

**FORM EQP 5111 ATTACHMENT B3
HYDROGEOLOGIC REPORT**

This document is an attachment to Gage Products Company's 2024 RCRA permit renewal 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 299.9506, R 299.9508, and R 299.9612 and Title 40 of the Code of Federal Regulations (CFR) §§264.94, 264.95, 264.97, 264.98, 270.13(10)(l), and 270.14(b)(19) establish requirements for hydrogeologic reports for hazardous waste management facilities. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

Gage Products Company (Gage) has completed this license application attachment to address requirements for a hydrogeologic report for Gage's hazardous waste Limited Storage Facility (Gage LSF) located in Ferndale, Michigan. This attachment includes hydrogeologic report requirements, waiver demonstrations, and alternative information requests for operating license applications as applicable. This hydrogeologic report supplies information to support the groundwater monitoring program, or groundwater monitoring waiver request, proposed and included in Attachment B5, Environmental Monitoring Programs.

Applicant for Operating License for Existing Facility:

- R 299.9506 hydrogeologic report
- A waiver for the hydrogeologic report is requested for one or more units
- Alternative information is proposed for information required in the hydrogeologic report for one or more units
- A waiver is requested for groundwater monitoring requirements for one or more units, and is included in Attachment B5

Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility:

- R 299.9506 hydrogeologic report
- A waiver is requested for groundwater monitoring requirements for one or more units, and is included in Attachment B5

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:

B3.A HYDROGEOLOGIC REPORT WAIVER REQUEST

B3.B SITE HYDROGEOLOGY

- ~~B3.B.1 Summary of Existing Information~~
- ~~B3.B.2 Identification of Aquifers and Their Uses~~
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 - ~~B3.B.3(a) Waste Management Areas~~
 - ~~B3.B.3(b) Property Boundaries~~
 - ~~B3.B.3(c) Point of Compliance~~
 - ~~B3.B.3(d) Groundwater Monitoring Wells~~
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 - ~~B3.B.3(f) Extent of Contaminant Plume~~
- ~~B3.B.4 Wells and Borings within One Mile~~
- ~~B3.B.5 Contaminant Plume Description~~

B3.C ENGINEERING REPORT FOR PROPOSED GROUNDWATER MONITORING PROGRAM

- ~~B3.C.1 Waiver or Alternate Information~~
- ~~B3.C.2 Soil Borings, Sampling, and Testing~~
 - ~~B3.C.2(a) Number and Location of Soil Borings~~
 - ~~B3.C.2(b) Soil Sampling and Testing~~
 - ~~B3.C.2(c) Soil Layer Evaluations~~
 - ~~B3.C.2(d) Boring Log Information~~
 - ~~B3.C.2(e) Borehole Completion~~
- ~~B3.C.3 Observation Wells and Well Clusters~~
 - ~~B3.C.3(a) Static Water Levels and Construction Details~~
 - ~~B3.C.3(b) Groundwater Maps~~
 - ~~B3.C.3(c) Justification for Observation Well Locations~~
 - ~~B3.C.3(d) Logs for Borings Completed as Observation Wells~~

B3.D GROUNDWATER MONITORING PROGRAM

~~Table B3.D.1 Unit Specific Groundwater Monitoring Program~~

B3.E ADDITIONAL INFORMATION REQUIREMENTS

- ~~B3.E.1 Additional Soil Boring Tests~~
- ~~B3.E.2 Soil Borings to Define Bedrock~~
- ~~B3.E.3 Additional Geotechnical Characteristics~~
- ~~B3.E.4 Geologic Cross Sections~~
- ~~B3.E.5 Water Budget Calculations~~

 EPA 1992. *RCRA Groundwater Monitoring Draft Technical Guidance Document*. Document Number 530-R-93-001. November.

B3.A HYDROGEOLOGIC REPORT WAIVER REQUEST
[R 299.9508(2)]

The Limited Storage Facility (Gage LSF) at the Gage Products facility includes tanks and containers, storage, and tank truck unloading but does not include a landfill, surface impoundment, waste pile or land treatment unit. Since all loading and unloading and storage activities take place in a building equipped with a poured-concrete floor, a drainage collection system, and are protected from precipitation and runoff by roofing and appropriately sloped concrete flooring, it is very unlikely that hazardous-waste constituents could be released to the soil from the hazardous-waste management area. Therefore, Gage LSF has requested and received a waiver from the hydrogeologic report requirements, as referenced by Part 111, Rule 299.9604 on previous applications.

- The Limited Storage Facility storage tanks and container storage areas are not a landfill, surface impoundment, waste pile, or land treatment unit, all hazardous waste management activities take place inside or under a structure that provides protection from precipitation and run-on/runoff, and the unit is in compliance with the facility design and operating standards found in R 299.9604.

B3.B SITE HYDROGEOLOGY

[R 299.9506 (1)(a) through (g) and 40 CFR, Part 265, Subpart F, and §§270.13(l), 270.14(b)(19), and 264.97]

The facility requested and received a waiver from the hydrogeologic report requirements, as referenced by Part 111, Rule 299.9604 on previous applications. In general, soils encountered at the site consist of two lithologies (soil types): a thin surficial granular fill that contains minor saturation in some locations; and an underlying dry to moist clay till containing varying amounts of admixed sand, silt, and traces of gravel. Additional hydrogeologic information is included in Corrective Action Attachment B2, section B2.A.2(c) " Environmental Setting".

B3.C ENGINEERING REPORT FOR PROPOSED GROUNDWATER MONITORING PROGRAM
[R 299.9506(2) and (7)]

Engineering information supporting the proposed waiver requests above has been included in this application as Attachment B5, Environmental Monitoring Programs, and Attachment B2, Corrective Action.

Originally on May 10, 1994, again on Aug. 4, 2003, and on the 2013 RCRA permit renewal Gage LSF qualified for a waiver from the requirements of R299.9611(3) of the Part 111 Administrative Rules for groundwater monitoring at the Limited Storage Facility. The rationale behind the requested waiver from groundwater monitoring is further discussed in Attachment B5, "Environmental Monitoring".

Engineering information included in the Corrective Action Plan, Attachment B2, and Soil Test Data provided in Attachment B2 Appendix B2-1, supports the requests for waivers from both the groundwater monitoring program and hydrogeologic report.

B3.D GROUNDWATER MONITORING PROGRAM

[R 299.9506(3) through (5), R 299.9611(2)(b) and (3), R 299.9612, R 299.9629, and 40 CFR, Part 264, Subpart F, except 40 CFR §§264.94(a)(2) and (3), 264.94(b) and (c), 264.100, and 264.101 }

The facility requested and qualified for a waiver from the groundwater monitoring program on the 2013 Permit Renewal Application. A waiver is requested as part of this 2024 permit application. A discussion of the waiver is located in Attachment B5 "Environmental Monitoring Programs".

B3.E ADDITIONAL INFORMATION REQUIREMENTS

[R 299.9506(6)]

Check as appropriate:

- The Limited Storage Facility unit is not a landfill, surface impoundment, waste pile, or land treatment unit. The requirements of R 299.9506(6) do not apply.
- The Hazardous Waste Unit unit is a landfill, surface impoundment, waste pile, or land treatment unit. Additional information has been included to address the requirements necessary to determine site suitability and facility design.

Additional information requirements including additional soil boring tests, soil borings to define bedrock, additional geotechnical characteristics, geologic cross sections, and water budget calculations are not applicable because the LSF is not a landfill, surface impoundment, waste pile, or land treatment unit.