

Attachment 6

Subpart AA Air Emissions from Process Vents

**FORM EQP 5111 ATTACHMENT C11 - SUBPART AA
AIR EMISSIONS FROM PROCESS VENTS**

This document is an attachment to the Michigan Department of Environmental Quality's (DEQ) *Instructions for Completing Form EQP 5111, Operating License Application Form for Hazardous Waste Treatment, Storage, and Disposal Facilities*. See Form EQP 5111 for details on how to use this attachment.

The administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), R 299.9504, R 299.9508, R 299.9605, and R 299.9630; and Title 40 of the Code of Federal Regulations (CFR), Part 264, Subparts AA, and 40 CFR §270.24 establish requirements for controlling organic air emissions from process vents. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application attachment addresses air emission control requirements for process vents at the hazardous waste management facility for the *EQ Resource Recovery, Inc. (EQRR)* facility in *Romulus*, Michigan.

(Check as Appropriate)

- Applicant for Operating License for Existing Facility
- Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility
- Process Vents Subject to 40 CFR, Part 264, Subpart AA (R 299.9630)
- No Process Vents Exist That Are Subject to 40 CFR, Part 264, Subpart AA (R 299.9630)

This attachment is organized as follows:

C11.A AIR EMISSIONS FROM PROCESS VENTS

- C11.A.1 Waste Streams
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- C11.A.4 Condenser and Closed-Vent System
 - C11.A.4(a) Applicable Standards
 - C11.A.4(b) Design
 - C11.A.4(c) Design Analysis
- C11.A.10 Certification Statements

C11.A Air Emissions from Process Vents
[R 299.9630 and 40 CFR, Part 264, Subpart AA]

- Process Vents Associated with Distillation
- Process Vents Associated with Fractionation
- Process Vents Associated with Thin-film evaporation
- Process Vents Associated with Solvent Extraction
- Process Vents Associated with Air or Steam Stripping Operations
- All Process Vents are Operated in Accordance with 40 CFR Parts 60, 61, or 63

C11.A.1 Waste Streams
[R 299.9630 and 40 CFR §264.1034(d)]

EQRR will receive used or spent solvent hazardous waste streams from off-site generators that have completed the EQRR waste characterization process. Typically these streams will be waste code D001 at minimum. See attachment A2 for the list of approved codes that could be accepted and processed at the facility.

C11.A.1(a) Organic Compound Concentration Determination Via Direct Measurement
[R 299.9630 and 40 CFR §264.1034(d)(1)]

EQRR requires the generator to complete a Waste Characterization Report for each waste to be approved into the EQRR facility. It is the generators responsibility to determine waste concentrations at the point of generation. EQRR will utilize generator knowledge and may also use analytical data provided by the generator or an analytical laboratory. Typical materials will be well in excess of 10 ppmw.

C11.A.1(a)(1) Sampling Parameters
[R 299.9630 and 40 CFR §264.1034(d)(1)(i) and (ii)]

See Attachment A3

C11.A.1(a)(2) Analytical Results
[R 299.9630 and 40 CFR §264.1034(d)(1)(iii)]

See Attachment A3

C11.A.1(a)(3) Calculation of Total Organic Compound Concentration
[R 299.9630 and 40 CFR §264.1034(d)(1)(iv)]

It is assumed in advance that the thin-film evaporation units will not be exempt from the regulation. A pollution control device will be attached to any applicable process vent to remove organic compounds.

C11.A.1(b) Organic Compound Concentration Determination Via Process Knowledge
[R 299.9630 and 40 CFR §264.1034(d)(2)]

See Attachment A3

C11.A.1(c) Date and Frequency of Determination
[R 299.9630 and 40 CFR §264.1034(e)]

See Attachment A3

C11.A.2 Unit Description
[R 299.11003 and 40 CFR §270.24(b)(1)]

Up to three thin-film evaporation units may be installed and operated at the facility. Each of these units will be connected to the closed vent control device. Actual annual throughput and operating hours are not available as the units are not operating at this time. Theoretical data may be developed as needed. The location of these units can be found on the engineering drawings located in Attachment B6.

C11.A.3 Emission Estimates
[R 299.11003 and 40 CFR §270.24(b)(1)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(a) Emission Rates
[R 299.11003 and 40 CFR §270.24(b)(2)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(b) Emission Reductions
[R 299.11003 and 40 CFR §270.24(b)(2)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(c) Engineering Calculations
[R 299.11003 and 40 CFR §270.24(b)(2)]

Final specifications of the control device have not been established yet. Closed vent pipe sizing and distances are also not firmly established. Engineering calculations will be provided to the Department prior to operation of the thin-film evaporators and the closed vent control device.

C11.A.3(d) Performance Test Plan
[R 299.9630 and 40 CFR §264.1032(c)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed. A Test Plan will be developed and submitted to the Department in accordance with the regulation.

C11.A.3(d)(1) Engineering Description of Control Device and Closed-Vent System
[R 299.9630 and 40 CFR §264.1034]

A detailed engineering description of the control device and closed vent system cannot be provided at this time as the control device and closed vent piping has not been identified. A description will be provided to the Department prior to operation of the thin-film evaporator and the closed vent control device.

C11.A.3(d)(2) Planned Timing
[R 299.9630 and 40 CFR §264.1034(c)]

There are no performance tests currently scheduled as the final equipment design is not complete. No equipment is installed.

C11.A.3(d)(3) Sampling and Monitoring Procedures
[R 299.9630 and 40 CFR §264.1034(c)]

Sampling and monitoring procedures have not been established for the closed vent control device

C11.A.3(e) Performance Test Results
[R 299.9630 and 40 CFR §264.1034(c)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed. A Test Plan will be developed and submitted to the Department in accordance with the regulation.

C11.A.3(e)(1) Description of Test Runs
[R 299.9630 and 40 CFR §264.1034(c)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(e)(2) Velocity and Volumetric Flow Rate
[R 299.9630 and 40 CFR §264.1034(c)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(e)(3) Organic Compound Content
[R 299.9630 and 40 CFR §264.1034(c)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(e)(4) Total Organic Mass Flow Rate
[R 299.9630 and 40 CFR §264.1034(c)(1)(iv)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.3(e)(5) Total Organic Compound Emissions
[R 299.9630 and 40 CFR §264.1034(c)(1)(v) and (vi)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.4 Condenser and Closed-Vent System
[R 299.9630 and 40 CFR §§264.1033 and 264.1035]

C11.A.4(a) Applicable Standards
[R 299.9630 and 40 CFR §264.1033(b)]

Test data will be provided to the Department when the thin-film evaporators, the closed vent piping, and the pollution control equipment is installed.

C11.A.4(b) Design
[R 299.9630 and 40 CFR §264.1035(b)(3)(ii)]

The final design and specification of the control device has not been determined.

C11.A.4(c) Design Analysis
[R 299.9630 and 40 CFR §264.1035(b)(4)(iii)]

The final design and specification of the control device has not been determined.

C11.A.5 Certification Statements
[R 299.9630 and 40 CFR §264.1030(e)]

Not Applicable