

**FORM EQP 5111 ATTACHMENT B5
ENVIRONMENTAL MONITORING PROGRAMS**

This document is an attachment to the Gage Products Company's (Gage) 2024 RCRA permit renewal Form EQP 5111. 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 299.9611 establishes requirements for the environmental monitoring programs for hazardous waste management facilities. All references to Title 40 of the Code of Federal Regulations (40 CFR) citations specified herein are adopted by reference in R 299.11003.

This license application attachment addresses requirements for an environmental monitoring program at Gage's Limited Storage Facility (Gage LSF) located in Ferndale, Michigan. The attachment includes a demonstration for a waiver from the monitoring requirements in accordance with R 299.9611(3)(a) and (b) and R 299.9611(4) as indicated below:

Groundwater Monitoring Program (*Check as appropriate*)

- R 299.9612 compliance monitoring program and sampling and analysis plan for one or more units
Waiver for one or more units

If appropriate, both boxes may be checked if different monitoring programs and waivers apply to the units at the facility.

Ambient Air Monitoring Program (Check as appropriate)

- Monitoring program and sampling and analysis plan
Waiver

Annual Soil Monitoring Program (Check as appropriate)

- Monitoring program and sampling and analysis plan
Waiver

Gage LSF has prepared a Quality Assurance/Quality Control (QA/QC) plan. A discussion of the QA/QC plan has been provided at the end of the Waste Analysis Plan contained in Attachment A3, Appendix A3-1. The QA/QC Plan follows the written procedures outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," U.S. Environmental Protection Agency (EPA) Publication SW846, Third Edition, Chapter 1 (November 1986), and its updates.

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:

B5.A GROUNDWATER MONITORING PROGRAM

- ~~———— B5.A.1 Unit Specific Groundwater Monitoring Program (NA)~~
~~———— Table B5.A.1 Groundwater Monitoring Program (NA)~~
B5.A.2 Groundwater Monitoring Program Waiver
B5.A.2(a) Other Units
~~———— B5.A.2(b) No Migration (NA)~~

- ~~Attachment B5.A.1 No Migration Demonstration (NA)~~
- ~~B5.A.3 General Groundwater Monitoring Requirements (NA)~~
 - ~~B5.A.3(a) Sampling and Analysis Plan (NA)~~
 - ~~B5.A.3(b) Description of Wells (NA)~~
 - ~~B5.A.3(c) Procedure for Establishing Background Quality (NA)~~
 - ~~B5.A.3(d) Statistical Procedures (NA)~~
- ~~B5.A.4 Detection Monitoring Program (NA)~~
 - ~~B5.A.4(a) Indicator Parameters, Waste Constituents, and Reaction Products~~
 - ~~B5.A.4(b) Groundwater Monitoring System (NA)~~
 - ~~B5.A.4(c) Background Concentration Values for Proposed Parameters (NA)~~
 - ~~B5.A.4(d) Proposed Sampling and Analysis Procedures (NA)~~
- ~~B5.A.5 Compliance Monitoring Program (NA)~~
 - ~~B5.A.5(a) Hazardous Constituents to be Monitored in Compliance Program (NA)~~
 - ~~B5.A.5(b) Concentration Limits (NA)~~
 - ~~B5.A.5(c) Concentration Limit Other than Background (NA)~~
- ~~Attachment B5.A.5.2 Concentration Limit Other Than Background Demonstration (NA)~~
 - ~~B5.A.5(d) Groundwater Monitoring System (NA)~~
 - ~~B5.A.5(e) Sampling and Analysis Procedures (NA)~~
- B5.B AMBIENT AIR MONITORING PROGRAM**
 - ~~B5.B.1 Sampling and Analysis Plan (NA)~~
- B5.C ANNUAL SOIL MONITORING PROGRAM**
 - ~~B5.C.1 Sampling and Analysis Plan (NA)~~

B5.A GROUNDWATER MONITORING PROGRAM

[R 299.9611(2)(b) and (3), R 299.9612, and R 299.9629 and 40 CFR, Part 264, Subpart F, except 40 CFR §§264.94(a)(2) and (3), (b), and (c), 264.100, and 264.101]

B5.A.2 Groundwater Monitoring Program Waiver

[R 299.9611(3)]

B5.A.2(a) Other Units

[R 299.9611(3)(a)]

The is not a land disposal unit and complies with one of the following provisions:

- All treatment, storage, and waste handling activities at the Gage LSF facility take place inside or under a structure that provides protection from precipitation and runoff, and the facility is in compliance with the provisions of R 299.9604.

On May 10, 1994, Aug.4, 2003, and March 31, 2015, Gage LSF qualified for a waiver of the requirements of R 299.9611(3) of the Part 111 Administrative Rules for groundwater monitoring of the Gage LSF for the following reasons:

All waste handling activities take place inside or under a structure that provides protection from precipitation and runoff since the Gage LSF is covered by a roof, and constructed with adequate secondary containment. In addition, the secondary containment requirements of R 299.9604 (Facility Design and Operating Standards) have been met. The Gage LSF was constructed with a sealant applied to the concrete secondary containment to prevent spills from penetrating the concrete and being released to soils and

groundwater. In addition, the tank farm dike is constructed with micro silica-filled concrete that makes it more impervious.

Gage LSF conducted groundwater monitoring to determine the rate and extent of any off-site migration of contaminated groundwater and to monitor and cleanup groundwater site-wide. Gage LSF also conducted site investigations, including an evaluation of a groundwater collection trench, and a determination of the extent and rate of migration of groundwater contaminants. The 2013 LSF permit application contained information from the RCRA Facility Investigation (RFI) Work Plan to further delineate contaminants in soils and groundwater. The final results of the supplemental investigation were submitted as an attachment to the April 27, 2015 RCRA Facility Investigation, Risk Evaluation and Corrective Measures Plan as Appendix B. The supplemental investigation did not identify any additional impacts to groundwater.

B5.B AMBIENT AIR MONITORING PROGRAM [R 299.9611(2)(c) and (4)]

Request for waiver. Originally on May 10, 1994, Aug. 4, 2003, and March 31, 2015, Gage LSF qualified for a waiver of the requirements of R 299.9611(2)(c) of Part 111 for ambient air monitoring at the Gage LSF for the following reasons:

- Based on the waste-management procedures described in Section B5.A.2, it is very unlikely that hazardous constituents could be released to the atmosphere; therefore, Gage LSF requested and received a waiver for air monitoring as referenced by Part 111, Rule 299.9611(4).
- The facility utilizes a vapor balance system for transferring bulk materials into the five Limited Storage Facility storage tanks, and for transferring materials into tank trucks for off-site disposal.

In addition, HSWA, as required by Section 3004(n) of RCRA, provides for final standards limiting organic emissions from process vents, equipment leaks, tanks, and containers. These requirements are codified in 40 CFR Part 264, Subparts AA, BB, and CC. There are no regulated process vents at the Gage LSF, and as such, Subpart AA is not applicable to the LSF. Subpart BB applies to leaks from equipment (e.g. pumps, valves, mixers and connectors) that contains or contacts the hazardous waste that is managed at the LSF. Subpart CC applies to regulated tanks and containers that store or contact the spent solvent hazardous waste at the facility. Detailed information regarding the Subpart BB and CC monitoring at the LSF is provided in Attachment C11b and C11c.

The tanks, containers and piping within the Limited Storage Facility are subject to Subpart BB and CC of Part 264, "Air Emission Standards for Equipment Leaks" and for leaks from tanks and containers. The containers that are utilized in the LSF are also subject to subpart CC of Part 264 Standards: Containers. All containers utilize Container Level 1 controls, in that they meet applicable U.S. Department of Transportation regulations for packaging hazardous materials for transportation as specified in Title 49 CFR part 178— Specifications for Packaging or 49 CFR part 179 Specifications for Tank Cars. More information about the subpart CC requirements for these tanks and containers can be found in Attachment C11c. Currently under Subpart BB requirements, the Limited Storage Facility pumps are monitored monthly, and the valves are monitored annually (since successive quarters did not detect any leaks). Documentation of this on-going program can be viewed at the facility. There have been no significant leaks detected to date using the levels specified in the standard.

B5.C ANNUAL SOIL MONITORING PROGRAM

[R 299.9611(2)(d) and (4)]

Request for waiver. On May 10, 1994, Aug.4, 2003, and March 31, 2015, Gage LSF qualified for a waiver of the requirements of R 299.9611(2)(d) of Part 111 for soil monitoring at the Gage LSF for the following reason:

The management of hazardous wastes occurs within secondarily contained areas that are designed to prevent run-off and spills from exiting the unit. In addition, the roof of the LSF prevents significant amounts of precipitation from entering the LSF. Information on the LSF containment systems including engineering drawings have been provided Attachments A1, Appendix A1-5 and Container and Tanks systems in Attachments C1, C2. Additional geological and soil information has been provided in the Hydrogeological Report in Attachment B3.