

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

This document is an attachment to Gage Product Company's (Gage) Michigan Department of Environment, Great Lakes, and Energy's (EGLE) Form EQP 5111 operating permit application. 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 attachment addresses air emission control requirements for tanks, containers, and surface impoundments at the hazardous waste management facility for the Gage Products Limited Storage Facility (Gage LSF) in Ferndale, 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)

Sections listed in the table of contents below that are not applicable to the Limited Storage Facility (LSF) permit renewal are denoted with a strikethrough and the corresponding section has been deleted from the text. This attachment is organized as follows:

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

The following types of units that exist at the Gage LSF.

- Tanks
- Containers
- Surface Impoundments

Spent solvents with average volatile organic concentrations of 500 parts per million by weight (ppmw) or greater are managed in tanks and containers at the Gage LSF. Air emissions from tanks are controlled in accordance with Tank Level 1 controls and from containers in accordance with Container Level 1 controls.

Tank Level 1 controls include fixed roofs; closure devices with no visible leaks, holes or gaps; spring-loaded pressure relief devices and safety devices (e.g. emergency vent). Container Level 1 controls for drums include meeting U.S. Department of Transportation (DOT) standards for packaging hazardous material, covers/closure devices secured in the closed position, and periodic inspections. Gage LSF has implemented an emissions control program for tanks and containers that include periodic monitoring and visual inspections repair of identified defects, and record keeping.

In addition, controls are in place regarding the transfer of materials to prevent the overflow or overfilling of tanks, spillage, or improper mixing of wastes at the limited storage facility. These controls include pressure relief valves, vacuum breakers, high-level alarms, and liquid-level indicators on the storage tanks; segregated drum storage area; emission controls on tanker-truck waste transfers; and procedures for transferring wastes between tanks, trucks, and drums. Detailed information regarding Gage's Subpart CC program applicable to the LSF is provided as follows referencing specific elements from Attachment C11c.

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

Waste Streams associated with each of the units (containers and tanks) identified above are associated with the LSF tank farm (above ground storage tanks (ASTs) # 72, 73, 74, 75, and 76), their associated piping and pumps of the LSF unloading area.

A full description of these waste streams, in addition to addressing item C11.C.1(e), for Tanks using Level 1 controls is found in the Chemical and Physical Analysis and Waste Analysis Plan Attachments A2 and A3. This includes information from the facility's Waste Analysis Plan, sampling parameters, analytical results, organic compound concentration determination via process knowledge (this is the method Gage LSF uses via extensive evaluation and experience relating to customer's waste streams). All waste managed in tanks and containers is assumed (based on generator knowledge and historic analytical) to contain more than 500 ppmw volatile organic (VO) material. Therefore, testing required to show waste contains less than 500 ppmw VO is not required and Attachment C11 Sections C11.C1(a) through (d) are not applicable.

C11.C.1(e) Maximum Organic Vapor Pressure Determination of Hazardous Waste in a Tank Using Level 1 Controls Via Process Knowledge
[R 299.9634 and 40 CFR §264.1083(c)]

The vapor pressures of the wastes are determined and documented in the facility records. All individual components, and mixtures have vapor pressures lower than 76.6 kPa.

C11.C.1(f) Description of Procedures for Determining No Detectable Organic Compound Emissions

[R 299.9634 and 40 CFR §§264.1083(d) and 270.27(a)(6)]

The facility is not claiming compliance with this subpart via a determination of no detectable organic compound emissions. Therefore, this section is not applicable.

C11.C.2 Tanks Description

[R 299.9634 and 40 CFR §270.27(a)(1) and (3)]

The LSF Tanks include 5 tanks:

Tank 72 – A 6,000 gallon (22.5 m³) vertical aboveground storage tank

Tank 73 – A 6,000 gallon (22.5 m³) vertical aboveground storage tank

Tank 74 – A 6,000 gallon (22.5 m³) vertical aboveground storage tank

Tank 75 – A 3,250 gallon (12.3 m³) vertical aboveground storage tank

Tank 76 – A 1,000 gallon (3.8 m³) vertical aboveground storage tank

All tanks are less than 75 m³. As a result, the maximum organic vapor pressure limit of the waste allowed in these tanks is 76.6 kPa for utilizing Level 1 controls. All waste managed at the facility has a vapor pressure of less than 76.6 kPa.

Additional technical information on the LSF Tanks is found in Attachment A1, Appendix A1-4 and A1-5.

C11.C.2(a) Description of Level 1 Controls

[R 299.9634 and 40 CFR §264.1084(c)]

Gage LSF tanks utilize the following Level 1 controls: fixed roofs; closure devices with no visible leaks, holes or gaps; spring-loaded pressure relief devices and safety devices (e.g. emergency vents). Gage LSF has implemented an emissions control program for tanks and containers that include periodic monitoring and visual inspection, repair of identified defects, and record keeping.

C11.C.2(a)(1) Maximum Organic Vapor Pressure Limit Design Capacity

[R 299.9634 and 40 CFR §264.1084(b)]

The tanks have been designed to hold solvent waste with a vapor pressure less than 76.6 kPa. Additional technical information on the LSF Tanks is found in Attachment A1, Appendix A1-4 and A1-5.

The vapor pressures of the wastes are determined and documented in the facility records. All individual components, and mixtures have vapor pressures lower than 76.6 kPa.

C11.C.2(a)(2) Description of Fixed Roof

[R 299.9634 and 40 CFR §264.1084(c)(2)]

The fixed roofs used on the LSF tanks result in no openings by which hazardous waste can escape to the atmosphere under operating conditions. Tank venting via vapor balance lines is provided to prevent excessive pressure or vacuum buildup due to maximum emptying, filling, thermal inbreathing and outbreathing rates. The tanks are equipped with an emergency vent. Excess pressure is vented through a flame arrestor.

C11.C.2(a)(3) Description of Closure Devices and Operating Procedures
[R 299.9634 and 40 CFR §264.1084(c)(3)]

Tanks openings are closed except during maintenance, testing or cleaning. Tank venting is provided to prevent excessive pressure or vacuum buildup due to maximum emptying, filling, thermal inbreathing and outbreathing rates. The tanks are equipped with an emergency vent. Excess pressure is vented through a flame arrestor.

C11.C.2(a)(4) Description of Inspection Procedures
[R 299.9634 and 40 CFR §264.1084(c)(4)]

Gage LSF has developed and implemented a comprehensive tank inspection program. These programs include periodic visual inspections, fugitive VOC emissions leak testing of fittings, agitators, flanges, sample ports, vents, fill lines and connectors. Visual inspection includes viewing the entire cover surface and each cover opening in a closed, sealed position for evidence of any defects such as a visible hole, gap, tear or split. In addition, API-653 Inspections including tank thickness are performed. Copies of these inspection reports are available at the facility.

The facility does not utilize Level 2 Controls. Therefore, Section C11.C.2(b) does not apply.
The facility does not operate a Surface Impoundment. Therefore, Section C11.C.3 does not apply.

C11.C.4 Container Descriptions
[R 299.9634 and 40 CFR §§264.1086, and 270.27(a)(2)]

Containers used for managing waste at the LSF only include 55-gallon (0.21m³ which is between the requirements of 0.1m³ - 0.46m³) drums meeting U.S. Department of Transportation (DOT) standards for packaging hazardous material. In addition, the LSF drum storage area is constructed of an impermeable concrete base, berm, and has segregated areas for non-compatible wastes.

C11.C.4(a) Description of Container Level 1 Controls
[R 299.9634 and 40 CFR §264.1086(b) and (c)]

Container Level 1 controls for drums include meeting U.S. Department of Transportation (DOT) standards for packaging hazardous material, covers/closure devices secured in the closed position, and periodic inspections. Gage LSF has implemented an emissions control program for tanks and containers that includes periodic monitoring and visual inspections (for cracks, holes gaps, and open spaces into the interior), repair of identified defects, and record keeping.

C11.C.4(a)(1) Michigan Department of Transportation Specifications
[R 299.9634 and 40 CFR §264.1086(c)(1)]

Gage LSF receives the drums for storage in the LSF in U.S. Department of Transportation (DOT) approved containers from licensed transporters.

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

Containers are inspected when received by the facility, and every week thereafter. Gage LSF has implemented an inspection program for containers that includes periodic monitoring and visual inspections (for cracks, holes gaps, and open spaces into the interior), repair of identified defects, and record keeping.

The facility does not receive waste in containers subject to Level 2, Level 3 controls for closed vapor/control devices. Therefore, Section C11.C.4(b), (c) and C11.C.5 below do not apply.

C11.C.6 Description of Record Keeping Procedures
[R 299.9634 and 40 CFR §264.1089(a)]

C11.C.6(a) Description of Tank Record Keeping Procedures
[R 299.9634 and 40 CFR §264.1089(b)]

A description of record keeping procedures to document compliance with 40 CFR Part 264, Subpart CC, and showing compliance of these procedures with the requirements of 40 CFR §264.1089(a) has been provided in the inspection schedule provided in Attachment A5. Records of API 653 tank inspections are maintained in the facility records onsite. Records are maintained for at least three years.

C11.C.6(a)(1) Tank Identification Numbers
[R 299.9634 and 40 CFR §264.1089(b)(1)(i)]

A unique tank identification system for each affected tank has been provided in Section C11.C.2 above.

C11.C.6(a)(2) Inspection Records
[R 299.9634 and 40 CFR §264.1089(b)(1)(ii)]

A description of record keeping procedures to document compliance with 40 CFR Part 264, Subpart CC, and showing compliance of these procedures with the requirements of 40 CFR §264.1089(b)(1)(ii) has been provided in the inspection schedule provided in Attachment A5.

C11.C.6(a)(3) Documentation for Determination of Maximum Organic Vapor Pressure for Fixed Roof Level 1 Controls
[R 299.9634 and 40 CFR §264.1089(b)(2)(i)]

The facility recycles waste solvent which have a known solvent mixture with known solvent vapor pressures. Documentation of vapor pressure is discussed above. Additional information is available in Attachment A2 Chemical Physical Analysis and Attachment A3 and Waste Analysis Plan.

C11.C.6(i) Certifications and Identification of Federal Clean Air Act of 1990 Requirements
[R 299.9634 and 40 CFR §264.1089(j)(1) and (2)]

The facility is not claiming compliance with the federal Clean Air Act of 1990 requirements under 40 CFR Parts 60, 61, or 63, in lieu of 40 CFR Part 264 requirements. Therefore, this certification is not required.