**

See Appendix 3

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:

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).

FGSITESCRUBBERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere when the site wide Thermal Oxidizer system is not operating properly.

The most recent PTI for this emission unit is 91-07E.

Emission Units: Include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: FGHP2012A2A, FGLEAKDETECTION

POLLUTION CONTROL EQUIPMENT

- Site-wide water scrubber system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Underlying Applicable Requirements
1. Benzene	7.1 pph ¹	Per testing protocol and/or the Benzene Emissions Management and Monitoring Plan (BEMMP)	FGSITESCRUBBERS emission units vented through the site wide water scrubber system	SC VI.1, VI.2, & VI.3	R 336.1225, R 336.1901
¹ This emissions limit only applies when EUTHROX is not operating and the site wide water scrubber system is serving as the back-up control device.					

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate FGSITESCRUBBERS unless the approved Benzene Emissions Management and Monitoring Plan (BEMMP) for demonstrating compliance with the emission limit for FGSITESCRUBBERS or an alternate plan approved by the AQD district supervisor is implemented and maintained.¹ **(R 336.1225, R 336.1901)**
- The permittee shall not bypass EUTHROX unless the following vents are routed to either the site wide water scrubbers or the control equipment specified in these vents emission unit tables in ROP No. MI-ROP-A4043-2008 (or any subsequent revisions) and the control equipment is installed, maintained, and operating in a satisfactory manner:²

SV515-001	SV303-011	SV303-002	SV321-024	SV321-059
SV515-003	SV303-016	SV303-004	SV321-031	
SV337-001	SV303-017	SV303-007	SV321-038	
SV337-002	SV303-019	SV321-018	SV321-052	
SV303-001	SV303-046	SV321-021	SV321-053	

(R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)

3. The permittee shall not bypass EUTHROX when operating SV2703-011 unless SV2703-011 is routed to the control equipment specified in EU2703-03 and the control equipment is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
4. The permittee shall not bypass EUTHROX when operating SV303-050 unless SV303-050 is routed to the control equipment specified in EU303-06 and the control equipment is installed, maintained, and operated in a satisfactory manner.² **(R 336.1205(2), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
5. Proper operation of the site wide water scrubbers includes the total scrubber water flow rate shall not be less than the minimum flow rate specified in the MAP.² **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the site wide water scrubbers with water flow meters. **(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. Whenever the vents comprising FGSITEBLOWER are not routed to the THROX, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the water flow rates for the site wide water scrubbers on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1910)**
2. The permittee shall keep, in a satisfactory manner, continuous records of scrubber flow rates for the site wide water scrubbers. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.² **(R 336.1910)**
3. The permittee shall keep, in a satisfactory manner, records demonstrating that the BEMMP is being implemented and maintained as required by SC III.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.¹ **(R 336.1225, R 336.1901)**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2512-001	6 ¹	65 ¹	R 336.1225
2. SV2512-002	6 ¹	65 ¹	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

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).

FGTHROX FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Site wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, hydrogen chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

Emission Units: Include, but are not limited to, the following: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU304-02, EU321-01, EU325-01, EU502-01, EU502-04, EU502-07, EU502-09, EU502-11, EU505-01, EU508-01, EU515-01, EU601-01, EU2515-01, EU2703-01, EU2703-03, EU2703-17, EURULE290, FGSITEBLOWER, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: FGHAP2012A2A

POLLUTION CONTROL EQUIPMENT

- Thermal oxidizer with heat recovery (THROX) unit consisting of a burner, quencher, absorber, 2 stage ionizing wet scrubbers (IWS) in series, and stack. This device is a CAM subject unit for VOCs and PM10.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	36 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through EUTHROX	SC VI.2, VI.10	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	90 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through EUTHROX	SC V.1, VI.11	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
3. PM10	13.4 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGTHROX emissions vented through EUTHROX	SC V.2, VI.12	R 336.1205(3),
4. PM10	3.5 pph ²	720 hour rolling average ^a	FGTHROX emissions vented through EUTHROX	SC V.2, VI.12	R 336.1205(3)
5. VOC	6.6 pph ²	Hourly	FGTHROX emissions vented through EUTHROX	SC V.1, VI.1, VI.9, VI.11	R 336.1205(1), R 336.1702(a), R 336.1901

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. PM10	100 lbs/month ²	Calendar month ^b	FGTHROX emissions vented through EUTHROX resulting from EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13	SC VI.12	R 336.1205(3)

^a PM10 emissions are due to silicon that is measure by the on-line Gas Chromatographs are based on a 720-hour rolling average (see SC VI.12(f)). Note that emission testing done per SC V.2 will detect all PM10 emissions, not just PM10 emissions due to silicon that has been measured by the on-line Gas Chromatographs.

^b PM10 emissions due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 are calculated on a monthly basis (see SC VI.12(g)). These emission units vent directly to the THROX so the silicon is not measured by the on-line Gas Chromatographs.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(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 the equipment in EUTHROX. **(40 CFR Part 60, Subparts A and Dc)**
2. Within 60 days after permit issuance, the permittee shall submit to the AQD District Supervisor and Technical Program Unit Supervisor, for review and approval, a protocol for demonstrating compliance with the PM10 emission limit in SC I.4 for EUTHROX. The permittee shall not operate EUTHROX unless the approved protocol or an alternate plan approved by the AQD District Supervisor and Technical Programs Unit Supervisor is implemented and maintained.² **(R 336.1205(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not route process vents to EUTHROX unless the burner, quencher, absorber, and two 2-stage ionizing wet scrubbers (IWS) in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the IWS and thermal oxidizer according to the MAP and maintaining a minimum THROX combustion chamber temperature of 1800°F and maintaining a residence time in the combustion chamber of greater than 1.0 second at any time when process vents are routed to EUTHROX. Satisfactory operation of the IWS includes maintaining the following parameters at or above the specified minimum values over the specified averaging period. An excursion is a combustion chamber temperature less than 1800°F, a residence time in the combustion chamber of one second or less, and operation of the IWS below the minimum values in the table below as defined in this condition, or demonstrated during testing. Upon detecting an excursion of EUTHROX combustion chamber temperature, residence time in the combustion chamber, or failing to maintain satisfactory operation of the IWS limit, the permittee shall restore operation of EUTHROX to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.² **(40 CFR 64.6(c)(2), 40 CFR 64.7(d), R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

Parameter	Units	Minimum Value	Averaging Period
1 st stage ^a secondary voltage	Kilovolts (kV)	10	1 hour

2 nd stage ^a secondary voltage	Kilovolts (kV)	15	1 hour
Secondary current	Milliamps (mA)	50	1 hour
Packing recycle rate per stage	Gallons per minute (gpm)	324	1 hour
^a Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS			

V. TESTING/SAMPLING

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

- At least once every 12 months, verification of PM₁₀, CO, and VOC emission rates from EUTHROX, by testing at owner's expense, in accordance with Department requirements, will be required. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. The permittee shall notify the AQD no less than 7 days prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following completion of testing.² (R 336.1205(1), R 336.1205(3), R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM ₁₀ /PM _{2.5}	40 CFR Part 51, Appendix M
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

- Every 6 months, the permittee shall verify the PM₁₀ outlet emission rates of the ionizing wet scrubbers by testing at owner's expense, in accordance with department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. Once 4 successful tests have been completed, the permittee may decrease the testing frequency to once every 12 months.² (R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

VI. MONITORING/RECORDKEEPING

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

- The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record on a continuous basis the combustion chamber temperature of EUTHROX. The temperature monitoring device shall be calibrated once per calendar year. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.² (R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, 40 CFR 64.6(c)(1)(i), (ii), (iii))
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x emissions for EUTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48b(b)(1), (c), (d), (e), (f).² (R 336.1205(1))
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the flue gas oxygen or carbon dioxide (CO₂) concentration for EUTHROX on a continuous basis and according to the procedures outlined in Appendix 3 and 40 CFR Part 60.48.² (R 336.1205(1))
- The permittee shall install, calibrate, maintain, and operate in a satisfactory manner online gas chromatographs to monitor and record the concentrations of compounds containing the silicon atom in the wet and dry vent

headers to EUTHROX on a continuous basis. For the purposes of this condition, “on a continuous basis” is defined as one measurement every 60 minutes. For the purposes of this condition, “in a satisfactory manner” includes calibrating and maintaining the gas chromatographs according to the MAP. While the gas chromatographs are being used to analyze individual vents routed to EUTHROX, the requirement to continuously measure the concentrations of compounds containing the silicon atom in the wet and dry vent headers to EUTHROX does not apply for a maximum of 5 hours per day and 72 hours per 12-month rolling time period, as determined at the end of each calendar month.² **(R 336.1205(3))**

5. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, devices to monitor and record the gas flow rates in the wet and dry vent headers to EUTHROX on a continuous basis. For the purposes of this condition, “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes.² **(R 336.1205(3))**
6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the gas flow rate from EUTHROX on a continuous basis and according to the procedures outlined in Appendix 3.² **(R 336.1205(3), 40 CFR 60.48c)**
7. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.² **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
8. The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period average fuel use records for EUTHROX. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**
9. The permittee shall keep, in a satisfactory manner, continuous records of EUTHROX combustion chamber temperature. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**
10. The permittee shall keep, in a satisfactory manner the following records for EUTHROX for each calendar day:
 - a. Calendar date that EUTHROX was in operation;
 - b. Identification of the operating days for which NO_x data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
 - c. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
 - d. Identification of the “F” factor used for calculations, method of determining the “F” factor and type of fuel combusted;
 - e. Identification of the times when the NO_x concentration exceeds full span of the continuous emission monitoring system;
 - f. Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(1))**

11. The permittee shall keep, in a satisfactory manner, records necessary to demonstrate that the following pollutants are in compliance with the emission limits listed in the corresponding special conditions. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.²

Pollutant	Emission Limit Special Condition	Applicable Requirement
a. NO _x	I.1	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
b. CO	I.2	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
c. VOC	I.5	R 336.1205(3), R 336.1702(a)

12. The permittee shall keep, in a satisfactory manner, records necessary to demonstrate compliance with the PM10 emission limits in SC I.3, I.4, and I.6. These records shall include the following:
- a. Dates and times that EUTHROX was combusting vent gas containing silicon;
 - b. Silicon loading to the IWS based on the online gas chromatographs;
 - c. Dates and times that the silicon loading to the IWS was not measured, as allowed by SC VI.4, including hours per day and hours per 12-month rolling time period, as determined at the end of each calendar month;
 - d. The exhaust flow rate through the IWS;
 - e. Calculation of the PM10 emission rate in pounds per hour using the Verantis equation, as described in the "Parametric Monitoring Plan and Verification of IWS Particulate Removal Efficiency from EUTHROX";
 - f. 720 hour average PM10 emission rate in pounds per hour, based on data from emission testing or the online gas chromatographs, calculated at the end of each hour from the PM10 emitted during the preceding 720 hours and the hours that EUTHROX was combusting vent gas containing silicon during the preceding 720 hours. This calculation shall be completed by the last day of the calendar month, for the previous calendar month, for each hour in the previous month;
 - g. PM10 emission rate in lb/month due to EU2703-06, EU2703-07, EU2703-08, EU2703-09, and EU2703-13 shall be calculated. This calculation shall be completed by the last day of the calendar month for the previous calendar month;
 - h. Twelve month rolling time period PM10 emission rate in tons per year, calculated at the end of each calendar month.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.² **(R 336.1205(3))**

13. The permittee shall keep, in a satisfactory manner, records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of EUTHROX; or any periods during which a continuous monitoring system or monitoring device in EUTHROX is inoperable. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.7)**
14. The permittee shall submit notification to the AQD District Supervisor of the design heat input capacity, the identification of fuels to be combusted and the annual capacity factor for EUTHROX as required by 40 CFR 60.7 and 40 CFR 60.48c(a). **(40 CFR 60.48c(a))**
15. For EUTHROX, 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 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). **(40 CFR 64.7(d))**
16. For EUTHROX, 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 40 CFR Part 64 compliance, 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 by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
17. For EUTHROX, the permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan if required by the Administrator pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

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))**

See Appendix 3

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. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006	54 ²	89.5 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), R 336.1901

IX. OTHER REQUIREMENT(S)

1. 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

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).

FGOLDFACILITY FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. See 40 CFR 63.2338(c).

Emission Units: EU311-01, EU340-03, EU505-01, EU508-01, EU515-01, EU2703-03, EURULE290

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Total organic HAP	Reduce emissions by 95 wt% OR ≤ 20 ppmv* exhaust concentration	Hourly	Storage Tanks See Table 2 of 40 CFR Part 63, Subpart EEEE	SC V.1 - 8	40 CFR 63.2346(a)
* Corrected to 3% oxygen for combustion devices using supplemental combustion air.					

- The permittee shall comply with the applicable requirements for storage tanks and transfer racks specified in 40 CFR Part 63, Subpart SS for meeting emission limits, substituting the term storage tank at each occurrence of the term storage vessel in Subpart SS. **(40 CFR 63.2346(a)(1))**
- The permittee must be in compliance with the emission limitations at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. The emission limitations apply during periods of Startup, Shutdown and Malfunction (SSM) except as provided in 40 CFR 63.2378(b)(2) and (3). **(40 CFR 63.2350(a), 40 CFR 63.2378(b)(1))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- For each storage tank identified in Table 2 of 40 CFR Part 63, Subpart EEEE, items 1 through 5, the permittee shall reduce the emissions of organic HAP using one of the following work practice standards:
 - Route emissions to a fuel gas system, to a non-fuel gas system, or back into a process as specified in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2346(a)(2))**
 - Use a vapor balancing system that complies with 63.2346(a)4(i) through (vii) and with the recordkeeping requirements in 40 CFR 63.2390(e). **(40 CFR 63.2346(a)(4))**
- For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year at an affected source that has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee must comply with 40 CFR Part 63,

Subpart TT (control level 1); 40 CFR Part 63, Subpart UU (control level 2); or 40 CFR Part 63, Subpart H. **(40 CFR 63.2346(c))**

3. For each storage tank and low throughput transfer rack, the permittee shall comply with the respective requirements for monitored parameters as specified in 40 CFR Part 63, Subpart SS. Alternatively, the permittee may comply with the operating limits in Table 3 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2346(e))**
4. The permittee shall develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3), except for sources not required to be controlled as specified in 40 CFR 63.2343. The permittee must follow the requirements in 40 CFR 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of 40 CFR 63.2378(b)(1) through (3) apply. **(40 CFR 63.2350(c), 40 CFR 63.2378(b))**
5. The permittee must be in compliance with the operating limits at all times when the equipment identified in 40 CFR 63.2338(b)(1) through (4) is in OLD operation. **(40 CFR 63.2350(a))**
6. The permittee shall operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(E)(I)(i). **(40 CFR 63.2350(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. The permittee shall demonstrate initial compliance with each applicable emission limitation and work practice standard as specified in Tables 6 and 7 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2370(a))**
2. The permittee shall demonstrate continuous compliance with each applicable emission limitation, operating limit, and work practice standard in Tables 2 through 4 of 40 CFR Part 63, Subpart EEEE according to the methods specified in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE, as applicable. **(40 CFR 63.2378(a))**
3. For each performance test, design evaluation, and/or compliance determination conducted, the permittee shall use the following procedures:
 - a. Design evaluations according to the procedures in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2354(a)(2))**
 - b. Compliance determine of the HAP content of organic liquids according to either EPA Method 311 of 40 CFR Part 63, Appendix A or other method approved by the Administrator. **(40 CFR 63.2354(c))**
4. The permittee shall conduct initial performance tests and design evaluations by the following dates, whichever is earlier: **(40 CFR 63.2358(a))**
 - a. According to the schedule in 40 CFR 63.7(a)(2); or
 - b. The compliance date specified in any applicable State or Federal new source review construction permit.
5. For storage tanks and transfer racks choosing to comply with the emission limits in Table 2 of 40 CFR Part 63, Subpart EEEE, the permittee shall demonstrate initial compliance according to the following schedule:
 - a. For existing sources, by August 4, 2007. **(40 CFR 63.2358(b)(1))**
6. For each owned transport vehicle that is equipped with vapor collection equipment that is loaded with organic liquids at transfer racks subject to control based on the criteria in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10, the permittee shall perform the vapor tightness testing required in Table 5 of 40 CFR Part 63, Subpart EEEE, item 2 at least once per year. **(40 CFR 63.2362(b)(1))**
7. For each owned transport vehicle that does not have vapor collection equipment, the permittee shall maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR Part 180 for cargo tanks or 49 CFR 173.31 for tank cars. **(40 CFR 63.2362(b)(2))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.2394)**

1. For each storage tank using a vapor balancing system per 40 CFR 63.2346(a)(4), the permittee shall keep the following records:
 - a. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR Part 180 – cargo tanks; **(40 CFR 63.2390(e)(1))**
 - b. Current certification in accordance with the U.S. DOT pressure test requirements of 49 CFR 173.31 – tank cars; **(40 CFR 63.2390(e)(1))**
 - c. Pressure relief vent setting specified in 40 CFR 63.2346(a)(4)(v); **(40 CFR 63.2390(e)(2))**
 - d. A record of the equipment to be used and procedures to be followed when reloading cargo tanks or tank cars and displacing vapors back to the storage tank from which the liquid originates; **(40 CFR 63.2390(e)(3)(i))**
 - e. A record of each time the vapor balancing system is used to comply with 40 CFR 63.2346(a)(4)(vi)(B). **(40 CFR 63.2390(e)(3)(ii))**
2. The permittee shall keep records of the total actual annual facility-level organic liquid loading volume as defined in 40 CFR 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 of 40 CFR Part 63, Subpart EEEE, items 7 through 10. **(40 CFR 63.2390(d))**
3. For nonflare control devices controlling storage tanks and low throughput transfer racks, the permittee shall submit a monitoring plan according to the requirements in 40 CFR Part 63, Subpart SS. **(40 CFR 63.2366(b))**
4. The permittee shall keep records in a form suitable and readily available for expeditious inspection and review according to 40 CFR 63.10(b)(1) including records stored in electronic form at a separate location. **(40 CFR 63.2394(a))**
5. The permittee shall keep records of all information for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). **(40 CFR 63.2394(b))**
6. The permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record as specified in 40 CFR 63.10(b)(1). These same records may be kept off site for the remaining 3 years. **(40 CFR 63.2394(c))**
7. The permittee shall keep all records required by 40 CFR 63.2343 for each emission source that does not require control under 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(a))**
8. The permittee shall keep all of the following records for each emission source that requires control under 40 CFR Part 63, Subpart EEEE:
 - a. All records in 40 CFR, Part 63, Subpart SS; **(40 CFR 63.2390(b))**
 - b. All records in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2390(b))**
 - c. All records required to show continuous compliance as required in 40 CFR Part 63, Subpart SS and in Tables 8 through 10 of 40 CFR Part 63, Subpart EEEE. **(40 CFR 63.2390(b))**

VII. REPORTING

1. The permittee shall submit the following notifications according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE:
 - a. Each notification in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2382(a))**
 - b. Each notification in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2382(a))**
 - c. Initial notification according to the schedule specified in 40 CFR 63.2382(b); **(40 CFR 63.2382(b))**
 - d. Notification of Intent to conduct a performance test as required in 40 CFR 63.7(b)(1); **(40 CFR 63.2382(c))**
 - e. Notification of Compliance Status including the information required in 40 CFR 63.999(b) and 40 CFR 63.2382(d)(2)(i) through (viii). **(40 CFR 63.2382(d))**

These notifications must be submitted according to the schedule in Table 12 of 40 CFR Part 63, Subpart EEEE and as specified in paragraphs (b) through (d) of 40 CFR 63.2382.

2. The permittee shall submit all applicable reports in 40 CFR 63.2386 according to the schedule in Table 11 of 40 CFR Part 63, Subpart EEEE and by the dates specified in 40 CFR 63.2386(b)(1) through (3). These reports include, but are not limited to, the following:
 - a. Each report in 40 CFR Part 63, Subpart SS; **(40 CFR 63.2386(a))**
 - b. Each report in Table 11 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - c. Each report in Table 12 of 40 CFR Part 63, Subpart EEEE; **(40 CFR 63.2386(a))**
 - d. First Compliance Report containing the information specified in 40 CFR 63.2386(c)(1) through (10); **(40 CFR 63.2386(c))**
 - e. Subsequent Compliance Reports containing the information specified in 40 CFR 63.2386(c)(1) through (9) and 40 CFR 63.2386(d)(1) through (4) where applicable; **(40 CFR 63.2386(d))**
 - f. Report of all deviations for each affected source that has obtained a Renewable Operating Permit. **(40 CFR 63.2386(e))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart EEEE for Organic Liquid Distribution by the initial compliance date. **(40 CFR Part 63, Subparts A and EEEE)**

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).

FGHCLMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

HCl production facility: the collection of unit operations and equipment associated with the production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations that is located at, or is part of, a major source of hazardous air pollutant emissions. See 40 CFR 63.8985(a).

Emission Units: EU356-01, EU356-02

POLLUTION CONTROL EQUIPMENT

- Packed bed scrubber (24388)
- Packed bed scrubber (24401)

I. EMISSION LIMITS

Pollutant	Limit ^a	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen Chloride (HCl)	12 ppmv or at least 99.4 percent reduction	Hourly	Emission stream from each HCl process vent in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
2. HCl	12 ppmv or at least 99.9 percent reduction	Hourly	Emission stream from each HCl storage tank in FGHCLMACT	SC V.1 & V.2	40 CFR 63.9000(a)
3. HCl	120 ppmv or at least 99 percent reduction	Hourly	Emission stream from each HCl transfer operation in FGHCLMACT	SC V.1, V.2, & V.3	40 CFR 63.9000(a)

^a The emission limits in SC I.1 through SC I.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall submit to the AQD District Supervisor, for comment, a leak detection and repair (LDAR) plan for FGHCLMACT as required by 40 CFR 63.9000. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the LDAR plan is implemented and maintained. **(40 CFR 63.9000(a))**
2. The permittee shall submit to the AQD Supervisor, with the Notification of Compliance, a monitoring plan for FGHCLMACT, as required by 40 CFR 63.9025. Following the submittal of the monitoring plan, the permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless the monitoring plan is implemented and maintained. **(40 CFR 63.8, 40 CFR 63.9025)**

IV. DESIGN/EQUIPMENT PARAMETERS

Special Conditions IV.1, IV.2, and IV.3 apply while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT.

1. The permittee shall equip and maintain scrubber 24388 and scrubber 24401 with the equipment listed below. **(40 CFR 63.9000(b))**
 - a. For each scrubber, a device to monitor the liquid flow rate to the packed bed;
 - b. For each scrubber, a device to monitor the scrubber effluent pH, unless an alternative is approved pursuant to 40 CFR 63.8(f).
2. The permittee shall not produce liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless scrubber 24388 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f). **(40 CFR 63.9000(b))**
3. The permittee shall not load rail cars with liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT unless scrubber 24401 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the liquid flow rate to the packed bed and the scrubber effluent pH in the ranges identified in the monitoring plan as constituting satisfactory operation. Scrubber effluent pH monitoring is not required if an alternative is approved pursuant to 40 CFR 63.8(f). **(40 CFR 63.9000(b))**

V. TESTING/SAMPLING

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

1. Within 180 days after initial startup of production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCLMACT, the permittee shall verify HCl emission rates from FGHCLMACT, by testing at owner's expense, in accordance with 40 CFR Part 63, Subpart A and NNNNN. The permittee shall notify the AQD District Supervisor in writing of the intention to conduct a performance test, at least 60 calendar days before the testing is scheduled to begin, in accordance with 40 CFR 63.9045(d). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 63, Appendix A. No less than 30 days prior to testing, the permittee shall submit a complete plan to the AQD Technical Programs Unit and the District Office. The AQD must approve the final plan prior to testing. The permittee shall 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. **(40 CFR Part 63, Subpart NNNNN)**
2. The permittee shall conduct periodic performance tests while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCLMACT, as required in 40 CFR 63.9015. Advance notification and reporting of results shall be as required in SC V.1 and in 40 CFR Part 63, Subparts A and NNNNN. **(40 CFR Part 63, Subparts A and NNNNN)**
3. For an emission stream from an HCl transfer operation in FGHCLMACT that meets the requirements of 40 CFR 63.9020(c), the permittee may submit a design evaluation to the AQD in lieu of any performance test required by SC V.1 or V.2. The design evaluation will meet the requirements of 40 CFR 63.9020(c). The permittee shall submit the design evaluation to the AQD District Supervisor no later than the date by which the performance test is required to be complete. **(40 CFR 63.9020(c))**

VI. MONITORING/RECORDKEEPING

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

Special Conditions VI.1 and VI.2 apply while producing liquid HCl at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT.

1. The permittee shall keep a record, in a satisfactory manner, of the time periods during which liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT. The permittee shall keep the record on a daily basis. **(40 CFR Part 63, Subparts A and NNNNN)**
2. The permittee shall monitor and record, in a satisfactory manner and on a daily basis, all of the operating parameters listed below: **(40 CFR 63.9000(b), 40 CFR 63.9025)**
 - a. The daily average liquid flow rate to the packed bed;
 - b. The daily average scrubber effluent pH for scrubber 24388 and scrubber 24401, unless an alternative is approved pursuant to 40 CFR 63.8(f).

VII. REPORTING

1. No later than 7 calendar days after startup of production of liquid HCl at concentrations of 30 weight percent or greater during normal operations in FGHCLMACT, the permittee shall notify the AQD District Supervisor in writing of the startup date. **(40 CFR Part 63, Subparts A and NNNNN)**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. This condition takes effect upon startup of production of liquid HCl product at a concentration of 30 weight percent or greater during normal operations in FGHCLMACT. Thereafter, while producing liquid HCl product at a concentration of 30 weight percent or greater during normal operations in equipment in FGHCLMACT the permittee shall comply with all provisions of the National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and NNNNN, as they apply to FGHCLMACT. **(40 CFR Part 63, Subparts A and NNNNN)**

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).

FGHAP2012A2A

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group consists of all the listed emission units. The listed emission units are the emission units at the facility as of the effective date of Permit to Install No. 91-07C (November 19, 2012) that emit hazardous air pollutants and emission units that support HAP emitting emission units, such as boilers and the InEnTec plasma enhanced melter (EU2515-01). This flexible group will apply to all the listed emission units even if they are reconstructed as defined in the Michigan Rules (R 336.1118), modified, renamed, or re-permitted. This flexible group was established for the purposes of keeping records for the actual to projected actual PSD applicability determination.

The most recent PTI for this emission unit is PTI No. 91-07E.

Emission Units: EU106-01, EU106-02, EU106-05, EU106-06, EU106-07, EU106-12, EU108-01, EU108-02, EU109-01, EU109-02, EU109-04, EU109-05, EU109-06, EU109-07, EU109-09, EU207-01, EU207-02, EU207-04, EU212-01, EU212-02, EU212-03, EU212-04, EU212-05, EU212-06, EU212-07, EU212-08, EU212-10, EU212-11, EU212-12, EU2404-01, EU2409-01, EU2409-02, EU2515-01, EU2701-01, EU2703-01, EU2703-02, EU2703-03, EU2703-04, EU2703-05, EU2703-06, EU2703-07, EU2703-08, EU2703-09, EU2703-10, EU2703-12, EU2703-13, EU2703-14, EU2901-02, EU2901-04, EU2901-05, EU2901-14, EU2901-15, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-04, EU303-06, EU303-09, EU303-10, EU303-11, EU303-13, EU303-15, EU303-16, EU303-17, EU303-18, EU304-01, EU3101-01, EU3102-02, EU3102-05, EU3102-09, EU3104-06, EU3104-08, EU3104-09, EU3104-14, EU3111-01, EU3211-01, EU3211-02, EU3211-05, EU3211-07, EU3211-08, EU3211-10, EU3211-11, EU3211-13, EU3211-14, EU3211-16, EU3211-17, EU3221-01, EU3221-02, EU3221-03, EU3221-05, EU3221-09, EU3221-10, EU3221-11, EU324-01, EU324-02, EU324-03, EU324-05, EU324-06, EU325-04, EU340-01, EU340-03, EU501-01, EU501-02, EU501-03, EU501-11, EU501-12, EU501-13, EU501-15, EU501-17, EU501-24, EU501-32, EU501-34, EU501-40, EU501-49, EU502-01, EU505-01, EU505-04, EU505-05, EU508-01, EU508-03, EU515-01, EU601-01, EU602-01, EU604-10, EUSITE-05, EUSITE-08, FG322-01, FGBOILERS2701-01, FGSITESCRUBBERS, FGTHROX

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 calculate and keep records of the annual emissions of VOC and NO_x from FGHP2012A2A described in Appendix 7, Section 7.14, in tons per calendar year. Calculations and record keeping shall begin upon issuance of Permit to Install No. 91-07C (November 19, 2012) and shall continue for ten (10) years.² **(R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))**

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 records of the annual emissions of VOC and NO_x from FGHP2012A2A described in Appendix 7, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - a. The calendar year actual emissions of VOC and NO_x exceed the baseline actual emissions (BAE) listed in Appendix 7 by a significant amount, as defined in R 336.2801(qq)(i)(B) and (E), and
 - b. The calendar year actual emissions differ from the pre-construction projections listed in Appendix 7, Section 7.14.The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.1, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projections).² **(R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

NA

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).

FGEMERGENCIRICE<500HP FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp, and is exempt from the requirements of Rule 201 pursuant to Rules 282(2)(b) or 285(2)(g).

Emission Units: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. An affected source that meets any of the criteria in paragraphs 40 CFR 63.6590(c)(1) through (7) must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. **(40 CFR 63.6590(c))**
2. The permittee shall limit operation of each stationary emergency RICE with a site rating of less than or equal to 500 brake HP or greater than 500 brake HP as follows:
 - a. There is no time limit on the use of emergency stationary RICE in emergency situations. **(40 CFR 63.6640(f))**
 - b. Emergency stationary RICE may be operated for the purposes of maintenance checks and readiness testing up to 100 hours per year. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. **(40 CFR 63.6640(f))**
 - c. Emergency stationary RICE may be operated up to 50 hours per year in non-emergency situations, but those hours are to be counted towards the 100 hours per year for maintenance and readiness testing. These 50 hours per year for non-emergency situations cannot be used for peak-shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. Up to 15 hours per year can be used as part of a demand response program. **(40 CFR 63.6640(f))**
3. The permittee shall operate and maintain existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP according to the manufacturer's emission-related operation and maintenance instructions or a plan developed by the facility that provides for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6(9)(a))**
4. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect the air cleaner every 1000 hours of operation or annually, whichever comes first. **(40 CFR 63.6603(a) and Table 2d (4)(b))**

5. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first. In lieu of changing the oil and filter, the permittee may implement an oil analysis program to have the oil analyzed at the same frequency specified for changing the oil as described in 40 CFR 63.6625(i). **(40 CFR 63.6603(a) and Table 2d (4)(a) and (5)(a))**
6. If implementing an oil analysis program and if the analytical results of the oil analysis program for emergency stationary CI engines with a site rate of less than or equal to 500 brake HP indicate any of the following limits are exceeded, the permittee shall change the oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 days or before commencing operation, whichever is later. **(40 CFR 63.6625(i))**
 - a. Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - b. Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new;
 - c. Percent water content (by volume) is greater than 0.5.
7. For existing emergency CI RICE with a site rating of less than or equal to 500 brake HP, the permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603(a) and Table 2d (4)(c) & (5)(c))**
8. If an existing emergency CI RICE with a site rating of less than or equal to 500 brake HP is operating during an emergency and it is not possible to shut down to perform the management practice requirements (change oil and filter, inspect air cleaner, and inspect hoses and belts) on the required schedule, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. **(40 CFR 63.6603(a) and Table 2d footnote 2)**
9. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission standards apply. **(40 CFR 63.6625(h), 40 CFR 63.6640(a))**
10. Beginning January 1, 2015, an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in 40 CFR 63.6640(f)(4)(ii), the permittee must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. **(40 CFR 63.6604(b))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. For existing emergency CI RICE with a site rating of 500 brake HP or less, the permittee shall install a nonresettable hour meter. **(40 CFR 63.6625(f))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.9360)**

1. If implementing an oil analysis program for emergency stationary CI engines with a site rating of less than or equal to 500 brake HP, the permittee shall at a minimum analyze the oil for the following three parameters: **(40 CFR 63.6625(i))**
 - a. Total Base Number;
 - b. Viscosity;
 - c. Percent water content (by volume).

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), 40 CFR 63.9360)**

1. The permittee shall maintain a copy of each notification and report submitted, including supporting documentation. **(40 CFR 63.6655(a)(1))**
2. The permittee shall maintain a record of the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(2))**
3. The permittee shall maintain a record of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **(40 CFR 63.6655(a)(5))**
4. The permittee shall maintain records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE was operated and maintained according to the facility maintenance plan. **(40 CFR 63.6655(e)(2))**
5. For existing emergency stationary RICE that do not meet the emission standards applicable to nonemergency stationary RICE, the permittee shall maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The records must document how many hours are spent for emergency operation; including what classified the operation as emergency; and how many hours are spent for nonemergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. **(40 CFR 63.6655(f))**
6. If implementing an oil analysis program, the permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. **(40 CFR 63.6625(i) and (j))**

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 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))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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).

FGPEM&BLR FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Plasma enhanced melter (PEM) and 25.1 MMBTU/hour boiler.

The most recent PTI for this emission unit is 175-09A.

Emission Units: EU2515-01, EUBOILER2515

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO _x	35.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC V.1	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
2. CO	30.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	FGPEM&BLR	SC V.1	R 336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall not route more than 9,540 MMBTU of synthesis gas to FGTHROX, per 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

IV. DESIGN/EQUIPMENT PARAMETERS

- The permittee shall not operate EUBOILER2515 while using synthesis gas unless the following equipment associated with EU2515-01 (i.e. Plasma Enhanced Melter) is installed, maintained, and operated in a satisfactory manner: partial quench column (Q-0630), baghouse (F-0640), HCl production system, and a synthesis gas polishing system including a recirculating scrubber (S-0650), a carbon filter (F-0680), and a high efficiency filter (F-0683).² (R 336.1201, R 336.1225, R 336.1702, R 336.1901, 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 keep, in a satisfactory manner, daily, monthly and 12-month rolling time period records of the quantity of synthesis gas in MMBTU sent to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² **(R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))**
2. The permittee shall keep, in a satisfactory manner, calculations of the NO_x and CO emission rates for each month and the 12-month rolling time period, as determined at the end of each calendar month, for FGPEM&BLR. All records shall be kept on file at the facility and made available to the Department upon request.² **(R 336.1201, R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))**
3. 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 336.1201(3))**

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 REQUIREMENTS

NA

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).

FGBOILERMACT-NG FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Requirements for existing Gas 1 (Natural Gas only) for existing Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These existing boilers or process heaters must comply with this subpart no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

Emission Units: EU303-04, EU325-04, EU501-40, EU508-02, EU508-03, EU604-10, FGBOILERS2701-01, FG432BOILERS

The collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within the units designed to burn gas 1 fuel subcategory as defined in 40 CFR 63.7575. At the time of permit renewal:

Less than 5 MMBTU/hr	EU508-02, EU604-10
Equal to or greater than 5 MMBTU/hr and less than 10 MMBTU/hr	EU325-04, 501-40
Equal to or greater than 10 MMBTU/hr	EU303-04, EU508-03, EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERS2701-01

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas as defined in 40 CFR 63.7575. **(40 CFR 63.7499(I))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the tune-up and Energy Assessment work practice standards for each applicable boiler or process heater at the source. **(40 CFR 63.7500(a)(1), 40 CFR Part 63, Subpart DDDDD, Table 3, Nos. 1-4)**
2. The permittee must operate and maintain affected sources in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**
3. The permittee may obtain approval from the Administrator to use an alternative to the work practice standards noted in SC III.1 and/or SC III.2. **(40 CFR 63.7500(b))**
4. The permittee must:
 - a. Complete a tune-up every 5 years (61 months) for boilers/process heaters less than or equal to 5 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**
 - b. Complete a tune-up every 2 years (25 months) for boilers greater than 5 million BTU per hour and less than 10 million BTU per hour; **(40 CFR 63.7500(e), 40 CFR 63.7515(d))**
 - c. Complete a tune-up annually (13 months) for boilers greater than 10 million BTU per hour; **(40 CFR 63.7540(a)(10), 40 CFR 63.7515(d))**

- d. Conduct the tune-up within 30 calendar days of startup, if the unit is not operating on the required date for a tune-up; **(40 CFR 63.7540(a)(13))**
 - e. Follow the procedures described in SC IX 4.a through 4.f for all initial and subsequent tune ups; **(40 CFR 63.7540(a)(10), 40 CFR Part 63, Subpart DDDDD, Table 3)**
 - f. Complete the Initial tune ups on all affected units no later than January 31, 2016, except as provided in 40 CFR 63.7510(j) and 40 CFR 63.7540(a)(13). **(40 CFR 63.7510(j), 40 CFR 63.7540(a)(13))**
5. The permittee must complete the one-time energy assessment no later than January 31, 2016. **(40 CFR 63.7510(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
2. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(a), (b), and (c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must submit a Notification of Compliance Status that includes each boiler or process heater before the close of business on the 60th day following the completion of the initial compliance demonstrations for all boiler or process heaters at the facility. The Notification of Compliance Status report must contain the following information and must be submitted within 60 days of January 31, 2016. **(40 CFR 63.7545(e))**
 - a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR Part 63, Subpart DDDDD, description of the fuel(s) burned. **(40 CFR 63.7545(e)(1))**
 - b. Certification(s) of compliance, as applicable, and signed by a responsible official: **(40 CFR 63.7545(e)(8))**
 - i. "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR Part 63, Subpart DDDDD at this site according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)"; **(40 CFR 63.7545(e)(8)(i))**
 - ii. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." **(40 CFR 63.7545(e)(8)(ii))**

5. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.7, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c, and not subject to emission limits or operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semi-annual compliance report: **(40 CFR 63.7550(b))**
 - a. The first semiannual compliance report must cover the period beginning on January 31, 2016 and ending on December 31. When submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on January 31, 2016 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified in 40 CFR 63.7495; **(40 CFR 63.7550(b)(1))**
 - b. The first semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the first calendar half after January 31, 2016. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than March 15; **(40 CFR 63.7550(b)(2), 40 CFR 63.7550(b)(5))**
 - c. Each subsequent semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31; **(40 CFR 63.7550(b)(3))**
 - d. Each subsequent semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), 40 CFR 63.7550(b)(5))**
6. The permittee must include the following information in the compliance report: **(40 CFR 63.7550(c), 40 CFR 63.7550(c)(1))**
 - a. Company and Facility name and address; **(40 CFR 63.7550(c)(5)(i))**
 - b. Process unit information, emissions limitations, and operating parameter limitations; **(40 CFR 63.7550(c)(5)(ii))**
 - c. Date of report and beginning and ending dates of the reporting period; **(40 CFR 63.7550(c)(5)(iii))**
 - d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown; **(40 CFR 63.7550(c)(5)(xiv))**
 - e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
7. The permittee must submit the reports according to the procedures specified in paragraph (h)(3) of 40 CFR 63.7550, as listed below; **(40 CFR 63.7550(h))**
 - a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's CDX. The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form becomes available in CEDRI. **(40 CFR 63.7550(h)(3))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

- The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, for existing boilers and process heaters, unless an extension has been granted per 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
- The permittee must be in compliance with the applicable work practice standards. **(40 CFR 63.7505(a))**
- For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up within 30 days of startup by following the procedures described in SC IX 4.a through 4.f. **(40 CFR 63.7515(g))**
- The permittee must demonstrate continuous compliance with the tune-up requirement by completing the following: **(40 CFR 63.7540(a))**
 - Inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - Maintain on-site and submit, if requested by the Administrator, the most recent periodic report containing the information as listed below: **(40 CFR 63.7540(a)(10)(vi))**
 - The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; **(40 CFR 63.7540(a)(10)(vi)(A))**
 - A description of any corrective actions taken as a part of the tune-up; **(40 CFR 63.7540(a)(10)(vi)(B))**
 - The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
- If the boiler or process heater has a heat input capacity of less than or equal to 5 million BTU per hour, the permittee may delay the burner inspection specified in SC IX 4.a until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the

oxygen level no lower than the oxygen concentration measured during the most recent tune-up.
(40 CFR 63.7540(a)(12))

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).

FGMONMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These conditions apply to miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source as defined in section 112(a) of the Clean Air Act and that meet all the criteria specified in 40 CFR Part 63, Subpart FFFF (40 CFR 63.2435). Specified processes are further defined in 40 CFR 63.2440. For the purpose of the emission units listed below, several emission units may be associated with one MCPU or multiple MCPUs depending upon the products manufactured. The type of products manufactured within an emission unit will also influence whether or not the entire emission unit or a portion of the emission unit is subject to 40 CFR Part 63, Subpart FFFF (MON).

Emission Units: EU108-01, EU207-01, EU207-02, EU207-03, EU212-01, EU212-03, EU212-12, EU2703-01, EU2703-03, EU2901-16, EU303-01, EU303-02, EU303-03, EU303-06, EU303-09, EU303-15, EU303-16, EU304-02, EU311-01, EU321-01, EU322-03, EU322-11, EU324-01, EU340-01, EU340-03, EU501-01, EU501-02, EU501-49, EU505-01, EU505-04, EU508-01, EU515-01, EU601-01, EU604-08, EURULE290, FG322-01

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

1. The permittee shall comply with the emission limits in Tables 1 through 5 of Subpart FFFF at all times, except during periods of startup, shutdown, and malfunction, or the alternative emission limits specified in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505, except as specified in 40 CFR 63.2450 (b) through (s). **(40 CFR 63.2450(a))**
2. The permittee shall comply with each applicable emission limit in Table 1 of Subpart FFFF for continuous process vents. **(40 CFR 63.2455(a))**
3. The permittee shall comply with each applicable emission limit in Table 2 of Subpart FFFF for batch process vents. **(40 CFR 63.2460(a))**
4. The permittee shall comply with each applicable emission limit in Table 3 of Subpart FFFF for process vents that emit hydrogen halide and halogen HAP or HAP metals. **(40 CFR 63.2465(a))**
5. The permittee shall comply with each applicable emission limit in Table 4 of Subpart FFFF for storage tanks. **(40 CFR 63.2470(a))**
6. The emission limits in Table 4 to Subpart FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. **(40 CFR 63.2470(d))**
7. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the emission limits specified in Table 4 of Subpart FFFF. **(40 CFR 63.2450(r))**
8. The permittee shall comply with each applicable emission limit in Table 5 of Subpart FFFF for transfer racks. **(40 CFR 63.2475(a))**
9. The permittee may elect to comply with the pollution prevention alternative requirements specified below in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to Subpart FFFF for any MCPU for which initial startup occurred before April 4, 2002. The permittee may comply with the requirements

of 40 CFR 63.2495(a)(1) for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes: **(40 CFR 63.2495(a))**

- a. The permittee must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65% from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor achieved by reducing HAP that are also volatile organic compounds (VOC), the permittee must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor achieved by reducing a HAP that is not a VOC, the permittee may not increase the VOC factor. **(40 CFR 63.2495(a)(1))**
 - b. Any MCPU for which the permittee seeks to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). The permittee may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). The permittee may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption. **(40 CFR 63.2495(a)(2))**
 - c. The permittee may comply with the requirements of paragraph (a) above for a series of processes, including situations where multiple processes are merged, if the permittee demonstrates to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes. **(40 CFR 63.2495(a)(3))**
 - d. The permittee must comply with the emission limitations and work practice standards contained in Tables 1 through 7 of Subpart FFFF for all HAP that are generated in the MCPU and that are not included in consumption, as defined in 40 CFR 63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in 40 CFR 63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements of 40 CFR 63.994 and the requirements referenced therein. The permittee may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes. **(40 CFR 63.2495(b))**
 - e. To demonstrate initial compliance with the pollution prevention alternative requirements (40 CFR 63.2495(a)), the permittee must prepare a demonstration summary in accordance with 40 CFR 63.2495(c)(1) and calculate baseline and target annual HAP and VOC factors in accordance with 40 CFR 63.2495(c)(2) and (3). **(40 CFR 63.2495(c))**
10. For an existing source, the permittee may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to Subpart FFFF by complying with the emissions averaging provisions specified in 40 CFR 63.150, except as specified below: **(40 CFR 63.2500(a))**
- a. The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of 40 CFR 63.150(d)(5). **(40 CFR 63.2500(b))**
 - b. References in 40 CFR 63.150 to 40 CFR 63.112 through 40 CFR 63.130 mean the corresponding requirements in 40 CFR 63.2450 through 40 CFR 63.2490, including applicable monitoring, recordkeeping, and reporting. **(40 CFR 63.2500(c))**
 - c. References to "periodic reports" in 40 CFR 63.150 mean "compliance report" for the purposes of Subpart FFFF. **(40 CFR 63.2500(d))**
 - d. For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in 40 CFR 63.1257(d)(2)(i) and (ii) instead of the procedures in 40 CFR 63.150(g)(2). Multiply the calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits. **(40 CFR 63.2500(e))**
 - e. References to "storage vessels" in 40 CFR 63.150 mean "storage tank" as defined in 40 CFR 63.2550 for the purposes of Subpart FFFF. **(40 CFR 63.2500(f))**
11. As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to Subpart FFFF and the requirements in 40 CFR 63.2455 through 40 CFR 63.2470, the permittee may comply with the emission limits below and demonstrate compliance in accordance with the requirements in 40 CFR 63.2505(b). **(40 CFR 63.2505)**
- a. The permittee must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph below: **(40 CFR 63.2505(a)(1))**
 - i. If the permittee uses a combustion control device, it must reduce HAP emissions to an outlet TOC concentration of 20 parts per million by volume (ppmv) or less and to an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less, or as an alternative, if the permittee controls halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and

halogen HAP generated in the combustion device by greater than or equal to 95% by weight in the scrubber. **(40 CFR 63.2505(a)(1)(i))**

- ii. If the permittee uses a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less. **(40 CFR 63.2505(a)(1)(ii))**
- b. Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in Tables 1 through 3 to Subpart FFFF. **(40 CFR 63.2505(a)(2))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with the work practice standards in Tables 1 through 7 of Subpart FFFF at all times, except during periods of startup, shutdown, and malfunction, and comply with the requirements specified in 40 CFR 63.2455 through 40 CFR 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through (s). **(40 CFR 63.2450(a))**
2. When organic HAP emissions from different emission types (e.g., continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, the permittee shall comply with the requirements of either 40 CFR 63.2450(c)(1) or 40 CFR 63.2450(c)(2). **(40 CFR 63.2450(c))**
3. The permittee shall not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions. **(40 CFR 63.2450(o))**
4. Opening a safety device, as defined in 40 CFR 63.2550, is allowed at any time conditions require it to avoid unsafe conditions. **(40 CFR 63.2450(p))**
5. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, the permittee shall comply with the work practice standards specified in Table 4 of Subpart FFFF. **(40 CFR 63.2450(r))**
6. For the purposes of determining group status for continuous process vents, batch process vents, and storage tanks in 40 CFR 63.2455, 40 CFR 63.2460, and 40 CFR 63.2470, the permittee shall consider hydrazine to be an organic HAP. **(40 CFR 63.2450(s))**
7. Periods of planned routine maintenance of each control device used to control emissions from storage tanks, during which the control device does not meet the emission limit specified in Table 4 to Subpart FFFF, must not exceed 240 hours per year (hr/yr). The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. **(40 CFR 63.2470(d))**
8. The permittee must comply with each work practice standard in Table 5 to Subpart FFFF that applies to transfer racks, and the permittee must meet each applicable requirement in 40 CFR 63.2475(b) and (c). When the term "high throughput transfer rack" is used in 40 CFR Part 63, Subpart SS, the term "Group 1 transfer rack," as defined in 40 CFR 63.2550, applies for the purposes of Subpart FFFF. **(40 CFR 63.2475)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. The requirements specified in 40 CFR 63.2450 (g)(1) through (5) apply instead of or in addition to the requirements specified in 40 CFR Part 63, Subpart SS. **(40 CFR 63.2450(g))**
2. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to Subpart FFFF. The permittee must conduct the performance test according to the procedures in 40 CFR 63.997. The permittee must use Method 29 of Appendix A of 40 CFR Part 60 to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of Appendix A of 40 CFR Part 60 to determine the total particulate matter (PM) at the inlet and outlet of each control device. The permittee has demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97% by weight. **(40 CFR 63.2465(d)(2))**

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 comply with the recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. **(40 CFR 63.2450(a))**
2. Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in 40 CFR 63.8 and 40 CFR 63.2450(j)(1) through (5). **(40 CFR 63.2450(j))**
3. The provisions in 40 CFR 63.2450(k)(1) through (6) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in 40 CFR Part 63, Subpart SS. **(40 CFR 63.2450(k))**
4. 40 CFR 63.152(f)(7)(ii) through (iv) and 40 CFR 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of startup, shutdown, and malfunction from daily averages, do not apply for the purposes of 40 CFR Part 63, Subpart FFFF. **(40 CFR 63.2450(l))**
5. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must comply with the monitoring requirements specified in 40 CFR 63.1366(b)(1)(xi) for each fabric filter used to control HAP metals. **(40 CFR 63.2465(d)(3))**
6. The permittee must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard. **(40 CFR 63.2495(e))**
7. The permittee shall keep each applicable record required by 40 CFR Part 63, Subpart A and in referenced subparts of 40 CFR Part 63, F, G, SS, UU, WW, and GGG and in referenced Subpart F of 40 CFR Part 63. **(40 CFR 63.2525(a))**
8. The permittee shall keep records of each operating scenario as specified below:
 - a. A description of the process and the type of process equipment used. **(40 CFR 63.2525(b)(1))**
 - b. An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks. **(40 CFR 63.2525(b)(2))**
 - c. The applicable control requirements of Subpart FFFF, including the level of required control, and for vents, the level of control for each vent. **(40 CFR 63.2525(b)(3))**
 - d. The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device. **(40 CFR 63.2525(b)(4))**
 - e. The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s). **(40 CFR 63.2525(b)(5))**
 - f. The applicable monitoring requirements of Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process. **(40 CFR 63.2525(b)(6))**
 - g. Calculations and engineering analyses required to demonstrate compliance. **(40 CFR 63.2525(b)(7))**

- h. For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario. **(40 CFR 63.2525(b)(8))**
9. The permittee shall keep a schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect. **(40 CFR 63.2525(c))**
10. The permittee shall keep records of the information specified below for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to Subpart FFFF if some of the vents are controlled to less the percent reduction requirement: **(40 CFR 63.2525(d))**
- a. Records of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(d)(1))**
 - b. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch. **(40 CFR 63.2525(d)(2))**
11. The permittee shall keep records of the information specified below, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required if the permittee documented in the notification of compliance status report that the MCPU meets any of the situations described in 40 CFR 63.2525(e)(1)(i), (ii), or (iii). **(40 CFR 63.2525(e))**
- a. If the permittee documented in the notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in 40 CFR 63.2460(b)(7), the permittee must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After 1 year, the permittee may revert to recording only usage if the usage during the year is less than 10,000 lb. **(40 CFR 63.2525(e)(2))**
 - b. If the permittee documented in the notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then the permittee must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, the permittee must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and begin recordkeeping as specified in 40 CFR 63.2525(e)(4). After one year, the permittee may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions. **(40 CFR 63.2525(e)(3))**
 - c. If none of the conditions specified in 40 CFR 63.2525(e)(1) through (3) are met, the permittee must keep records of the information specified below: **(40 CFR 63.2525(e)(4))**
 - i. A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions; **(40 CFR 63.2525(e)(4)(i))**
 - ii. A record of whether each batch operated was considered a standard batch; **(40 CFR 63.2525(e)(4)(ii))**
 - iii. The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch; **(40 CFR 63.2525(e)(4)(iii))**
 - iv. Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly. **(40 CFR 63.2525(e)(4)(iv))**
12. The permittee shall keep a record of each time a safety device is opened to avoid unsafe conditions in accordance with 40 CFR 63.2450(s). **(40 CFR 63.2525(f))**
13. The permittee shall keep record of the results of each CPMS calibration check and the maintenance performed, as specified in 40 CFR 63.2450(k)(1). **(40 CFR 63.2525(g))**
14. For each CEMS, the permittee must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. **(40 CFR 63.2525(h))**
15. For each PUG, the permittee must keep records specified below: **(40 CFR 63.2525(i))**

- a. Descriptions of the MCPU and other process units in the initial PUG required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(1))**
 - b. Rationale for including each MCPU and other process unit in the initial PUG (i.e., identify the overlapping equipment between process units) required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(2))**
 - c. Calculations used to determine the primary product for the initial PUG required by 40 CFR 63.2535(l)(2)(iv); **(40 CFR 63.2525(i)(3))**
 - d. Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by 40 CFR 63.2535(l)(1)(v); **(40 CFR 63.2525(i)(4))**
 - e. The calculation of each primary product redetermination required by 40 CFR 63.2535(l)(2)(iv). **(40 CFR 63.2525(i)(5))**
16. In the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment. **(40 CFR 63.2525(j))**
17. For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken. **(40 CFR 63.2525(k))**

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 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 comply with the notification and reporting requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525. **(40 CFR 63.2450(a))**
5. When 40 CFR 63.2455 through 63.2490 reference other subparts in 40 CFR 63 that use the term "periodic report," it means "compliance report" for the purposes of 40 CFR Part 63, Subpart FFFF. The compliance report must include the information specified in 40 CFR 63.2520(e), as well as the information specified in referenced subparts. **(40 CFR 63.2450(m)(1))**
6. When there are conflicts between 40 CFR Part 63, Subpart FFFF and referenced subparts for the due dates of reports required by 40 CFR Part 63, Subpart FFFF, reports must be submitted according to the due dates presented in 40 CFR Part 63, Subpart FFFF. **(40 CFR 63.2450(m)(2))**
7. Excused excursions, as defined in 40 CFR Part 63, Subparts G and SS, are not allowed. **(40 CFR 63.2450(m)(3))**
8. If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to Subpart FFFF, then the permittee must submit documentation in the precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and the permittee must describe the procedures that will be implemented to minimize HAP emissions from these vent streams. **(40 CFR 63.2450(q))**
9. If complying with the pollution prevention standard, the permittee must include the pollution prevention demonstration plan in the precompliance report required by 40 CFR 63.2520(c). The permittee must identify all days when the annual factors were above the target factors in the compliance reports. **(40 CFR 63.2495(f))**
10. The permittee must submit each applicable report in Table 11 to Subpart FFFF. **(40 CFR 63.2520(a))**

11. Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report by the date in Table 11 to Subpart FFFF and according to 40 CFR 63.2520(b)(1) through (5). **(40 CFR 63.2520(b))**
12. The permittee must submit a precompliance report to request approval for any of the items in 40 CFR 63.2520(c)(1) through (7). The report will be approved or disapproved within 90 days after receipt. If it is disapproved, the permittee must still be in compliance with the emission limitations and work practice standards in Subpart FFFF by the compliance date. To change any of the information submitted in the report, the permittee must submit a notification 60 days before the planned change is to be implemented. **(40 CFR 63.2520(c))**
13. The permittee must submit a notification of compliance status report according to the schedule in 40 CFR 63.2520(d)(1), and the notification of compliance status report must contain the information specified in 40 CFR 63.2520(d)(2). **(40 CFR 63.2520(d))**
14. The compliance report must contain the information specified in 40 CFR 63.2520(e)(1) through (10). **(40 CFR 63.2520(e))**
15. The permittee must submit all of the notifications in 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply by the dates specified. **(40 CFR 63.2515(a))**
16. As specified in 40 CFR 63.9(b)(2), if the affected source starts-up before November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after November 10, 2003. **(40 CFR 63.2515(b)(1))**
17. As specified in 40 CFR 63.9(b)(3), if the new affected source starts-up on or after November 10, 2003, the permittee must submit an initial notification not later than 120 calendar days after becoming subject to Subpart FFFF. **(40 CFR 63.2515(b)(2))**
18. If required to conduct a performance test, the permittee must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in Table 2 to Subpart FFFF, the permittee must also submit the test plan required by 40 CFR 63.7(c) and the emission profile with the notification of the performance test. **(40 CFR 63.2515(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart FFFF for Miscellaneous Organic Chemical Manufacturing. **(40 CFR Part 63, Subparts A and FFFF)**
2. The permittee shall determine if an emission stream is a halogenated vent stream, as defined in 40 CFR 63.2550, by calculating the mass emission rate of halogen atoms in accordance with 40 CFR 63.115(d)(2)(v). Alternatively, the permittee may elect to designate the emission stream as halogenated. **(40 CFR 63.2450(b))**
3. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, the permittee shall meet the requirements of 40 CFR 63.982(c) and the requirements referenced therein. **(40 CFR 63.2450(e)(1))**
4. Except when complying with 40 CFR 63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to a flare, the permittee shall meet the requirements of 40 CFR 63.982(b) and the requirements referenced therein. **(40 CFR 63.2450(e)(2))**

5. If the permittee uses a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, the permittee shall meet the requirements of 40 CFR 63.994 and the requirements referenced therein. If the permittee uses a halogen reduction device before a combustion device, the permittee shall determine the halogen atom emission rate prior to the combustion device according to the procedures in 40 CFR 63.115(d)(2)(v). **(40 CFR 63.2450(e)(3))**
6. As part of a flare compliance assessment required in 40 CFR 63.987(b), the permittee has the option of demonstrating compliance with the requirements of 40 CFR 63.11(b) by complying with the requirements in either 40 CFR 63.11(b)(6)(i) or 40 CFR 63.987(b)(3)(ii). If the permittee elects to meet the requirements in 40 CFR 63.11(b)(6)(i), the permittee shall keep flare compliance assessment records as specified in 40 CFR 63.2450(f)(2)(i) and (ii). **(40 CFR 63.2450(f))**
7. To determine the percent reduction of a small control device that is used to comply with an emission limit specified in Table 1, 2, 3, or 5, the permittee may elect to conduct a design evaluation as specified in 40 CFR 63.1257(a)(1) instead of a performance test as specified in 40 CFR Part 63, Subpart SS. The permittee shall establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate. **(40 CFR 63.2450(h))**
8. When 40 CFR 63.997(e)(2)(iii)(C) requires correcting the measured concentration at the outlet of a combustion device to 3% oxygen if supplemental combustion air is added, the requirements in either (a) or (b) below apply for the purposes of 40 CFR Part 63, Subpart FFFF:
 - a. The permittee shall correct the concentration in the gas stream at the outlet of the combustion device to 3% oxygen if supplemental gases are added, as defined in 40 CFR 63.2550, to the vent stream; or **(40 CFR 63.2450(i)(1))**
 - b. The permittee shall correct the measured concentration for supplemental gases using Equation 1 of 40 CFR 63.2460; the permittee may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas. **(40 CFR 63.2450(i)(2))**
9. For each continuous process vent, the permittee shall either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 40 CFR 63.115(d), except as specified in 40 CFR 63.2455(b)(1) through (3). **(40 CFR 63.2455(b))**
10. If the permittee uses a recovery device to maintain the TRE above a specified threshold, the permittee shall meet the requirements of 40 CFR 63.982(e) and the requirements referenced therein, except as specified in 40 CFR 63.2450 and 40 CFR 63.2455(c)(1). **(40 CFR 63.2455(c))**
11. If a process has batch process vents, as defined in 40 CR 63.2550, the permittee must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and (ii), except as specified in 40 CFR 63.2460(b)(1) through (7). **(40 CFR 63.2460(b))**
12. Exceptions to the requirements for batch process vents in 40 CFR Part 63, Subparts SS and WW are specified in 40 CFR 66.2460(c)(1) through (9). **(40 CFR 63.2460(c))**
13. If any process vents within a process emit hydrogen halide and halogen HAP, the permittee must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in 40 CFR 63.1257(d)(2)(i) and/or (ii), as appropriate. When 40 CFR 63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of 40 CFR 63.2465(b). **(40 CFR 63.2465(b))**
14. If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), the permittee must comply with 40 CFR 63.994 and the requirements referenced therein, except as specified in 40 CFR 63.2465(c)(1) through (3). **(40 CFR 63.2465(c))**

15. To demonstrate compliance with the emission limit in Table 3 to Subpart FFFF for HAP metals at a new source, the permittee must determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data. **(40 CFR 63.2465(d)(1))**
16. If the permittee conducts a performance test or design evaluation for a control device used to control emissions only from storage tanks, the permittee must establish operating limits, conduct monitoring, and keep records using the same procedures as required in 40 CFR Part 63, Subpart SS for control devices used to reduce emissions from process vents instead of the procedures specified in 40 CFR 63.985(c), 40 CFR 63.998(d)(2)(i), and 40 CFR 63.999(b)(2). **(40 CFR 63.2470(c)(1))**
17. When the term “storage vessel” is used in 40 CFR Part 63, Subparts SS and WW, the term “storage tank,” as defined in 40 CFR 63.2550 applies for the purposes of Subpart FFFF. **(40 CFR 63.2470(c)(2))**
18. The permittee must meet each requirement in Table 6 to Subpart FFFF that applies to equipment leaks, except as specified in 40 CFR 63.2480(b) through (d). **(40 CFR 63.2480)**
19. The permittee must meet each requirement in Table 7 to Subpart FFFF that applies to wastewater streams and liquid streams in open systems within an MCPU, except as specified in 40 CFR 63.2485(b) through (o). **(40 CFR 63.2485)**
20. The permittee must meet each requirement in Table 10 to Subpart FFFF that applies to heat exchange systems, except that the phrase “a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of this section” in 40 CFR 63.104(a) means “an MCPU meeting the conditions of 40 CFR 63.2435” for the purposes of Subpart FFFF and that the reference to 40 CFR 63.100(c) in 40 CFR 63.104(a) does not apply for the purposes Subpart FFFF. **(40 CFR 63.2490)**
21. For each MCPU for which the permittee is complying with 40 CFR 63.2495(a), the pollution prevention standard, the permittee must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified below. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to 40 CFR 63.2495(c)(3). **(40 CFR 63.2495(d))**
 - a. To calculate the annual factors, the permittee must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph below, as applicable: **(40 CFR 63.2495(d)(1))**
 - i. For continuous processes, the permittee must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (i.e., annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section; **(40 CFR 63.2495(d)(2))**
 - ii. For batch processes, the permittee must calculate the annual factors every 10 batches for the 12-month period preceding the 10th batch (i.e., annual rolling average calculated every 10 batches), except as specified if the permittee produces more than 10 batches during a month, the permittee must calculate the annual factors at least once during that month and, if the permittee produces less than 10 batches in a 12-month period, the permittee must calculate the annual factors for the number of batches in the 12-month period since the previous calculations. **(40 CFR 63.2495(d)(3))**
22. To demonstrate compliance with the alternative standard in 40 CFR 63.2505, the permittee must meet the requirements of 40 CFR 63.1258(b)(5) beginning no later than the initial compliance date specified in 40 CFR 63.2445, except as specified below. **(40 CFR 63.2505(b))**
 - a. The permittee must comply with the requirements in 40 CFR 63.983 and the requirements referenced therein for closed-vent systems. **(40 CFR 63.2505(b)(1))**
 - b. When 40 CFR 63.1258(b)(5)(i) refers to 40 CFR 63.1253(d) and 40 CFR 63.1254(c), the requirements in paragraph 40 CFR 63.2505(a) apply for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(2))**
 - c. When 40 CFR 63.1258(b)(5)(i)(B) refers to “HCl,” it means “total hydrogen halide and halogen HAP” for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(3))**
 - d. When 40 CFR 63.1258(b)(5)(ii) refers to 40 CFR 63.1257(a)(3), it means 40 CFR 63.2450(j)(5) for the purposes of Subpart FFFF. **(40 CFR 63.2505(b)(4))**
 - e. The permittee must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report. **(40 CFR 63.2505(b)(5))**

- f. If the permittee elects to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95% by weight in 40 CFR 63.2505(a)(1)(i)(C), the permittee must meet the requirements below. **(40 CFR 63.2505(b)(6))**
 - i. Demonstrate initial compliance with the 95% reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with 40 CFR 63.994 and the requirements referenced therein. The permittee must submit the results of the initial compliance demonstration in the notification of compliance status report. **(40 CFR 63.2505(b)(6)(i))**
 - ii. Install, operate, and maintain CPMS for the scrubber as specified in 40 CFR 63.994(c) and 40 CFR 63.2450(k), instead of as specified in 40 CFR 63.1258(b)(5)(i)(C). **(40 CFR 63.2505(b)(6)(ii))**
 - g. If flow to the scrubber could be intermittent, the permittee must install, calibrate, and operate a flow indicator as specified in 40 CFR 63.2460(c)(7). **(40 CFR 63.2505(b)(7))**
 - h. Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data. **(40 CFR 63.2505(b)(8))**
 - i. The requirements in 40 CFR 63.2505(a) do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in 40 CFR 63.2470(d). The permittee must comply with the recordkeeping and reporting specified in 40 CFR 63.998(d)(2)(ii) and 40 CFR 63.999(c)(4) for periods of planned routine maintenance. **(40 CFR 63.2505(b)(9))**
23. For any equipment, emission stream, or wastewater stream subject to the provisions of both 40 CFR Part 63, Subpart FFFF and another rule, the permittee may elect to comply only with the provisions as specified in 40 CFR 63.2535(a) through (l). The permittee also must identify the subject equipment, emission stream, or wastewater stream, and the provisions that will be complied with, in the notification of compliance status report required by 40 CFR 63.2520(d). **(40 CFR 63.2535)**
24. For any Group 2 emission point that becomes a Group 1 emission point after the compliance date for the facility, the permittee shall comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(d))**
25. If, after the compliance date for the facility, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, the permittee shall comply with the applicable emission limits specified in Table 3 of 40 CFR Part 63, Subpart FFFF and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(e))**
26. If the permittee has a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in 40 CFR 63.2550(i), the permittee shall comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration, as specified in 40 CFR Part 63, Subpart FFFF, shall be conducted within 150 days after the switch occurs. **(40 CFR 63.2445(f))**

Footnotes:

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

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

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1. Abbreviations and Acronyms

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

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

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

Appendix 2. Schedule of Compliance

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

Appendix 3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS.

FG432BOILERS
NO_x and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO _x	2
CO ₂ /O ₂	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b) A report of all periods of CEMS downtime and corrective action.
 - c) A report of the total operating time of each boiler during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX:

FGTHROX
NO_x and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO _x	2
CO ₂ /O ₂	3
Flow	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b) A report of all periods of CEMS downtime and corrective action.
 - c) A report of the total operating time of each boiler during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

Appendix 4. Recordkeeping

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

Appendix 5. Testing Procedures

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

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-A4043-2008. 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-A4043-2008 is being reissued as Source-Wide PTI No. MI-PTI-A4043-20XX.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
134-08	200800093	Silicone rubber manufacturing process	EU207-01
534-77G	200900104	Alkoxylation process	EU601-01
175-09A	201100031	25.1 MMBTU/hr boiler and electrically powered plasma arc gasifier known as a "plasma enhanced melter" (PEM)	EUBOILER2515, EU2515-01 FGPEM&BLR
812-91C	201300027	Grignard process	EU515-01
14-13	201300048	5617 batch kettle process producing silane and siloxane products	EU324-08
15-13	201300048	4820 batch kettle process producing silane and siloxane products	EU324-01
169-12	201300048	Resin and coating manufacturing	EU505-01
29-07B	201300077	HCl production plant, rail car transfer station no. 9E, and rail car unloading station no. 10E	EU356-01, EU356-02, EU356-03, FGHCLMACT
125-10A	201300106	Distillation pilot process	EU2901-12
34-04B	201300123	Calcium chloride process	EU340-01
91-07E	201400039	Site consolidation and blower system, site-wide scrubber system and thermal oxidation unit, and the trichlorosilane, silicon tetrachloride and dichlorosilane bulk move operations	FGSITEBLOWER, FGTHROX, FGSITESCRUBBERS, FGHP2012A2A, FGOLDFACILITY
26-14	201400073	9025C dedicated waste tank in 2703 building	EU2703-17
84-08B	201400084	Phenyltrichlorosilane and diphenylchlorosilane recovery process	EU508-01, FG304VENTRECOVERY
91-14	201400117	Phenyl Chlorosilane Waste Tank 25403	EU502-09
44-89D	201500076	Silicone products manufacturing process	EU2504-01
104-14A	201500130	6019 Batch Kettle	EU212-03
63-14A	201500173	6054 Batch Kettle	EU212-01
48-14B	201500174	20400 Batch Kettle	EU212-12

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
156-06D	201600012	Liquid silicone rubber manufacturing batch mixer process	EU207-03
132-15	201600017	Chlorosilane waste tank 256 in the 2502 tank farm	EU502-11
131-15	201600018	Methyl vent system consisting of emissions from tanks T-100, T-102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methyltrichlorosilane, methyl-dichlorosilane, dimethyldichlorosilane, dimethylchlorosilane, trimethylchlorosilane, phenyltrichlorosilane, and ethyltrichlorosilane, and the vent from the Cabot Mix Tank operation.	EU502-01
185-07B	201600019	Two sets of related equipment with different emission profiles and different vent control paths: Distillation Vents and Bulk Move Vents	EU502-07
180-15A	201600022	B Module Twin Screw Extruder	EU2901-16
126-03A	201600037	1107 hydrolysis process, including tanks 4160 and 23535	EU501-02
	201600045	Remove condition V.1 from Table	EU207-01
200-15	201600046	Silicone manufacturing process	EU505-04
44-06B	201600121	Trichlorosilane vent recovery system including carbon bed and venturi scrubber system	EU325-01, FG325-01
	201600127	Revised list of site boilers subject to Boiler MACT	
174-12A	201600135	40x resin manufacture	EU321-01
146-16	201700019	1600 Batch Kettle	EU303-15
147-16	201700019	1650 Batch Kettle	EU303-16
804-92D	201700019	Phenyl Methyl Fluids	EU303-01
19-14A	201700026	Silicone fluids manufacturing process	EU324-18
622-92D	201800012	Carbon parametric monitoring and recordkeeping	EU108-01
18-18	201800070	Container Maintenance and Wash area for the High Volume Silanes production facility. Includes nitrogen purge for some containers	EU502-04
437-90B	Unknown	Low viscosity fluids and 3-component fluids process	EU501-49

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 emission unit tables EU108-01, EU207-03, EU2703-03, EU303-02, EU303-01, EU303-09, EU322-01, EU322-03, EU322-04, EU322-11, EU340-01, EU601-01, EU604-08, and EU800-01.

7.1 – EU108-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.2 – EU207-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

Calculations based on vent samples

$$\text{VOC Total} = [(\text{No. Batches/ Month containing xylene and ethylbenzene}) \times (0.072 \text{ lb VOC/ batch})] + [(\text{No. of other Batches/ Month}) \times (0.015 \text{ lb VOC/ Batch})] = \text{lb VOC/ Month}$$

VOC Rate (Maximum) = [(0.13 lb VOC/ Mixer hour) x (No. of Mixers in heat step at same time with xylene, ethylbenzene, and VOC emissions)] + [(0.05 lb VOC/ Mixer hour) x (No. of other Mixers in heat step at same time)] = lb VOC/ hour

7.3 – EU2703-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's laws.

Determine partial pressure [P_v] of a component above a mixture

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v \div P_t$$

Determine partial pressure [P_v] of a component as a function of temperature

Determine Vapor Pressure by a form of Antoine's Law. (See simple form below)

$$\text{Log } [V_p(i)] = A + (B / \text{Absolute temperature})$$

Total vent flow calculation, based on molar flow rate (lbmol / hr)

SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

Ton / year calculation

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N₂, flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction}(a) * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef}(a) + [\text{Liq/Vap Distrib}])$$

where individual Distribution Coef(a) =
 $\text{lb moles} / \{[(\text{actual condenser pressure} + 14.7) / 14.7]\} * 760\}$

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

Lbs of liquid condensed for component (a) =
 total moles of liquid * liquid mole fraction (X_{wa}) * Mol. Wt. of component (a)

Lbs of uncondensed vapor of component (a) =
 $[\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

$([\text{lb of component (a) in the feed} / \text{Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed} / \text{Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed} / \text{Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed} / \text{Mol. Wt. of comp. (d)}]) / [\text{Liq/Vap Distrib}]$

and

$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 98.4% for the various chlorosilanes, but take no removal credit for the other compounds (for example, allyl chloride).

- f) determine the tons/year after-control emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc., to determine the annual emissions.

7.4 – EU303-01 & EU303-02 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas $[X(i)]$

where $X(i) = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.5 - EU303-09 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's Laws.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where $P_i = (\text{Vapor Pressure of pure component } [P_{vapi}])$
 $\times (\text{Mole Fraction of the component in the liquid phase } [X_i])$

$$P_i = P_{vapi} \times X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_t$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_1}{P_T} = \frac{n_1}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

Basic set of equations:

- 1) determine the vent flow rate* [moles/hour] and mole fractions for the inert compounds
- 2) use Raoult's Law to determine partial pressures of inert compounds

* Where the total vent flow rate is determined as follows:

$$\text{Total vent flow rate} = \frac{(\text{lbmoles of volatiles stripped}) + (\text{lbmoles of N}_2 \text{ due to vacuum leak rate})}{[\text{vapor mole fraction of carrier gas (N}_2\text{)}]}$$

where the "lbmoles of volatiles stripped" is determined as follows:

$$\text{lbmoles of volatiles stripped} = \frac{(\text{loading rate}) + (\text{purge rate}) [\text{lbmoles/hour}]}{386.7 [\text{ft}^3/\text{lbmole}]}$$

HOURLY EMISSION RATE CALCULATION

$$\text{Lbs/Hr} = \text{Total Vent Flow} [\text{lbmole/Hr}] \times \text{Molecular Weight} \times \text{Vapor Mole Fraction} [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from *Chemical Engineering*, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

7.6 – EU322-01 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where P_i = (Vapor Pressure of pure component [P_{vapi}])
 * (Mole Fraction of the component in the liquid phase [X_i])

$$P_i = P_{vapi} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where Y_i = Partial Pressure Vapor/ Total System Pressure

$$Y_i = P_i \div P_t$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_1}{P_T} = \frac{n_1}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. This item—Item No. 1—is located in the CONFIDENTIAL section of this permit file.
2. Determine the emissions resulting from three separate sets of operations:
 - a) start up/ shut down (i.e. purging with N₂, flushing, and tank feeding)
 - b) normal operations (i.e. steady state)
 - c) periodic tank level changes
3. Basic set of equations:
 - a) determine the moles/hour and mole fractions for the inert compounds
 - b) use Raoult's Law to determine partial pressures of inert compounds
 - c) determine total moles of active ingredients/compounds—thereby determining the lbs/hour before-control-emissions
 - d) determine the lbs/hour after-the-condenser emissions—method for determining amount of material controlled in the condenser:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction(a)} * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef(a)} + [\text{Liq/Vap Distrib}])$$

*where individual Distribution Coef(a) =
 lb moles / {[actual condenser pressure + 14.7]/ 14.7} * 760}*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} * \text{liquid mole fraction (X}_{wa}) * \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

Moles of vapor =

$$([\text{lb of component (a) in the feed/ Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed/ Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed/ Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed/ Mol. Wt. of comp. (d)}]) / [\text{Liq/Vap Distrib}]$$

and

$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$
--

- e) determine the lbs/hour after-the-scrubber emissions

Assume a scrubber removal efficiency of 97% for the various chlorosilanes, but take no removal credit for the other compounds (i.e. xylene and acetylene).

- f) determine the tons/year after-control-emissions

Multiply the lbs/hour values by the appropriate hours of operation per year and tanks filled per year, etc. to determine the annual emissions.

7.7 – EU322-03 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3\text{)}]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.8 - EU322-04 - Vent Calculations For VOC's and chlorosilanes

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$P_v = V_p(i) \times Y(ii)$

Determine the Mole Fraction of the Gas $[X(i)]$

where $X(i) = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
 SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)] \times \text{Vent Reduction Equipment Efficiency (VREE)}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

7.9 - EU322-11 - Vent Calculations

Assumption: Gases are ideal and obey Raoult's and Dalton's law.

Dalton's Law of partial pressures:

$$P_1 + P_2 + P_3 + \dots = P_T$$

Where P_1 = partial pressure of component 1 in the vapor phase
 P_T = total pressure

Raoult's Law:

Determine Partial Pressure, P_i

where $P_i = (\text{Vapor Pressure of pure component } [P_{\text{vapi}}])$
 * (Mole Fraction of the component in the liquid phase $[X_i]$)

$$P_i = P_{\text{vapi}} * X_i$$

Determine the Mole Fraction of the Gas, Y_i

where $Y_i = \text{Partial Pressure Vapor} / \text{Total System Pressure}$

$$Y_i = P_i \div P_t$$

Combining Dalton's and Raoult's Laws:

$$\frac{P_1}{P_T} = \frac{n_1}{n_T}$$

The above listed equations shall be used in the following manner for determining emission rates:

1. Recognize that this ("MeVi") process is a batch operation.
2. Basic set of equations:
 - a) determine the moles
 - b) determine the pounds emitted per batch of material produced

- c) determine the lbs/hour (based on the worst-case highest instantaneous rate) flow to the condenser
- d) determine the flow from vent condenser (to atmosphere) by using the following condensation calculations:

In addition to using Raoult's and Dalton's Laws, it is necessary to determine the "liquid/vapor distribution" coefficient and also the "individual mole fraction in the liquid phase" coefficient

The liquid/vapor distribution coefficient is determined through iteration of the following equations:

$$X_{wa} + X_{wb} + X_{wc} + X_{wd} = 1$$

where X_w = individual mole fraction in liquid phase

or more specifically,

$$X_{wa} = \text{liquid mole fraction(a)} * ([\text{Liq/Vap Distrib}] + 1) * (\text{individual Distribution Coef(a)} + [\text{Liq/Vap Distrib}])$$

*where individual Distribution Coef(a) = lb moles / {[(actual condenser pressure + 14.7) / 14.7] * 760}*

The amount of material condensed into the liquid phase can then be calculated, followed by the amount of uncondensed vapor:

$$\text{Lbs of liquid condensed for component (a)} = \text{total moles of liquid} * \text{liquid mole fraction } (X_{wa}) * \text{Mol. Wt. of component (a)}$$

$$\text{Lbs of uncondensed vapor of component (a)} = [\text{lbs of component (a) in feed}] - [\text{lbs of liquid (a) condensed}]$$

Note the following relationship between the total number of moles of vapor in the system, the total number of moles of liquid, and the "Liquid/Vapor Distribution" coefficient:

$$\text{Moles of vapor} = ([\text{lb of component (a) in the feed} / \text{Mol. Wt. of comp. (a)}] + [\text{lb of component (b) in the feed} / \text{Mol. Wt. of comp. (b)}] + [\text{lb of component (c) in the feed} / \text{Mol. Wt. of comp. (c)}] + [\text{lb of component (d) in the feed} / \text{Mol. Wt. of comp. (d)}]) / [\text{Liq/Vap Distrib}]$$

and

$$\text{moles of liquid} = [\text{Liq/Vap Distrib}] * \text{mol vapor}$$

- e) multiply the lbs/batch values by the number of batches (produced) per year

7.10 - EU340-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACHF (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

7.11 - EU601-01 - Vent Calculations

For VOC's and all chlorosilanes:

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$P_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = P_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;
SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

For HCl:

$$PV = nRT$$

Where V = sum of the volumes of each piece of associated process equipment that feeds into the scrubber.

7.12 - EU604-08 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [$V_p(i)$] of pure component x Mole Fraction of the component in the liquid [$Y(i)$]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [$X(i)$]

where $X(i)$ = Partial Pressure Vapor/ Total System Pressure

$$X(i) = P_v \div P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas } [X(i)]$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

VACUUM LEAK RATE (Lb/Hr), from Chemical Engineering, March 16, 1987 issue, Page 75;

$$\text{LEAK RATE, Lbs/Hr} = 0.08 \times [\text{Volume (ft}^3)]^{0.667}$$

ACFH (actual cubic feet per hour) is calculated at the vent outlet, based on atmospheric pressure and process temperature.

VOLUME VENTED DUE TO SEAL FLUID TRANSFER

$$\text{ft}^3/\text{year} = (\text{gallons / year}) \times (\text{ft}^3 / 7.48 \text{ gallons})$$

$$\text{VAPOR DISPLACED BY SEAL FLUID} = 40.11 \text{ ft}^3/\text{year}$$

VOLUME VENTED DUE TO B/S LEAKAGE AS MEASURED ON FLOW INDICATOR

$$\text{Number of batch still runs} = \text{B/S production} \div 8000 \text{ lbs/batch}$$

$$\text{B/S runs} = 250$$

$$\text{Total vent through FI-2054 for year} = (\text{B/S runs}) \times (\text{lb. vented / batch})$$

$$\text{Total vent} = 4500.0 \text{ lb./year}$$

$$\text{lb/year to ft}^3 = \text{specific volume} \times \text{lb/year}$$

$$\text{specific volume @ 1 psig} = (\text{specific vol. of air lb/ft}^3) (\text{MW air / MW N}_2) (\text{absolute pressure / actual pressure})$$

$$\text{Specific Vol.} = 12.527385 \text{ ft}^3/\text{lb}$$

$$\text{N}_2 \text{ vent ft}^3/\text{year} = \text{Specific Vol.} \times \text{total vent}$$

$$\text{N}_2 \text{ vent} = 56372.8 \text{ ft}^3/\text{year}$$

TOTAL VAPOR DISPLACEMENT

$$\text{ft}^3/\text{year} = \text{total displacement from level N}_2 + \text{displacement from TCP transfer}$$

$$\text{TOTAL VAPOR DISPLACED} = 56413 \text{ ft}^3/\text{year}$$

VENT COMPOSITION DETERMINATION

Mole fraction trimer in vent = vapor pressure of trimer / total pressure

vapor mole fraction trimer = 0.00001

vent mole density = 7883 high pressure [psia] / (10.73 psia • ft³/lbmol • R) / TEMP R

mol density of vent = 0.00252 lbmol/ft³

7.13 - EU800-01 - Vent Calculations

Assumption: Solutions are ideal and obey Raoult's and Dalton's law.

Determine Partial Pressure [P_v]

where P_v = Vapor Pressure [V_p(i)] of pure component x Mole Fraction of the component in the liquid [Y(i)]

$$P_v = V_p(i) \times Y(i)$$

Determine the Mole Fraction of the Gas [X(i)]

where X(i) = Partial Pressure Vapor / Total System Pressure

$$X(i) = P_v / P_t$$

TOTAL VENT FLOW CALCULATION, lbmol/Hr;

SCFH (standard cubic feet per hour) is based on MDEQ standard conditions of 70°F and 1 atmosphere.

$$\text{Lbs/Hr} = \text{Total Vent Flow [lbmol/Hr]} \times \text{Molecular Weight} \times \text{Mole Fraction gas [X(i)]}$$

OR

$$(\text{Lbs of Compound A / hour}) \times (\text{lbmol / MW of Compound A}) \times (1 \text{ Mole Compound A} / 1 \text{ Mole Compound B}) \times (\text{MW of Compound B} / \text{lbmol of Compound B}) = \text{Lbs of Compound B Emitted per Hour}$$

TON/YEAR CALCULATION

$$\text{Ton/Yr} = \text{Lbs/Hr} \times \text{Hr/Batch} \times \text{Batch/Yr} \times \text{Ton/2000 Lbs}$$

OR

$$(\text{Ton Compound A / hour}) \times (\text{lbmol / MW of Compound A}) \times (1 \text{ Mole of Compound A} / 1 \text{ Mole of Compound B}) \times (\text{MW of Compound B} / \text{lbmol of Compound B}) = \text{Tons of Compound B Emitted per Hour}$$

7.14 - FG HAP2012A2A - Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and 40 CFR 52.21(r)(6)(i) for ten years after issuance of Permit to Install No. 91-07C, and shall be provided to the Department for the first year and thereafter made available to the Department upon request.

A. Project Description:

Dow Corning removed the facility wide HAP emission limits, which allows increased emissions of HAPs and criteria pollutants.

B. Applicability Test Description:

The actual to projected actual applicability test was used to demonstrate that PSD does not apply to removal of the HAP emission limits.

C. Emission Projections:

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual	Projected Actual/Potential	Excluded	
FGHAP2012A2A	VOC	147	176	-	NA
FGHAP2012A2A	NOx	50	80	-	NA

Note Dow Corning did not consider any emissions to be excludable for this applicability test.

7.15 - EU502-04- HCl Equivalents and SiO2 Equivalents

HCl Equivalents

"HCl equivalents" refers to a theoretical mass of hydrogen chloride calculated from the chlorine composition of chlorosilane compounds in an exhaust stream, presuming complete hydrolysis of the exhaust stream's chlorosilane compounds. The calculation uses chemical principles to determine the stoichiometric amount of HCl from the chlorosilane compounds in the exhaust stream.

For each chlorosilane compound:

$$\frac{MF_{Cl \text{ compound}}}{MW_{of \text{ MF}}} \times \# \text{ of Cl atoms} \times MW_{HCl} = MF_{HCl}$$

For the entire exhaust stream:

$$Total \text{ } MF_{HCl} = \sum MF_{HCl}$$

Term	Explanation/Definition
MF _{Cl compound}	The mass flow or pound per hour mass emission rate of each chlorosilane compound in the exhaust stream
MW _{of MF}	The molecular weight of the chlorosilane compound
# of Cl _{atoms}	The number of chlorine atoms in the chlorosilane compound
MW _{HCl}	Molecular weight of HCl: 36.5 lbs/lb-mole
MF _{HCl}	The theoretical mass flow (pound per hour) emission rate of HCl equivalents for the chlorosilane compound
Total MF _{HCl}	The total HCl equivalents for the exhaust stream

HCl Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other chlorosilane compounds:

Compound	Exhaust stream flow	Molecular weight	# of Cl atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	3
HCDS	2.0 lb/hr	268.9 lb/lb-mole	6

For TCS:

$$\frac{4.0}{135.5} \times 3 \times 36.5 = 3.15 \frac{lb}{hr} = MF_{HCl}$$

For HCDS:

$$\frac{2.0}{268.5} \times 3 \times 36.5 = 1.58 \frac{lb}{hr} = MF_{HCl}$$

For the entire exhaust stream:

$$Total\ MF_{HCl} = 3.15 + 1.58 = 4.73 \frac{lb}{hr} HCl\ equivalents$$

SiO₂ Equivalents

“SiO₂ equivalents” refers to a theoretical mass of silicon dioxide calculated from the silicon composition of silicon-containing compounds in an exhaust stream, presuming complete oxidation of the exhaust stream’s silicon-containing compounds. The calculation uses chemical principles to determine the stoichiometric amount of SiO₂ from the amount of silicon in the exhaust stream.

For each silicon-containing compound:

$$\frac{MF_{Si\ compound}}{MW_{of\ MF}} \times \#\ of\ Si\ atoms \times MW_{SiO_2} = MF_{SiO_2}$$

For the entire exhaust stream:

$$Total\ MF_{SiO_2} = \sum MF_{SiO_2}$$

Term	Explanation/Definition
MF _{Si compound}	The mass flow or pound per hour mass emission rate of each silicon-containing compound in the exhaust stream
MW _{of MF}	The molecular weight of the silicon-containing compound
# of Si atoms	The number of silicon atoms in the silicon-containing compound
MW _{SiO₂}	The molecular weight of SiO ₂ : 60.08 lbs/lb-mole
MF _{SiO₂}	The theoretical mass flow (pound per hour) loading of SiO ₂ equivalents for the silicon-containing compound
Total MF _{SiO₂}	The total SiO ₂ equivalents for the exhaust stream

SiO₂ Equivalents Example

An exhaust stream contains trichlorosilane (TCS) and hexachlorodisilane (HCDS), with no other silicon-containing compounds:

Compound	Exhaust stream flow	Molecular weight	# of Si atoms
TCS	4.0 lb/hr	135.5 lb/lb-mole	1
HCDS	2.0 lb/hr	268.9 lb/lb-mole	2

For TCS:

$$\frac{4.0}{135.5} \times 1 \times 60.08 = 1.79 \frac{lb}{hr} = MF_{SiO_2}$$

For HCDS:

$$\frac{2.0}{268.5} \times 2 \times 60.08 = 0.90 \frac{lb}{hr} = MF_{SiO_2}$$

For the entire exhaust stream:

$$Total\ MF_{SiO_2} = 1.79 + 0.90 = 2.69 \frac{lb}{hr} SiO_2\ equivalents$$

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, 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.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
Authorized by Michigan Act 451, Public Acts of 1994, as amended, Part 31

CERTIFICATE OF COVERAGE

**Under General Permit No. MIS420000
SW-Containment CY4 General Permit**

CERTIFICATE OF COVERAGE NO.: MIS420040
DESIGNATED NAME: Dow Corning Corp-Midland
PERMITTEE: Dow Corning Corporation
MAILING ADDRESS: 3901 South Saginaw Road
PO Box 0995 Mail #065
Midland, Michigan 48686-0995

This certificate of coverage authorizes Dow Corning Corporation to discharge an unspecified amount of storm water which meets the criteria established in General Permit No. MIS420000. The discharge is from the Dow Corning Corporation, Midland Facility located at 3901 South Saginaw Road, Midland, Michigan 48686-0995. The discharge is to Lingle Drain, in the SW1/4, SW1/4, Section 26, Town 14 N, Range 2 E, Midland County.

This authorization is based on written certification received on October 14, 2013, that the permittee is in compliance with the following requirements of the Storm Water Pollution Prevention Plan and the General Permit:

- Industrial Storm Water Certified Operator requirements
- Source identification requirements
- Non-structural controls
- Structural controls
- Prohibition of unauthorized non-storm water discharges

By September 21, 2015, the permittee shall complete a Short-Term Storm Water Characterization Study (STSWCS) based on the existing, previously approved STSWCS Plan for the permitted facility, and submit to the Department a report, developed in accordance with the requirements of the General Permit and to include all analytical results of the STSWCS; or, if changes have occurred at the facility which could result in the discharge of pollutants different from those identified in the previously approved STSWCS Plan, the permittee shall submit an updated approvable STSWCS Plan developed in accordance with the requirements of the General Permit.

Unless specified otherwise in the General Permit, all contact with the Department, and all Department approvals, shall be directed to or made by the Saginaw Bay District Supervisor of the Water Resources Division. The Saginaw Bay District Office is located at 401 Ketchum Street, Bay City, Michigan 48708, telephone: 989-894-6280, fax: 989-684-9799.

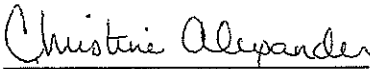
Any person who is aggrieved by this certificate of coverage may file a sworn petition with the Michigan Administrative Hearing System within the Michigan Department of Licensing and Regulatory Affairs, c/o the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.

The issuance of this certificate of coverage does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality (Department) permits, or approvals from other units of government as may be required by law.

This certificate of coverage is based on a complete application received by the Department on October 14, 2013, and is subject to all conditions specified in General Permit No. MIS420000 issued October 1, 2013, expiring April 1, 2019. This certificate of coverage may be modified, terminated, reissued, or revoked as allowed for in General Permit No. MIS420000. On the effective date of this certificate of coverage, this certificate of coverage shall supersede Certificate of Coverage No. MIS410652, issued November 30, 2009, which is hereby revoked.

This COC takes effect on the date of issuance.

March 20, 2015
Date Issued


Christine Alexander, Chief
Lakes Erie & Huron Permits Unit
Permits Section

PERMIT NO. MIS420000



**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTEWATER DISCHARGE GENERAL PERMIT**

**STORM WATER DISCHARGES WITH REQUIRED MONITORING
FOR CYCLE-YEAR 4 WATERSHEDS**

In compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. 1251 *et seq.*, as amended; the "Federal Act"); Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Part 41, Sewerage Systems, of the NREPA; and Michigan Executive Order 2011-1, storm water associated with industrial activity as defined under Title 40 of the Code of Federal Regulations, Sections 122.26(b)(14)(i-ix) and (xi), or as deemed necessary under Section 402(p)(2)(E) of the Federal Act, and other storm water that is adequately regulated by this General Permit, is authorized to be discharged from facilities specified in individual "Certificates of Coverage" (COC) in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this general National Pollutant Discharge Elimination System (NPDES) permit (the "permit").

The applicability of this permit shall be limited to facilities that discharge storm water to surface waters of the state located within a Cycle-Year 4 watershed as determined by the Michigan Department of Environmental Quality (the "Department"). Applicable discharges include storm water from secondary containment structures required by state or federal law, from lands on Michigan's List of Sites of Environmental Contamination pursuant to Part 201, Environmental Remediation, of the NREPA, or from other activities that may contribute pollutants to the storm water for which the Department determines monitoring is needed. This permit does not authorize discharges determined by the Department to need Individual NPDES Permits or different general permits, or that may cause or contribute to a violation of the Water Quality Standards.

In order to constitute a valid authorization to discharge, this permit must be complemented by a COC issued by the Department. The COC will specify which sections of this permit apply at the individual facility.

Unless specified otherwise, all contact with the Department required by this permit shall be to the position indicated in the COC.

This General Permit shall take effect **April 1, 2014**. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules.

This General Permit shall expire at midnight, **April 1, 2019**.

Issued: October 1, 2013

Original Permit Signed by Philip Argiroff
Philip Argiroff, Chief
Permits Section
Water Resources Division

PERMIT FEE REQUIREMENTS

In accordance with Section 324.3118 of the NREPA, the permittee shall make payment of an annual storm water fee to the Department for each January 1 the permit is in effect, regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by March 15 for notices mailed by February 1. The fee is due no later than 45 days after receiving the notice for notices mailed after February 1.

CONTESTED CASE INFORMATION

The terms and conditions of this General Permit shall apply to an individual facility on the effective date of a COC for the facility. Any person who is aggrieved by this permit may file a sworn petition with the Michigan Administrative Hearing System within the Michigan Department of Licensing and Regulatory Affairs, c/o the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.

PART I**Section A. Final Effluent Limitations and Monitoring Requirements****1. Final Effluent Limitations**

During the period beginning on the effective date of this permit and the individual COC and lasting until the expiration of this permit or termination of the individual COC, the permittee is authorized to discharge an unspecified amount of storm water to the surface waters of the State of Michigan from secondary containment structures required by State or Federal law, from lands on Michigan's List of Sites of Environmental Contamination pursuant to Part 201 (Environmental Response) of the NREPA, and from other activities that may contribute pollutants to the storm water for which the Department determines monitoring is needed. Such discharge shall be limited and monitored by the permittee as specified below.

- a. **Narrative Standard**
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge in unnatural quantities, which are or may become injurious to any designated use.
- b. **Visual Assessment of Discharges**
To ensure storm water discharges from the facility do not violate the narrative standard in the receiving waters, storm water discharges shall be evaluated by the Industrial Storm Water Certified Operator. The Industrial Storm Water Certified Operator shall conduct visual assessments of storm water discharges in accordance with Part I.C.2.c.7) of this permit.
- c. **Implementation of Storm Water Pollution Prevention Plan**
The permittee shall implement an acceptable Storm Water Pollution Prevention Plan (SWPPP) as required by Part I.C. of this permit. If storm water will be discharged from secondary containment structures, the SWPPP shall include procedures for ensuring that the discharge does not contribute to the violation of the Water Quality Standards.
- d. **Certified Operator**
The permittee shall have an Industrial Storm Water Certified Operator who has supervision over the facility's storm water treatment and control measures included in the SWPPP.
- e. **Limitations for Discharges from Secondary Containment Structures**

In addition to the requirements set forth in a. through d., above, contained storm water may not be discharged if:

- 1) the storm water contains unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or suspended solids; or
 - 2) the permittee knows, or has reason to believe, the contained storm water is contaminated by or has come in contact with materials stored within the primary containment structure, unless the Department approves the discharge. An operator of a bulk fuel storage facility may discharge storm water that is known to have contacted petroleum products stored within primary containment structures if the contained storm water has been treated to ensure that the limitations in item 1) (above) are met.
- f. **Limitations for Discharges from Areas without Secondary Containment, including Sites of Environmental Contamination and Areas with Other Activities that May Contribute Pollutants to the Storm Water for which the Department Determines Monitoring is Needed**

In addition to the requirements set forth in a. through d. above, storm water may not be discharged if the permittee knows, or has reason to believe, the storm water contains contaminants from the site that may cause a violation of the Water Quality Standards.

PART I**Section A. Final Effluent Limitations and Monitoring Requirements****g. Short-Term Storm Water Characterization Study (STSWCS)**

The permittee shall complete an STSWCS, which is an analysis of the storm water discharges authorized by the COC and this general permit. Permittees seeking reissuance under this permit may complete the STSWCS by following their STSWCS Plan previously approved (written approval or approval as defined in a previous permit) by the Department, in which case the STSWCS shall be submitted to the Department within six (6) months of the effective date of the COC issued under this permit. If, however, changes have occurred at the facility that could result in the discharge of different pollutants than those identified in the previously-approved STSWCS Plan or if the permittee has never submitted an STSWCS Plan, then the permittee shall submit a new STSWCS Plan in accordance with the following:

1) Monitoring Plan Submittal

Within six (6) months after the effective date of a COC issued under this permit, the permittee shall submit to the Department either:

(a) an STSWCS Plan (permittees without an approved STSWCS plan or permittees needing to revise the previously-approved STSWCS Plan), or

(b) an STSWCS (permittees with an approved STSWCS Plan that is still appropriate).

The date for submittal of the STSWCS Plan or STSWCS will be included in the COC. Guidance for the STSWCS Plan is available on the Internet at www.michigan.gov/deqstormwater. In the center of the page, under the 'Information' heading, click on the 'Industrial Program' link, and at the bottom of the page under the 'Storm Water Sampling Info' heading is the Short Term Storm Water Characterization Study Document link. The STSWCS Plan shall include a proposed list of pollutants to be monitored to adequately characterize the discharge. At a minimum, the proposed list of pollutants shall include significant materials that the permittee knows, or has reason to believe, are present in areas that require storm water monitoring (these areas include secondary containment structures and associated storage vessels, Sites of Environmental Contamination, or other activities or areas that may contribute pollutants to the storm water for which the Department determines monitoring is needed). If the permittee has more than one area that requires storm water monitoring, such as a secondary containment structure **and** a Site of Environmental Contamination, then a separate STSWCS Plan shall be submitted for each area. The STSWCS Plan may include a request to monitor a combined discharge from multiple secondary containment structures if the permittee demonstrates in the STSWCS Plan that the monitoring is representative of water from all secondary containment structures. The STSWCS Plan(s) shall describe the monitoring frequency and duration, the total number of sampling events (each discharge is one event), the monitoring and analysis methods to be used, and a date for submittal of the summarized analytical results. Sample collection, handling, and analysis shall be in accordance with Part II.B.2. of this permit. Some desired quantification levels are available in the NPDES Permit Application Appendix at www.michigan.gov/deq, then on the left-hand side click on 'Water,' then 'Surface Water,' and then 'NPDES Permits.' In the center of the page, under the 'Information' heading, click on 'How to Apply for an NPDES permit.' The Permit Application Appendix is under the 'Downloadable Forms' header.

2) Monitoring Secondary Containment Structures or Detention Basins with Detention Periods Greater than 24 Hours

Samples shall be collected from the water within a secondary containment structure or detention basin, or of the discharge prior to mixing with the receiving water or other waste streams. Grab samples shall be taken unless the Department specifies other sampling methods. Pollutant concentrations and estimated total volume of the discharge shall be reported. Sampling shall include visual observations to determine if the storm water contains unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or suspended solids.

PART I

Section A. Final Effluent Limitations and Monitoring Requirements

3) Monitoring Storm Water Runoff from a Site of Environmental Contamination or Other Activity (without Secondary Containment or 24-Hour Detention) that May Contribute Pollutants to the Storm Water for which the Department Determines Monitoring Is Needed

Samples shall be collected from any discharge resulting from a qualifying storm event. A qualifying storm event is defined as a storm event causing greater than 0.1 inch of rainfall and occurring at least 72 hours after the previous measurable storm event that also caused greater than 0.1 inch of rainfall, unless an alternate definition is approved by the Department. At least one grab sample shall be collected during the **first 30 minutes** of the discharge for each qualifying storm event. Additionally, composite samples may be required during the first three (3) hours of a discharge event if deemed necessary by the Department to adequately characterize the pollutants discharged from the site. Composite samples may be flow- or time-weighted. Date and duration of the storm event, the rainfall measurement or estimate, duration between the storm event sampled and the end date of the previous measurable storm event, pollutant concentration(s), visual observations, and estimated total volume of the discharge shall be reported

4) Monitoring Startup

Upon approval of the STSWCS Plan, the permittee shall begin monitoring the authorized discharge as specified in the plan. If the Department does not take action to approve or comment on the monitoring plan within 90 days after submittal, the permittee shall begin storm water monitoring in accordance with the STSWCS Plan submitted. Nothing in this permit shall prevent additional sampling from being conducted beyond that specified in the monitoring plan. The analytical results of all representative discharge samples collected must be reported to the Department.

If, upon review of the analysis, it is determined that any of the materials or constituents require limiting to protect the receiving waters in accordance with applicable Water Quality Standards, the Department may determine that an individual permit is needed for the discharge, in accordance with Part I.D.10. of this permit.

PART I**Section B. Schedules and Certifications****1. Schedules and Certifications for New Storm Water General Permit Applicants**

Applicants requesting first-time authorization to discharge under Part I.A.1. of this permit shall comply with the following requirements prior to submittal of a Notice of Intent (NOI) or other Department-approved application to be covered under this permit.

a. Schedule

A first-time applicant will not receive a COC issued under this permit unless the NOI or application is accompanied by certification of compliance with the Industrial Storm Water Certified Operator and SWPPP requirements of this permit as follows:

1) Certified Operator

The applicant shall have an operator certified by the Department, as required by Section 3110 of the NREPA. The operator shall be certified as an Industrial Storm Water Certified Operator and shall have supervision over the facility's storm water treatment and control measures included in the SWPPP.

2) SWPPP

The applicant's SWPPP shall be developed in accordance with Part I.C. and ready for implementation prior to submittal of an NOI or other application to be covered under this permit. The SWPPP shall be reviewed and signed by the Industrial Storm Water Certified Operator and the permittee. Applicants shall be fully ready to carry out the activities specified in their SWPPP and comply with this permit in order to be issued a COC. New facilities shall have a COC issued under this permit prior to commencement of discharge of storm water.

b. Certification

If the permittee submits an application other than an NOI for this permit, the permittee shall also submit a written certification that the facility is in compliance with the requirements identified in Parts I.B.1.b.1) through I.B.1.b.5) of this permit. The certification shall be a written statement that the SWPPP has been completed and is being implemented. It is not necessary to submit the SWPPP to the Department unless requested. New facilities shall fulfill the requirements of Parts I.B.1.b.3) and I.B.1.b.4) when industrial activity begins.

1) The facility has an Industrial Storm Water Certified Operator as required in Part I.B.1.a.1) of this permit. The name and certification number of the Industrial Storm Water Certified Operator shall be included in the written certification. If the Industrial Storm Water Certified Operator's number is not available at the time the written certification is submitted, the permittee shall provide the date the individual took the certification exam, the location of the Department's office where the exam was taken, and the signature of the person who took the exam.

2) The source identification requirements of the SWPPP are completed and identified in the SWPPP (see Part I.C.1.).

3) Nonstructural preventive measures and source controls are being implemented (see Part I.C.2.).

4) The structural controls for prevention and treatment (see Part I.C.3.), if needed, are installed and operational. The permittee shall indicate, in writing, if a determination is made that no structural controls are necessary.

5) Non-storm water discharges are eliminated or authorized by an NPDES permit (see Part I.D.3.).

PART I**Section B. Schedules and Certifications****2. Schedules and Certifications for Storm Water Dischargers with Previous Permit Requirements for a SWPPP**

A permittee who has been authorized to discharge storm water under a permit other than this permit, which required a SWPPP, and who submits an NOI or other application for authorization to discharge under this permit shall comply with the following:

- a. **Schedule**
Continue development and implementation of the SWPPP in accordance with the schedule established under the individual permit, or general permit and COC, held previous to this permit. That schedule shall be enforceable under this permit.
- b. **Certification**
 - 1) If the permittee submits an application other than an NOI for this permit, the permittee shall also submit a written certification that the facility is in compliance with its current Storm Water General Permit and COC or the SWPPP requirements of its individual permit. The certification shall be a written statement that the SWPPP has been completed and is being implemented. The written certification shall include the name and certification number of the Industrial Storm Water Certified Operator. It is not necessary to submit the SWPPP to the Department unless requested to do so.
 - 2) The applicant shall have an operator certified by the Department as required by Section 3110 of the NREPA. The operator shall be certified as an Industrial Storm Water Certified Operator and shall have supervision over the facility's storm water treatment and control measures included in the SWPPP.

PART I**Section C. Storm Water Pollution Prevention Plan****1. Source Identification**

To identify potential sources of significant materials that can pollute storm water and subsequently be discharged from the facility, the SWPPP shall, at a minimum, include the following items:

- a. A site map identifying:
 - 1) buildings and other permanent structures;
 - 2) storage or disposal areas for significant materials;
 - 3) secondary containment structures and descriptions of the significant materials contained within the primary containment structures;
 - 4) storm water discharge points (which include outfalls and points of discharge), numbered or otherwise labeled for reference;
 - 5) location of storm water and non-storm water inlets (numbered or otherwise labeled for reference) contributing to each discharge point;
 - 6) location of NPDES-permitted discharges other than storm water;
 - 7) outlines of the drainage areas contributing to each discharge point;
 - 8) structural runoff controls or storm water treatment facilities;
 - 9) areas of vegetation (with brief descriptions, such as lawn, old field, marsh, wooded, etc.);
 - 10) areas of exposed and/or erodible soils and gravel lots;
 - 11) impervious surfaces (e.g., roofs, asphalt, concrete, etc.);
 - 12) name and location of receiving water(s); and
 - 13) areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the NREPA.
- b. A list of all significant materials that could pollute storm water. For each material listed, the SWPPP shall include each of the following descriptions:
 - 1) the ways in which each type of significant material has been, or has reasonable potential to become, exposed to storm water (e.g., spillage during handling; leaks from pipes, pumps, and vessels; contact with storage piles, contaminated materials, or soils; waste handling and disposal; deposits from dust or overspray; etc.);
 - 2) identification of the discharge point(s) and the inlet(s) contributing the significant material to each discharge point through which the significant material may be discharged if released; and
 - 3) an evaluation of the reasonable potential for contribution of significant materials to runoff from at least the following areas or activities:

PART I**Section C. Storm Water Pollution Prevention Plan**

- a) loading, unloading, and other significant material-handling operations;
 - b) outdoor storage, including secondary containment structures;
 - c) outdoor manufacturing or processing activities;
 - d) significant dust- or particulate-generating processes;
 - e) discharge from vents, stacks, and air emission controls;
 - f) on-site waste disposal practices;
 - g) maintenance and cleaning of vehicles, machines, and equipment;
 - h) areas of exposed and/or erodible soils;
 - i) Sites of Environmental Contamination listed under Part 201 (Environmental Response) of the NREPA;
 - j) areas of significant material residues;
 - k) areas where animals (wild or domestic) congregate and deposit wastes; and
 - l) other areas where storm water may come into contact with significant materials.
- c. A listing of significant spills and significant leaks of polluting materials that occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the facility. The listing shall include spills that occurred over the three (3) years prior to the effective date of a COC authorizing discharge under this permit. The listing shall include the date, volume, and exact location of the release, and the action taken to clean up the material and/or prevent exposure to storm water runoff or contamination of surface waters of the state. Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss.
- d. The permittee shall determine whether its facility discharges storm water to a water body for which the Department has established a Total Maximum Daily Load (TMDL). If so, the permittee shall assess whether the TMDL requirements for the facility's discharge are being met through the existing SWPPP controls or whether additional control measures are necessary. The permittee's assessment of whether the TMDL requirements are being met shall focus on the effectiveness, adequacy, and implementation of the permittee's SWPPP controls. The applicable TMDLs will be identified in the COC issued under this permit.
- e. A summary of existing storm water discharge sampling data (if available), describing pollutants in storm water discharges at the facility. This summary shall be accompanied by a description of the suspected source(s) of the pollutants detected.

PART I**Section C. Storm Water Pollution Prevention Plan****2. Preventive Measures and Source Controls, Nonstructural**

To prevent significant materials from contacting storm water at the source, the SWPPP shall, at a minimum, include each of the following nonstructural controls:

- a. A program which includes a schedule for routine preventive maintenance. The preventive maintenance program shall consist of routine inspections and maintenance of storm water management and control devices (e.g., cleaning of oil/water separators and catch basins, routine housekeeping activities, etc.), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to the storm sewer system or the surface waters of the state. The routine inspection shall include areas of the facility in which significant materials have the reasonable potential to contaminate runoff. A written report of the inspection and corrective actions shall be retained in accordance with Part I.D.1.
- b. A description of good housekeeping procedures to maintain a clean, orderly facility. Good housekeeping procedures shall include routine inspections that focus on the areas of the facility that have a reasonable potential to contaminate storm water runoff from the property. The routine housekeeping inspections may be combined with the routine inspections for the preventive maintenance program. A written report of the inspection and corrective actions shall be retained in accordance with Part I.D.1.
- c. A description of and schedule for **quarterly** comprehensive site inspections to be conducted by the Industrial Storm Water Certified Operator. At a minimum, one inspection shall be performed within each of the following quarters: January-March, April-June, July-September, and October-December. The comprehensive site inspections shall include, but not be limited to, inspection of structural controls in use at the facility, and the areas and equipment identified in the preventive maintenance program and good housekeeping procedures. These inspections shall also include a review of the routine preventive maintenance reports, good housekeeping inspection reports, and any other paperwork associated with the SWPPP. The permittee may request Department approval of an alternate schedule for comprehensive site inspections. A written report of the inspection and corrective actions shall be retained in accordance with Part I.D.1., and the following shall be included on the comprehensive inspection form/report:
 - 1) Date of the inspection.
 - 2) Name(s), title(s), and certification number(s) of the personnel conducting the inspection.
 - 3) Precipitation information (i.e., a description of recent rainfall/snow melt events).
 - 4) All observations relating to the implementation of control measures. Items to include if applicable:
 - a) updates on corrective actions implemented due to previously identified pollutant and/or discharge issues;
 - b) any evidence of, or the potential for, pollutants to discharge to the drainage system or receiving waters and the condition of and around the outfall including flow dissipation measures needing maintenance or repairs;
 - c) any control measures needing maintenance or repairs; and

PART I**Section C. Storm Water Pollution Prevention Plan**

- d) any additional control measures needed to comply with permit requirements.
- 5) Any required revisions to the SWPPP resulting from the inspection.
- 6) A certification stating the facility is in compliance with this permit and the SWPPP, or, if there are instances of noncompliance, they are identified.
- 7) A description of procedures for a **quarterly** visual assessment of storm water discharges from each discharge point identified under Part I.C.1.a.4). At a minimum, one inspection shall be performed within each of the following quarters: January-March, April-June, July-September, and October-December. These assessments shall be conducted by the Industrial Storm Water Certified Operator as part of the comprehensive site inspection and shall be conducted within one month of control measure observations (see Part I.C.2.c.4)). If the Department has approved an alternate schedule for the comprehensive site inspection, the visual assessment may likewise be performed according to the same approved alternate schedule.

The following are the requirements of the visual assessment:

- a) A representative storm water sample shall be collected from each discharge point. Samples shall be:
 - (1) collected in a clean, clear glass or plastic container;
 - (2) collected within the first 30 minutes of the start of a discharge from a storm event and on discharges that occur at least 72 hours (3 days) from the previous discharge. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample shall be collected as soon thereafter as practicable but not exceeding 60 minutes. In the case of snowmelt, samples shall be collected during a period with measurable discharge from the site; and
 - (3) examined in a well-lit area and visually inspected for conditions which could cause a violation of the narrative water quality standards as defined in Parts I.A.1.a. of this permit;
- b) Visual assessments shall be documented. This documentation shall be retained in accordance with Part I.D.1. of the permit and shall include the following:
 - (1) sampling location(s) at the discharge point(s) identified on the site map (Part I.C.1.a.4));
 - (2) storm event information (i.e., length of event expressed in hours, approximate size of event expressed in inches of precipitation, duration of time since previous event that caused a discharge, and date and time the discharge began);
 - (3) sample collection date and time, and visual assessment date and time for each sample;
 - (4) name(s), title(s), and Industrial Storm Water Certified Operator number(s) of the personnel collecting the sample and performing the visual assessment;
 - (5) nature of the discharge (i.e., rain runoff or snowmelt);
 - (6) observations made of the storm water discharge;
 - (7) probable sources of any observed storm water contamination;
 - (8) if applicable, an explanation for why it was not possible to take samples within the first 30 minutes of discharge; and
 - (9) photographic evidence of the sample against a white background, to be maintained along with the written report.

PART I**Section C. Storm Water Pollution Prevention Plan**

- c) When adverse weather conditions prevent the collection of samples during the quarter, a substitute sample shall be taken during the next qualifying storm event. Documentation of the rationale for no visual assessment during a quarter shall be included with the SWPPP records as described in Part I.D.1. Adverse conditions are those that are dangerous or create inaccessibility for personnel such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical such as drought or extended frozen conditions.
 - d) If the facility has two or more discharge points that are believed to discharge substantially identical storm water effluents, the facility may conduct visual assessments of the discharge at just one of the discharge points and report that the results also apply to the other substantially identical discharge point(s). The determination of substantially identical discharge points is to be based on the significant material evaluation conducted under Part I.C.1.b. of this permit and shall be clearly documented in the SWPPP. Visual assessments shall be performed on a rotating basis of each substantially identical discharge point throughout the period of coverage under this permit.
 - e) Procedures for conducting the visual assessment shall be developed within 6 months of issuance/reissuance of the COC, and incorporated into the SWPPP. The first visual assessment shall be conducted in conjunction with the next occurring comprehensive inspection.
- d. A description of material handling procedures and storage requirements for significant materials. Equipment and procedures for cleaning up spills shall be identified in the SWPPP and made available to the appropriate personnel. The procedures shall identify measures to prevent spilled materials or material residues from contaminating storm water runoff from the property. The SWPPP shall include language describing what a reportable spill or release is and the appropriate reporting requirements in accordance with Part II.C.6. and Part II.C.7. The SWPPP may include, by reference, requirements of either a Pollution Incident Prevention Plan (PIPP) prepared in accordance with the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code); a Hazardous Waste Contingency Plan prepared in accordance with 40 CFR 264 and 265 Subpart D, as required by Part 111 of the NREPA; or a Spill Prevention Control and Countermeasure (SPCC) plan prepared in accordance with 40 CFR 112.
- e. Identification of areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. Gravel lots are areas to be included. The SWPPP shall also identify measures used to control soil erosion and sedimentation.
- f. A description of the employee training program that will be implemented on an annual basis to inform appropriate personnel at all levels of their responsibility as it relates to the components and goals of the SWPPP. The SWPPP shall identify periodic dates for the employee training program. Records of the employee training program shall be retained in accordance with Part I.D.1.
- g. Identification of actions to limit the discharge of significant materials in order to comply with TMDL requirements.
- h. Identification of significant materials expected to be present in storm water discharges following implementation of nonstructural preventive measures and source controls.

PART I**Section C. Storm Water Pollution Prevention Plan****3. Structural Controls for Prevention and Treatment**

Where implementation of the measures required by Part I.C.2. does not control storm water discharges in accordance with Part I.D.2., the SWPPP shall provide a description of the location, function, design criteria, and installation/construction schedule of structural controls for prevention and treatment. Structural controls may be necessary:

- a. to prevent uncontaminated storm water from contacting, or being contacted by, significant materials; or
- b. if preventive measures are not feasible or are inadequate to keep significant materials at the site from contaminating storm water. Structural controls shall be used to treat, divert, isolate, recycle, reuse, or otherwise manage storm water in a manner that reduces the level of significant materials in the storm water and provides compliance with the Water Quality Standards as identified in Part I.D.2.

4. Keeping SWPPPs Current

- a. The permittee and/or the Industrial Storm Water Certified Operator shall review the SWPPP annually after it is developed and maintain a written report of the review in accordance with Part I.D.1. Based on the review, the permittee or the Industrial Storm Water Certified Operator shall amend the SWPPP as needed to ensure continued compliance with the terms and conditions of this permit. The written report shall be submitted to the Department on or before January 10th of each year.
- b. The SWPPP developed under the conditions of a previous permit shall be amended as necessary to ensure compliance with this permit.
- c. The SWPPP shall be updated or amended whenever changes at the facility have the potential to increase the exposure of significant materials to storm water, significant spills occur at the facility, or when the SWPPP is determined by the permittee or the Department to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Updates based on increased activity or spills at the facility shall include a description of how the permittee intends to control any new sources of significant materials, or respond to and prevent spills in accordance with the requirements of Parts I.C.1., I.C.2., and I.C.3. of this permit.
- d. The Department or authorized representative may notify the permittee at any time that the SWPPP does not meet minimum requirements. Such notification shall identify why the SWPPP does not meet minimum requirements. The permittee shall make the required changes to the SWPPP within 30 days after such notification from the Department or authorized representative and shall submit to the Department a written certification that the requested changes have been made.
- e. Amendments shall be signed and retained with the SWPPP on-site pursuant to Part I.C.6.

5. Industrial Storm Water Certified Operator Update

If the Industrial Storm Water Certified Operator is changed or an Industrial Storm Water Certified Operator is added, the permittee shall provide the name and certification number of the new Industrial Storm Water Certified Operator to the Department. If a facility has multiple Industrial Storm Water Certified Operators, the names and certification numbers of all shall be included in the SWPPP.

PART I**Section C. Storm Water Pollution Prevention Plan****6. Signature and SWPPP Review**

- a. The SWPPP shall be reviewed and signed by the Industrial Storm Water Certified Operator(s) and either the permittee or an authorized representative in accordance with 40 CFR 122.22. The SWPPP and associated records shall be retained on-site at the facility that generates the storm water discharge.
- b. The permittee shall make the SWPPP, reports, log books, storm water discharge sampling data (if collected), and items required by Part I.D.1. available upon request to the Department or authorized representative. The Department may make the non-confidential business information-portions of the SWPPP available to the public.

PART I**Section D. Special Conditions****1. Record Keeping**

The permittee shall maintain records of all SWPPP-related inspection and maintenance activities. Records shall also be kept describing incidents such as spills or other discharges that can affect the quality of storm water runoff. All such records shall be retained for three years. The following records are required by this permit:

- a. Routine preventive maintenance inspection reports (Part I.C.2.a.)
- b. Routine good housekeeping inspection reports (Part I.C.2.b.)
- c. Comprehensive site inspection reports (Part I.C.2.c.)
- d. Visual assessment of storm water documentation (Part I.C.2.c.7))
- e. Employee training records (Part I.C.2.f.), and
- f. Written summaries of the annual SWPPP review (Part I.C.4.a.).

2. Water Quality Standards

At the time of discharge, there shall be no violation of the Water Quality Standards in the receiving waters as a result of the storm water discharge. This requirement includes, but is not limited to, the following conditions:

- a. In accordance with Rule 323.1050 of the Water Quality Standards, the receiving waters shall not have any of the following unnatural physical properties as a result of this discharge in quantities which are, or may become, injurious to any designated use: turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits.
- b. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department, followed by a written report within five days detailing the findings of the investigation and the steps taken to correct the condition.
- c. Any pollutant for which a level of control is specified to meet a TMDL established by the Department shall be controlled at the facility so that its discharge is reduced by/to the amount specified in the TMDL.

3. Prohibition of Non-Storm Water Discharges

Discharges of material other than storm water shall be in compliance with an NPDES permit (other than this permit) issued for the discharge. Storm water shall be defined to include all of the following non-storm water discharges, provided pollution prevention controls for the non-storm water component are identified in the SWPPP:

- a. discharges from fire hydrant flushing;
- b. potable water sources, including water line flushing;
- c. water from fire system testing and fire fighting training without burned materials or chemical fire suppressants;
- d. irrigation drainage;
- e. lawn watering;

PART I

Section D. Special Conditions

- f. routine building wash-down that does not use detergents or other compounds;
- g. pavement wash waters where contamination by toxic or hazardous materials has not occurred (unless all contamination by toxic or hazardous materials has been removed) and where detergents are not used;
- h. uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- i. springs;
- j. uncontaminated ground water;
- k. foundation or footing drains where flows are not contaminated with process materials such as solvents; and
- l. discharges from fire-fighting activities. Discharges from fire-fighting activities are exempted from the requirement to be identified in the SWPPP.

4. Request for Discharge of Water Treatment Additives

In the event a permittee proposes to discharge water additives, the permittee shall submit a request to discharge water additives to the Department for approval. Such requests shall be sent to the Permits Section, Water Resources Division, Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan 48909, with a copy to the Department contact listed on the cover page of this permit. Instructions to submit a request electronically may be obtained via the Internet (<http://www.michigan.gov/deqnpdes>; then click on Applicable Rules and Regulations, which is under the Information banner and then click on Water Treatment Additive Discharge Application Instructions). Written approval from the Department to discharge such additives at specified levels shall be obtained prior to discharge by the permittee. Additional monitoring and reporting may be required as a condition for the approval to discharge the additive.

A request to discharge water additives shall include all of the following water additive usage and discharge information:

- a. Material Safety Data Sheet;
- b. the proposed water additive discharge concentration with supporting calculations;
- c. the discharge frequency (i.e., number of hours per day and number of days per year);
- d. the monitoring point from which the product is to be discharged;
- e. the type of removal treatment, if any, that the water additive receives prior to discharge;
- f. product function (i.e. microbiocide, flocculant, etc.);
- g. a 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either *Ceriodaphnia* sp., *Daphnia* sp., or *Simocephalus* sp.); and
- h. the results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2) of the Water Quality Standards.

Prior to submitting the request, the permittee may contact the Permits Section by telephone at 517-284-5568 or via the Internet at the address given above to determine if the Department has the product toxicity data required by items g. and h. above. If the Department has the data, the permittee will not need to submit product toxicity data.

PART I**Section D. Special Conditions****5. Tracer Dye Discharges**

This permit does not authorize the discharge of tracer dyes without approval from the Department. Requests to discharge tracer dyes shall be submitted to the Department in accordance with Rule 1097 (Rule 323.1097 of the Michigan Administrative Code).

6. Facility Contact

The "Facility Contact" was specified in the application. The permittee may replace the facility contact at any time, and shall notify the Department in writing within 10 days after replacement (including the name, address, and telephone number of the new facility contact).

- a. The facility contact shall be (or a duly authorized representative of this person):
 - for a corporation, a principal executive officer of at least the level of vice president, or a designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the permit application or other NPDES form originates;
 - for a partnership, a general partner;
 - for a sole proprietorship, the proprietor; or
 - for a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager, or other duly authorized employee.
- b. A person is a duly authorized representative only if:
 - the authorization is made in writing to the Department by a person described in paragraph a. of this section; and
 - the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.

7. Portable Industrial Facilities

- a. Storm water discharges from satellite locations of a portable industrial facility may be authorized by obtaining a COC issued under this permit. To obtain a COC, an NOI or other Department-approved application shall be submitted to the Department for a primary mailing address of the owner or operator of the portable facility. Following receipt of a COC, if the portable facility is to be moved to a satellite location, the permittee shall notify the Department of the relocation, in writing, at least 10 days prior to start-up at the satellite location. Written notification shall include the location (township, range, section, and quarter-quarter section) of the current and proposed sites for the portable facility, the receiving water for the discharge, and the anticipated date of the move. Failure to notify the Department concerning the satellite location is a permit violation.
- b. The permittee shall submit an NOI or other Department-approved application for each portable facility that could be moved to a satellite location. A SWPPP shall be in place for each facility at the time of start-up and shall be modified for each new location as necessary.

PART I**Section D. Special Conditions****8. Expiration and Reissuance**

On or before October 1, 2018, a permittee seeking continued authorization to discharge under this permit beyond the permit's expiration date shall submit to the Department a written request containing such information, forms, and fees as required by the Department. Without an adequate request, a permittee's authorization to discharge will expire on April 1, 2019. With an adequate request, a permittee shall continue to be subject to the terms and conditions of the expired permit until the Department takes action on the request, unless this permit is terminated or revoked.

If this permit is terminated or revoked, all authorizations to discharge under the permit shall expire on the date of termination or revocation.

If this permit is modified, the Department will notify the permittee of any required action. Without an adequate response, a permittee's authorization to discharge will terminate on the effective date of the modified permit. With an adequate response, a permittee shall be subject to the terms and conditions of the modified permit on the effective date of the modified permit unless the Department notifies the permittee otherwise.

If a discharge is terminated, the permittee shall request termination of discharge authorization.

9. Termination of General Permit Coverage

A permittee may submit a request to the Department to terminate the COC for a facility when:

- a. all storm water discharges authorized by Part I.A.1. are eliminated, or
- b. industrial activity has ceased, and no significant materials remain or are exposed to storm water.

10. Requirement to Obtain Individual Permit

The Department may require any person who is authorized to discharge by a COC and this permit to apply for and obtain an Individual NPDES Permit if any of the following circumstances apply:

- a. the discharge is a significant contributor to pollution as determined by the Department on a case-by-case basis;
- b. the discharger is not complying, or has not complied, with the conditions of the permit;
- c. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of waste applicable to the point source discharge;
- d. effluent standards and limitations are promulgated for point source discharges subject to this permit; or
- e. the Department determines that the criteria under which the permit was issued no longer apply.

Any person may request the Department to take action pursuant to the provisions of Rule 2191 (Rule 323.2191 of the Michigan Administrative Code).

PART II

Section A. Definitions

Part II may include terms and /or conditions not applicable to discharges covered under this permit.

Section A. Definitions

Acute toxic unit (TU_A) means $100/LC_{50}$ where the LC_{50} is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.

Bioaccumulative chemical of concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in Table 5 of R 323.1057 of the Water Quality Standards.

Biosolids are the solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

Bulk biosolids means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

Certificate of Coverage (COC) is a document, issued by the Department, which authorizes a discharge under a general permit.

Chronic toxic unit (TU_C) means $100/MATC$ or $100/IC_{25}$, where the maximum acceptable toxicant concentration (MATC) and IC_{25} are expressed as a percent effluent in the test medium.

Class B biosolids refers to material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with the Part 24 Rules. Processes include aerobic digestion, composting, anaerobic digestion, lime stabilization and air drying.

Combined sewer system is a sewer system in which storm water runoff is combined with sanitary wastes.

Daily concentration is the sum of the concentrations of the individual samples of a parameter divided by the number of samples taken during any calendar day. If the parameter concentration in any sample is less than the quantification limit, regard that value as zero when calculating the daily concentration. The daily concentration will be used to determine compliance with any maximum and minimum daily concentration limitations (except for pH and dissolved oxygen). When required by the permit, report the maximum calculated daily concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the Discharge Monitoring Reports (DMRs).

For pH, report the maximum value of any individual sample taken during the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs and the minimum value of any individual sample taken during the month in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. For dissolved oxygen, report the minimum concentration of any individual sample in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

PART II

Section A. Definitions

Daily loading is the total discharge by weight of a parameter discharged during any calendar day. This value is calculated by multiplying the daily concentration by the total daily flow and by the appropriate conversion factor. The daily loading will be used to determine compliance with any maximum daily loading limitations. When required by the permit, report the maximum calculated daily loading for the month in the "MAXIMUM" column under "QUANTITY OR LOADING" on the DMRs.

Daily monitoring frequency refers to a 24-hour day. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

Department means the Michigan Department of Environmental Quality.

Detection level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

Discharge event is a discrete occurrence during which effluent is discharged to the surface water up to 10 days of a consecutive 14 day period.

Discharge point is the location where the point source discharge is directed to surface waters of the state or to a separate storm sewer. It includes the location of all point source discharges where storm water exits the facility, including outfalls which discharge directly to surface waters of the state and points of discharge which discharge directly into separate storm sewer systems.

EC₅₀ means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

Fecal coliform bacteria monthly is the geometric mean of the samples collected during a discharge event. Days with no discharge shall not be used to determine the value. The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMR. If the period in which the discharge event occurred was partially in each of two months, the monthly value shall be reported on the DMR of the month in which the last day of discharge occurred.

Fecal coliform bacteria 7-day is the geometric mean of the samples collected in any 7-day period during a discharge event. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the maximum calculated 7-day concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. If the seven day period was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

Flow proportioned sample is a composite sample with the sample volume proportional to the effluent flow.

Geometric mean is the average of the logarithmic values of a base 10 data set, converted back to a base 10 number.

Grab sample is a single sample taken at neither a set time nor flow.

IC₂₅ means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.

Individual permit means a site-specific NPDES permit.

Inlet means a catch basin, roof drain, conduit, drain tile, retention pond riser pipe, sump pump, or other point where storm water or wastewater enters into a closed conveyance system prior to discharge off site or into waters of the state.

PART II

Section A. Definitions

Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: 1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and 2) therefore, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference.]

Land application means spraying or spreading biosolids or a biosolids derivative onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids or biosolids derivative can either condition the soil or fertilize crops or vegetation grown in the soil.

LC₅₀ means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

Maximum acceptable toxicant concentration (MATC) means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

MGD means million gallons per day.

Monthly concentration is the sum of the daily concentrations determined during a discharge event divided by the number of daily concentrations determined. The calculated monthly concentration will be used to determine compliance with any maximum monthly concentration limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly concentration in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMR. If the seven day period was partially in each of two months, the monthly average shall be reported on the DMR of the month in which the last day of discharge occurred.

For minimum percent removal requirements, the monthly influent concentration and the monthly effluent concentration shall be determined. The calculated monthly percent removal, which is equal to 100 times the quantity [1 minus the quantity (monthly effluent concentration divided by the monthly influent concentration)], shall be reported in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

Monthly loading is the sum of the daily loadings of a parameter divided by the number of daily loadings determined during a discharge event. The calculated monthly loading will be used to determine compliance with any maximum monthly loading limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly loading in the "AVERAGE" column under "QUANTITY OR LOADING" on the DMR. If the seven day period was partially in each of two months, the monthly average shall be reported on the DMR of the month in which the last day of discharge occurred..

Monthly monitoring frequency refers to a calendar month. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

National Pretreatment Standards are the regulations promulgated by or to be promulgated by the Federal Environmental Protection Agency pursuant to Section 307(b) and (c) of the Federal Act. The standards establish nationwide limits for specific industrial categories for discharge to a POTW.

No observed adverse effect level (NOAEL) means the highest tested dose or concentration of a substance which results in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

PART II

Section A. Definitions

Noncontact cooling water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

Nondomestic user is any discharger to a POTW that discharges wastes other than or in addition to water-carried wastes from toilet, kitchen, laundry, bathing or other facilities used for household purposes.

Outfall is the location of a point source discharge where storm water or treated wastewater is discharged directly to the surface waters of the state.

Partially treated sewage is any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is treated to a level less than that required by the permittee's National Pollutant Discharge Elimination System permit, or that is not treated to national secondary treatment standards for wastewater, including discharges to surface waters from retention treatment facilities.

Point of discharge is the location of a point source discharge where storm water is discharged directly into a separate storm sewer system.

Point source discharge means a discharge from any discernible, confined, discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, or rolling stock. Changing the surface of land or establishing grading patterns on land will result in a point source discharge where the runoff from the site is ultimately discharged to waters of the state.

Polluting material means any material, in solid or liquid form, identified as a polluting material under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code).

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

POTW is a publicly owned treatment works.

Quantification level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant.

Quarterly monitoring frequency refers to a three month period, defined as January through March, April through June, July through September, and October through December. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Secondary containment structure means a unit, other than the primary container, in which significant materials are packaged or held, which is required by State or Federal law to prevent the escape of significant materials by gravity into sewers, drains, or otherwise directly or indirectly into any sewer system or to the surface or ground waters of this state.

Separate storm sewer system means a system of drainage, including, but not limited to, roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, or man-made channels, which is not a combined sewer where storm water mixes with sanitary wastes, and is not part of a POTW.

PART II

Section A. Definitions

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process waste stream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Significant materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents and plastic pellets; finished materials such as metallic products; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see 40 CFR 372.65); any chemical the facility is required to report pursuant to Section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA); polluting materials as identified under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code); Hazardous Wastes as defined in Part 111 of the NREPA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills and significant leaks means any release of a polluting material reportable under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code).

Storm water means storm water runoff, snow melt runoff, surface runoff and drainage, and non-storm water included under the conditions of Part I.D.3.

SWPPP means the Storm Water Pollution Prevention Plan prepared in accordance with Part I.C. of this permit.

Stoichiometric means the quantity of a reagent calculated to be necessary and sufficient for a given chemical reaction.

Tier I value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier I toxicity database.

Tier II value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier II toxicity database.

Total Maximum Daily Loads (TMDLs) are required by the Federal Act for waterbodies that do not meet Water Quality Standards. TMDLs represent the maximum daily load of a pollutant that a waterbody can assimilate and meet Water Quality Standards and an allocation of that load among point sources, nonpoint sources, and a margin of safety.

Toxicity Reduction Evaluation (TRE) means a site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Water Quality Standards means the Part 4 Water Quality Standards promulgated pursuant to Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being Rules 323.1041 through 323.1117 of the Michigan Administrative Code.

Weekly monitoring frequency refers to a calendar week which begins on Sunday and ends on Saturday. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Yearly monitoring frequency refers to a calendar year beginning on January 1 and ending on December 31. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

PART II

Section A. Definitions

24-hour composite sample is a flow-proportioned composite sample consisting of hourly or more frequent portions that are taken over a 24-hour period. A time-proportioned composite sample may be used upon approval of the Department if the permittee demonstrates it is representative of the discharge.

3-portion composite sample is a sample consisting of three equal volume grab samples collected at equal intervals over an 8-hour period.

7-day concentration is the sum of the daily concentrations determined during any 7 days of discharge during a discharge event divided by the number of daily concentrations determined. If the number of days of the discharge event is less than 7 days the number of actual days of discharge shall be used for the calculation. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations. When required by the permit, report the maximum calculated 7-day concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMR. If the seven day period was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

7-day loading is the sum of the daily loadings of a parameter divided by the number of daily loadings determined during any 7 consecutive days. If the number of days of the discharge event is less than 7 days the number of actual days of discharge shall be used for the calculation. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations. When required by the permit, report the maximum calculated 7-day loading for the month in the "MAXIMUM" column under "QUANTITY OR LOADING" on the DMR. If the seven day period in which the discharge event occurred was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

PART II

Section B. Monitoring Procedures

1. Representative Samples

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 - Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Test procedures used shall be sufficiently sensitive to determine compliance with applicable effluent limitations. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Chief of the Permits Section, Water Resources Division, Michigan Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan, 48909-7773. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

3. Instrumentation

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Department.

PART II

Section C. Reporting Requirements

1. Start-up Notification

If the permittee will not discharge during the first 60 days following the effective date of the facility's COC, the permittee shall notify the Department within 14 days following the effective date of the COC, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Part 31 of Act 451 of 1994, as amended, specifically Section 324.3110(3) and Rule 323.2155(2) of Part 21 allows the Department to specify the forms to be utilized for reporting the required self-monitoring data. Unless instructed on the effluent limitations page to conduct "Retained Self-Monitoring" the permittee shall submit self-monitoring data via the Department's Electronic Environmental Discharge Monitoring Reporting (e2-DMR) system.

The permittee shall utilize the information provided on the e2-Reporting website at <https://secure1.state.mi.us/e2rs/> to access and submit the electronic forms. Both monthly summary and daily data shall be submitted to the Department no later than the **20th day of the month** following each month of the authorized discharge period(s). The permittee may be allowed to submit the electronic forms after this date if the Department has granted an extension to the submittal date.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) to conduct retained self-monitoring, the permittee shall maintain a year-to-date log of retained self-monitoring results and, upon request, provide such log for inspection to the Department. Retained self-monitoring results are public information and shall be promptly provided to the public upon request.

The permittee shall certify, in writing, to the Department, on or before January 10th of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the discharge. With this annual certification, the permittee shall submit a summary of the previous year's monitoring data. The summary shall include maximum values for samples to be reported as daily maximums and/or monthly maximums and minimum values for any daily minimum samples.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41 of the NREPA or Rule 35 of the Mobile Home Park Commission Act (Act 96 of the Public Acts of 1987) for assurance of proper facility operation shall be submitted as required by the Department.

5. Compliance Dates Notification

Within 14 days of every compliance date specified in this permit, the permittee shall submit a written notification to the Department indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a written report is required to be submitted by a specified date and the permittee accomplishes this, a separate written notification is not required.

PART II

Section C. Reporting Requirements

6. Noncompliance Notification

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the NREPA, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

- a. 24-Hour Reporting
Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.
- b. Other Reporting
The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times, or, if not yet corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

7. Spill Notification

The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated on the COC, or if the notice is provided after regular working hours call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

PART II**Section C. Reporting Requirements****8. Upset Noncompliance Notification**

If a process "upset" (defined as an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24 hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

- a. that an upset occurred and that the permittee can identify the specific cause(s) of the upset;
- b. that the permitted wastewater treatment facility was, at the time, being properly operated and maintained (note that an upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation); and
- c. that the permittee has specified and taken action on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

9. Bypass Prohibition and Notification

- a. Bypass Prohibition
Bypass is prohibited, and the Department may take an enforcement action, unless:
 - 1) bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - 2) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and
 - 3) the permittee submitted notices as required under 9.b. or 9.c. below.
- b. Notice of Anticipated Bypass
If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least ten (10) days before the date of the bypass, and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three (3) conditions listed in 9.a. above.
- c. Notice of Unanticipated Bypass
The permittee shall submit notice to the Department of an unanticipated bypass by calling the Department at the number indicated on the COC (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

PART II**Section C. Reporting Requirements**

- d. **Written Report of Bypass**
A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.
- e. **Bypass Not Exceeding Limitations**
The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of 9.a., 9.b., 9.c., and 9.d., above. This provision does not relieve the permittee of any notification responsibilities under Part II.C.10. of this permit.
- f. **Definitions**
 - 1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
 - 2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

PART II

Section C. Reporting Requirements

10. Notification of Changes in Discharge

The permittee shall notify the Department, in writing, as soon as possible but no later than 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: 1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; 2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or 3) any chemical at levels greater than five times the average level reported in the complete application (see the COC for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

11. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters shall be reported to the Department by a) submission of an increased use request (application) and all information required under Rule 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; 3) the action or activity is not prohibited by the requirements of Part II.C.12.; and 4) the action or activity will not require notification pursuant to Part II.C.10. Following such notice, the permit may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

12. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of Rules 323.1098 and 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

13. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: 1) the legal name and address of the new owner; 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.

PART II

Section C. Reporting Requirements

14. Operations and Maintenance Manual

Part 41 of Act 451 of 1994, as amended, specifically Section 324.4104 and associated Rule 299.2957, allow the Department to require an Operations and Maintenance (O&M) manual for the wastewater treatment facility. An up-to-date copy of the O&M manual shall be kept at the wastewater treatment facility. Upon request a copy of the O&M manual shall be provided to the Department. The Department may review the manual in whole or in part at their discretion and require modifications to it if portions are determined to be inadequate.

At a minimum, the O&M manual should include the following information: permit standards, description and operation information for all equipment, staffing information, laboratory requirements, record keeping requirements, maintenance plan for equipment, emergency operating plan, safety program information and copies of all pertinent forms, as-built plans, and manufacturer's manuals.

Certification of the existence and accuracy of the operations and maintenance manual is required to be submitted to the Department at least sixty days prior to startup of a new wastewater treatment plant. Submittal of re-certifications will also be required sixty days prior to start-up of any substantial improvements or modifications made at the wastewater treatment plant.

15. Signatory Requirements

All applications, reports, or information submitted to the Department in accordance with the conditions of this permit or the facility's COC that require a signature shall be signed and certified as described in the Federal Act and the NREPA.

The Federal Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit or the facility's COC, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

The NREPA (Section 3115(2)) provides that a person who at the time of the violation knew or should have known that he or she discharged a substance contrary to this part, or contrary to a permit, COC, or order issued or rule promulgated under this part, or who intentionally makes a false statement, representation, or certification in an application for or form pertaining to a permit or COC or in a notice or report required by the terms and conditions of an issued permit or COC, or who intentionally renders inaccurate a monitoring device or record required to be maintained by the Department, is guilty of a felony and shall be fined not less than \$2,500.00 or more than \$25,000.00 for each violation. The court may impose an additional fine of not more than \$25,000.00 for each day during which the unlawful discharge occurred. If the conviction is for a violation committed after a first conviction of the person under this subsection, the court shall impose a fine of not less than \$25,000.00 per day and not more than \$50,000.00 per day of violation. Upon conviction, in addition to a fine, the court in its discretion may sentence the defendant to imprisonment for not more than 2 years or impose probation upon a person for a violation of this part. With the exception of the issuance of criminal complaints, issuance of warrants, and the holding of an arraignment, the circuit court for the county in which the violation occurred has exclusive jurisdiction. However, the person shall not be subject to the penalties of this subsection if the discharge of the effluent is in conformance with and obedient to a rule, order, permit, or COC of the Department. In addition to a fine, the attorney general may file a civil suit in a court of competent jurisdiction to recover the full value of the injuries done to the natural resources of the state and the costs of surveillance and enforcement by the state resulting from the violation.

16. Electronic Reporting

Upon notice by the Department that electronic reporting tools are available for specific reports, the permittee shall submit all such reports as required by this permit, electronically.

PART II

Section D. Management Responsibilities

1. Duty to Comply

All discharges authorized herein shall be consistent with the terms and conditions of this permit and the facility's COC. The discharge of any pollutant identified in this permit and/or the facility's COC more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit and the facility's COC. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit or the facility's COC constitutes a violation of the NREPA and/or the Federal Act and constitutes grounds for enforcement action; for COC termination, revocation and reissuance, or modification; or denial of an application for COC renewal.

It shall not be a defense for a 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 permit.

2. Operator Certification

The permittee shall have the waste treatment facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Sections 3110 and 4104 of the NREPA. Permittees authorized to discharge storm water shall have the storm water treatment and/or control measures under direct supervision of a storm water operator certified by the Department, as required by Section 3110 of the NREPA.

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures.

4. Power Failures

In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

- a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or
- b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

5. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.

PART II

Section D. Management Responsibilities

6. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code). For a Publicly Owned Treatment Work (POTW), these facilities shall be approved under Part 41 of the NREPA.

7. Waste Treatment Residues

Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit, or other pollutants or wastes) removed from or resulting from treatment or control of wastewaters, including those that are generated during treatment or left over after treatment or control has ceased, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, the NREPA, Part 31 for protection of water resources, Part 55 for air pollution control, Part 111 for hazardous waste management, Part 115 for solid waste management, Part 121 for liquid industrial wastes, Part 301 for protection of inland lakes and streams, and Part 303 for wetlands protection. Such disposal shall not result in any unlawful pollution of the air, surface waters or groundwaters of the state.

8. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department or the Regional Administrator, upon the presentation of credentials:

- a. to enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

9. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (Rule 323.2128 of the Michigan Administrative Code), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the NREPA.

10. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

PART II**Section E. Activities Not Authorized by This Permit****1. Discharge to the Groundwaters**

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the NREPA.

2. POTW Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities at a POTW. Approval for the construction or modification of any physical structures or facilities at a POTW shall be by permit issued under Part 41 of the NREPA.

3. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part II.C.9. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

5. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Federal Act.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.