

C.11 Air Emissions Subpart AA/BB/CC

**MICHIGAN DISPOSAL WASTE TREATMENT PLANT (MDWTP)
MID 000 724 831**

JANUARY 18, 2019 ATTACHMENT REVISIONS

Replaces Previous Attachment C.11 Subpart CC

FORM EQP 5111 ATTACHMENT TEMPLATE C11 - SUBPART CC
AIR EMISSIONS FROM TANKS, CONTAINERS, AND SURFACE IMPOUNDMENTS

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 299.9634; and Title 40 of the Code of Federal Regulations (CFR), Part 264, Subpart CC, and 40 CFR §270.27, establish requirements for controlling organic air emissions from tanks, containers, and surface impoundments. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application template addresses air emission control requirements for tanks, containers, and surface impoundments at the hazardous waste management facility for the Michigan Disposal Waste Treatment Plant (MDWTP) facility in Belleville, Michigan.

(Check as Appropriate)

- Applicant for Operating License for Existing Facility
- Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility
- Tanks, Containers, or Surface Impoundments Subject to 40 CFR Part 264, Subpart CC (R 299.9634)
- No Tanks, Containers, or Surface Impoundments Subject to 40 CFR Part 264, Subpart CC, Exist at the Facility (R 299.9634)

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C11.C AIR EMISSIONS FROM TANKS, CONTAINERS, AND SURFACE IMPOUNDMENTS
[R 299.9634 and 40 CFR Part 264, Subpart CC]

- Tanks
- Containers
- Surface Impoundments

MDWTP operates in accordance with its Title V, Renewable Operating Permit and is subject to requirements outlined in 40 CFR 63, Subpart DD National Emissions Standards for Hazardous Air Pollutants (NESHAP) from Off-Site Waste and Recovery Operations. Control requirements established in the NESHAP mimic requirements outlined in 40 CFR 264 Subpart CC and are present in the East Treatment Building (ETB) allowing MDWTP to process waste with VOC concentration >500ppm.

The ETB is exempt from Subpart CC requirements as indicated by 40 CFR 268.1080(b)(7):

The requirements of this subpart do not apply to the following waste management units at the facility: A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of § 264.1084(i), except as provided in § 264.1082(c)(5).

Tanks in MDWTP's ETB enclosure, vent to a control device as specified by the exemption and therefore complies with the requirements of the exemption. The information provided in this template is intended to demonstrate compliance with container requirements as well as 40 CFR 264.1084(i).

Additionally, the West Treatment Building only processes waste with VOC concentrations <500ppm. The information provided in this attachment addresses container requirements as well as demonstrates compliance with enclosure and control device requirements outlined in § 264.1084(i).

C11.C.1 WASTE STREAMS
[R 299.9634 and 40 CFR §264.1082(c)]

MDWTP may process hazardous waste subject to 40 CFR 264 Subpart CC requirements from off-site facilities in the ETB tanks. Generators provide information on the regulatory status of the waste as part of their waste characterization. Analytical data or process knowledge may be requested to support their determination. Waste streams are reviewed as described in A2 Chemical and Physical Properties and A3 Waste Analysis Plan.

C11.C.2 TANKS DESCRIPTION
[R 299.9634 and 40 CFR §270.27(a)(1) and (3)]

Attachment C2 Tank Systems provides all tank specification.

C11.C.2(a) Description of Level 1 and 2 Controls
[R 299.9634 and 40 CFR §264.1084(d)]

C11.C.2(a)(1) Tank Located Within an Enclosure Vented to a Combustion Device
[R 299.9634 and 40 CFR §264.1084(i)]

Tank designs are discussed in C2 Tank Systems. The ETB tanks are enclosed in a negatively pressurized building and vented to a Regenerative Thermal Oxidizer (RTO) by means of enclosed duct work. The pollution control devices are operated in accordance with Section 1 of the facility ROP.

C11.C.3 CONTAINER DESCRIPTIONS
[R 299.9634 and 40 CFR §§264.1086, and 270.27(a)(2)]

Each of the container storage areas may store VOC bearing waste streams subject to Subpart CC requirements. Generators are responsible for ensuring containers meet regulatory requirements for the waste placed inside the container prior to transportation. MDWTP may receive container requiring level 1 or 2 controls. Containers remain closed at all times except during sampling or transfer of the waste.

MDWTP has not performed treatment in a container requiring level 3 controls. However, treatment of waste with >500ppm would be completed in the ETB.

The majority of the Subpart CC regulated waste processed through the treatment building are not in light service (containing <20% VOCs) and are subject to level 1 controls. Container level 2 controls may be accepted and require that the hazardous waste be stored in an approved DOT container, a container that operates with no detectable organic emissions, or a demonstrated vapor-tight container.

MDWTP certifies the requirements of Subpart CC are met for containers stored in each of the container storage areas.

C11.C.3(a) Inspection Procedures
[R 299.9634 and 40 CFR §264.1086(c)(4)]

Generators of waste >500ppm are required to ensure containers are equipped with a cover and closure devices for each opening, or an open-top container with an organic vapor suppressing barrier. Containers >121.5 gallons with VOC contents >20% are subject to level 2 monitoring requirements. A portable instrument is used to detect individual leaks at each potential leak interface (i.e. anywhere an organic vapor leak could occur) on the cover and associated closure devices to ensure emissions are <500ppm above background.

Containers remain closed unless waste is being added. Inspections will be completed as outlined in Attachment A5 Inspection Schedule.

C11.C.3(b) Waste Transfer Procedures
[R 299.9634 and 40 CFR §264.1086(e)(2)]

Waste subject to Subpart CC is transferred in accordance with the applicable control level requirements.

- Containers <26.4 gallons(0.1m³) are exempt from Subpart CC controls
- Containers >26.4 gallons (0.1m³) and <121 gallons (0.46 m³) controls are not required during transfer.
- Containers >121 gallons (0.46m³) and is not in light service material controls are not required during transfer.

- Containers >121 gallons (0.46m³) and is in light service material controls will be implemented to minimize exposure of the hazardous waste to the atmosphere, by transferring on the East Side. If this cannot be done, MDWPT will notify the DEQ and provide an explanation on how the transfer will be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials.

C11.C.4 DESCRIPTION OF CLOSED-VENT SYSTEMS AND CONTROL DEVICES

[R 299.9634 and 40 CFR §§264.1087 and 270.27(a)(5)]

The closed-vent system and control device are operated in accordance with the requirements of the facility's ROP.

C11.C.4(a)(1) Description of Closed-Vent System

[R 299.9634 and 40 CFR §264.1087(b)]

MDWPT operates an enclosed ventilation system on the East Side of the treatment building in accordance with specification outlined in the ROP. These specifications include a requirement to maintain negative pressure, and continuously monitor air flow and pressure. The system draws air at a minimum flow rate of 19,500 cfm into closed ductwork from inside the building through a baghouse dust collector. Air then moves into the RTO where vapors are combusted, before being passed through a wet caustic scrubber prior to being discharged through the stack.

C11.C.4(a)(2) Description of Control Devices

[R 299.9634 and 40 CFR §264.1087(c)]

The RTO operates at minimum 1500°F temperature and a control efficiency of at least 95% as required by the facility ROP. MDWPT demonstrates compliance with this requirement in accordance with emissions testing requirements outlined in the ROP.

C11.C.4(a)(3) Inspection Procedures

[R 299.9634 and 40 CFR §264.1087(b)(4) and (c)(7)]

Inspections and calibrations are completed in accordance with ROP requirements. Additionally, closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) are visually inspected at least once per calendar year in order to verify emissions are not detectable (<500ppm) utilizing Method 21 of 40 CFR Part 60 Appendix A.

C11.C.5 DESCRIPTION OF RECORD KEEPING PROCEDURES

[R 299.9634 and 40 CFR §264.1089(a)]

Recordkeeping procedures are completed as specified in the ROP.

C11.C.5(a) Description of Tank Record Keeping Procedures

[R 299.9634 and 40 CFR §264.1089(b)]

Attachment C2 Tanks outlines tank recordkeeping procedures.

C11.C.5(a)(1) Tank Identification Numbers
[R 299.9634 and 40 CFR §264.1089(b)(1)(i)]

East treatment building Tanks E-H may accept Subpart CC regulated waste.

C11.C.5(a)(2) Inspection Records
[R 299.9634 and 40 CFR §264.1089(b)(1)(ii)]

Inspections of the tanks and containers are completed as outlined in attachment A5 Inspection Schedule. Inspections of the closed-vent system and control device are completed in compliance with the ROP.

C11.C.5(a)(3) Calculations and Records for Demonstrating Compliance with Enclosure Requirements for Level 2 Controls
[R 299.9634 and 40 CFR §264.1089(b)(2)(iv)]

The East Side treatment tanks are located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device. The facility's ROP specifies the maintenance, operating, recordkeeping and reporting requirements for the controls. In 1998 MDWTP confirmed compliance with the permanent enclosure requirements. Because each of the building opening remains closed during routine operation of the process none of the openings meet the definition of a natural draft opening. Additionally all building openings combined do not exceed 5% of the surface area of the enclosures' four walls, floor and ceiling. The table below has been included in Tables 1 and 2.

Table 1
Calculation of Total Building Surface Area

Building Segment	Dimensions (ft)		Area (ft ²)
	Length	Width	
Floor	67.83	108.88	7,385.35
North Wall	40.00	67.83	2,713.33
South Wall	33.30	67.83	2,258.99
East Wall, South Half, Rectangle	33.30	77.00	2,564.26
East Wall, South Half, Triangle	5.19	77.00	399.93
East Wall, North Half, Rectangle	40.00	31.88	1,275.00
East Wall, North Half, Triangle	1.85	31.88	58.81
West Wall, South Half, Rectangle	33.30	77.00	2,564.26
West Wall, South Half, Triangle	5.19	77.00	399.93
West Wall, North Half, Rectangle	40.00	31.88	1,275.00
West Wall, North Half, Triangle	1.85	31.88	58.81
Roof, South Half	77.70	67.83	5,270.65
Roof, North Half	32.09	67.83	2,176.77
Total			28,401.11

Table 2
Calculation of Building Opening to Enclosure Area Ratio

Building Opening	Dimensions (ft)		Area (ft ²)	Opening to Enclosure Area Ratio (dimensionless)
	Length	Width		
Large Bay Door	23.08	25.00	577.08	0.02
Medium Bay Door	15.58	18.50	288.29	0.01
Small Bay Door	15.58	16.333	254.53	0.01
Man Door #1	7.375	3.33	24.58	0.00
Man Door #2	7.375	3.33	24.58	0.00
Man Door #3	7.375	3.33	24.58	0.00
Pug Mill Window	2.50	3.00	7.50	0.00
Total			1,201.15	0.04

C11.C.6(b) Closed-Vent System and Control Device Records
 [R 299.9634 and 40 CFR §264.1089(e)]

C11.C.6(b)(1) Performance Certification
 [R 299.9634 and 40 CFR §264.1089(e)(1)(i)]

Performance certifications are completed and maintained in accordance with the facility ROP.

C11.C.6(b)(2) Design Analysis Documentation
 [R 299.9634 and 40 CFR §264.1089(e)(1)(i)(ii)]

Control device analysis and a signed certification that the control equipment meets applicable specifications are maintained onsite in accordance with requirements outlined in the ROP.

C11.C.6(d)(3) Performance Test Plan and Results
 [R 299.9634 and 40 CFR §264.1089(e)(1)(i)(iii)]

Performance testing results are maintained onsite and provided to the AQD in accordance with the requirements outlined in the ROP.

C11.C.6(b)(4) Planned Routine Maintenance Schedules
 [R 299.9634 and 40 CFR §264.1089(e)(1)(i)(v)]

Maintenance is performed as outlined in the ROP, and is reported as required.

C11.C.6(b)(5) Descriptions of Unplanned Malfunctions
 [R 299.9634 and 40 CFR §264.1089(e)(1)(i)(vi)]

Unplanned malfunctions are documented and reported as required by the ROP.

C11.C.5(c) Documentation Required for Tanks and Containers Not Using Air Emission Controls
 [R 299.9634 and 40 CFR §264.1089(i)]

Air emissions controls are not utilized for waste streams that contain VOC <500ppm by weight.

C11.C.5(d) Certifications and Identification of Federal Clean Air Act of 1990 Requirements
[R 299.9634 and 40 CFR §264.1089(j)(1) and (2)]

Section 1 of the facility ROP outlines the specifications operating, testing, monitoring, inspection, and recordkeeping requirements.