

Attachment 7

Subpart BB Air Emissions from Equipment Leaks

**FORM EQP 5111 ATTACHMENT C11 - SUBPART BB
AIR EMISSIONS FROM EQUIPMENT LEAKS**

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 299.9631; and Title 40 of the Code of Federal Regulations (CFR), Part 264, Subpart BB, and 40 CFR §270.25 establish requirements for controlling organic air emissions from equipment leaks. 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 equipment leaks at the hazardous waste management facility for the *EQ Resource Recovery, Inc. (EQRR)* facility in *Romulus*, Michigan.

- Applicant for Operating License for Existing Facility
- Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility
- Equipment Subject 40 CFR, Part 264, Subpart BB (R 299.9631)
- No Equipment Exists That Is Subject to 40 CFR, Part 264, Subpart BB (R 299.9631)

This attachment is organized as follows:

C11.B AIR EMISSIONS FROM EQUIPMENT LEAKS

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- C11.B.10 Valves in Gas/Vapor Service or in Light Liquid Service
- C11.B.11 Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, Flanges, and Other Connectors
- C11.B.12 Certification Statements

C11.B AIR EMISSIONS FROM EQUIPMENT LEAKS
[R 299.9631 and 40 CFR, Part 264, Subpart BB]

- Pumps in Light Liquid Service
- Compressors
- Pressure Relief Devices in Gas or Vapor Service
- Sampling Connection Systems
- Open-ended Valves or Lines
- Valves in Gas or Vapor or Light Liquid Service
- Pumps and Valves in Heavy Liquid Service
- Flanges and Other Connectors

C11.B.1 Waste Streams
[R 299.9631 and 40 CFR §264.1050(b)]

See attachment A2 for the list of acceptable waste codes. The hazardous waste tanks identified in Attachment C2 and their respective pumps, and pipe runs are intended to be used for the recovery of used/spent solvent wastes. These solvent wastes are typically well in excess of 10% by weight organic concentration. EQRR is not seeking to exempt any of the pumps, pipe runs, or other equipment from Subpart BB requirements.

C11.B.1(a) Organic Compound Concentration Determination Via Direct Measurement
[R 299.9631 and 40 CFR §264.1063(d)(1) and (2)]

Organic concentration is assumed to be in excess of 10% by weight. Direct measurement is not required.

C11.B.1(b) Organic Compound Concentration Determination Via Process Knowledge
[R 299.9631 and 40 CFR §264.1063(d)(3)]

The hazardous waste tanks identified in Attachment C2 and their respective pumps, and pipe runs are intended to be used for the recovery of used/spent solvent wastes. These solvent wastes are typically well in excess of 10% by weight organic concentration. EQRR is not

seeking to exempt any of the pumps, pipe runs, or other equipment from Subpart BB requirements. Concentration of liquids will be obtained from Waste Characterization Reports submitted by the generator of the waste. The generator is required to evaluate these concentrations at the point of waste generation. See Attachment A3.

C11.B.1(c) Date and Frequency of Determination
[R 299.9631 and 40 CFR §264.1063(d)]

The Subpart BB determination is not anticipated to change over time based on facility activities. The generator must submit a revised WCR for each unique approval when a change occurs in the generating process or at least certify that there has been no change to the generating source at least annually.

C11.B.1(d) Light or Heavy Liquid Designation
[R 299.9631 and 40 CFR §264.1063(h)]

Based on the likely organic compounds to be recovered at the facility, it is assumed that the designation will be "light liquid service."

C11.B.2 Equipment Identification
[R 299.9631 and 40 CFR §§264.1050 and 270.25(a)]

All applicable equipment has been identified. Inspection reports containing the listing of affected equipment by unique identification numbers can be found in Attachment A5.

C11.B.3 Equipment with No Detectable Emissions
[R 299.9631 and 40 CFR §264.1064(g)(2)]

Not Applicable

C11.B.3(a) Identification Numbers
[R 299.9631 and 40 CFR §264.1064(g)(1)]

All applicable equipment has been identified. Inspection reports containing the listing of affected equipment by unique identification numbers can be found in Attachment A5.

C11.B.3(b) Monitoring Procedures
[R 299.9631 and 40 CFR §264.1063]

Each valve in light liquid service is monitored monthly to detect leaks by methods specified in 40 CFR 264.1063(b).

C11.B.3(c) Comparison to Background
[R 299.9631 and 40 CFR §264.1063(c)(2)]

Each valve in light liquid service is monitored monthly to detect leaks by methods specified in 40 CFR 264.1063(b).

C11.B.3(d) Pump Standards
[R 299.9631 and 40 CFR §§264.1052 and 264.1058]

See Attachment B6 Engineering Plans P&ID 36

C11.B.3(e) Compressor Standards
[R 299.9631 and 40 CFR §264.1053]

Not Applicable

C11.B.3(f) Valve Standards
[R 299.9631 and 40 CFR §264.1057 and 264.1058]

See Attachment B6 Engineering Plans P&ID 41 through 45

C11.B.4 Closed-Vent Systems and Control Equipment
[R 299.9631 and 40 CFR §264.1060]

The closed vent system and control equipment will be reviewed for any potential Subpart BB equipment when final equipment designs and installation are completed.

C11.B.4(a) Condenser
[R 299.9631 and 40 CFR §264.1060(a)]

See Attachment C11 Subpart AA

C11.B.4(b) Thermal Vapor Incinerator
[R 299.9631 and 40 CFR §264.1060(a)]

See Attachment C11 Subpart CC

C11.B.5 Pumps in Light Liquid Service
[R 299.9631 and 40 CFR §270.25)(d)]

There are pumps in light liquid service. The methods of compliance are weekly visual inspection and when identified a repair, and monthly leak detection and when identified a repair.

Pumps are visually inspected each calendar week for indications of liquid dripping from the pump seal. If there are visual indications of liquid dripping from the pump seal, a leak is detected.

Pumps are monitored monthly to detect leaks by methods specified in 40 CFR 264.1063(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

If a leak is detected a first attempt to repair the leak will be conducted as soon as practicable and no later than 5 calendar days after each leak is detected. The leak will be repaired no later than 15 calendar days after it is detected, except as provided in 40 CFR 264.1059.

C11.B.6 Compressors
[R 299.9631 and 40 CFR §270.25)(d)]

Not Applicable

C11.B.7 Pressure Relief Devices in Gas or Vapor Service
[R 299.9631 and 40 CFR §270.25)(d)]

Not Applicable

C11.B.8 Sampling Connection Systems
[R 299.9631 and 40 CFR §270.25)(d)]

Not Applicable

C11.B.9 Open-ended Valves or Lines
[R 299.9631 and 40 CFR §270.25)(d)]

There are open-ended valves or lines. The method of compliance is capping and operational procedure. Each open-ended valve or line is equipped with a cap or second valve. The cap or second valve seals the opened end at all times except during operations requiring hazardous waste flow through the open ended valve or line. Each open-ended valve or line equipped with a second valve will be operated in such a manner that the valve on the hazardous waste stream end is closed before the second valve is closed.

C11.B.10 Valves in Gas/Vapor Service or in Light Liquid Service
[R 299.9631 and 40 CFR §270.25)(d)]

There are valves in light liquid service. The method of compliance is monthly leak detection, monitoring, and repair. Each valve in light liquid service is monitored monthly to detect leaks by methods specified in 40 CFR 264.1063(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

If for two successive months a leak is not detected, then monitoring will be modified to occur only on the first month of each succeeding quarter, beginning the next quarter, until a leak is detected. After a leak is detected, the valve will return to the monthly monitoring program until no leak is detected for two successive months.

If a leak is detected, it will be repaired as soon as practicable. The first attempt will be made no later than 5 calendar days after each leak is detected, except as provided in 40 CFR 264.1059. The leak will be repaired no later than 15 calendar days after it is detected, except as provided in 40 CFR 264.1059.

After proper notification to the Michigan Department of Environmental Quality (MDEQ) Director, the facility may elect to follow alternative standards for valves in gas/vapor or in light liquid service in accordance with 40 CFR264.1061 and/or 40CFR 264.1062.

C11.B.11 Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, Flanges, and Other Connectors
[R 299.9631 and 40 CFR §270.25)(d)]

There are flanges and connectors in light liquid service. The method of compliance is quarterly inspection of flanges and connectors using visual, audible and olfactory senses or any other detection device.

If evidence of a leak is detected by visual, audible, olfactory or any other detection method, the equipment will be monitored within 5 days by the method specified in 40 CFR 264.1063(b).

If the instrument reading is greater than or equal to 10,000 ppm, then a leak is detected.

If a leak is detected, it will be repaired as soon as practicable. The first attempt will be made no later than 5 calendar days after each leak is detected, except as provided in 40 CFR 264.1059. The leak will be repaired no later than 15 calendar days after it is detected, except as provided in 40 CFR 264.1059.

After proper notification to the Michigan Department of Environmental Quality (MDEQ) Director, the facility may elect to follow alternative standards for flanges or connectors in gas/vapor or in light liquid service in accordance with 40 CFR 264.1061 and/or 40 CFR 264.1062.

C11.B.12 Certification Statements
[R 299.9631 and 40 CFR §270.25)(e)(4) and (5)]

Not Applicable. See Attachment A11 Subpart AA and/or CC