FORM EQP 5111 ATTACHMENT C1
USE AND MANAGEMENT OF CONTAINERS

This document is an attachment to Gage Products Company's (Gage) 2024 RCRA permit renewal application Form EQP 5111. R 299.9614 of 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 29.4101 to R 29.4505 promulgated pursuant to the provisions of the Michigan Fire Protection Act, PA 207, as amended (Act 207); and Title 40 of the Code of Federal Regulations (CFR) §§270.14(d), 270.15, and Part 264, Subpart I, establish requirements for the use and management of containers. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003. This license application template addresses requirements for the use and management of containers at the Gage limited storage facility (Gage LSF) in Ferndale, Michigan. This attachment addresses the condition of containers, compatibility of waste with containers, management of containers, inspections, containment, special requirements for ignitable or reactive waste, special requirements for incompatible wastes, and closure.

Applicant for Operating License for Existing Facility:

☒ R 299.9614 use and management of containers

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

☐ R 299.9614 use and management of containers

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:

INTRODUCTION

The following attachment describes Gage LSF's compliance with the container performance standards for containers and container storage areas. Attachment C11, Subpart CC, Air Emissions from Tanks and Containers, addresses air emissions for containers. Specific closure requirements for container storage areas are addressed in this Attachment, additional information is available in Attachment A11, Closure Plan.

Gage LSF stores hazardous wastes in containers in the limited storage facility, which has been specifically designed for this purpose. All wastes are stored for less than 90 days. The containers that are stored in the facility are 55-gallon drums, but other DOT containers of lesser volume may also be accepted. At no time will the total volume in the container/drum storage area exceed 2,750 gallons. Most wastes are stored in bulk vertical tanks. The wastes are stored at the facility until treated on-site or shipped off-site for disposal.

Gage Products Company operates a solvent blending, packaging and remanufacturing facility. Products include custom solvents, paint-related products and cleaners, and calibration and test fuels. In the production of these specialty-blended solvents, Gage Products Company is a leader in sustainable manufacturing and solvent remanufacturing processes. Solvent remanufacturing includes either thin film evaporation, distillation, or both.

Hazardous-waste activities at the Gage LSF facility can be segregated into two categories: (1) hazardous wastes generated on-site from the remanufacturing of "spent" solvent wastes and other manufacturing wastes, and (2) hazardous-waste solvents, including hazardous secondary materials, received for recycling or transfer off-site for disposal. This application for a limited storage facility covers only those wastes received from offsite generators for recycling or transfer off-site.

The offsite waste coming to Gage LSF is characterized according to the procedures in the Waste Analysis Plan, which is located in Attachment A3 of this application.

Accepted wastes are either stored in drums within the container storage building or in vertical bulk tanks in the adjacent bulk tank storage area. Accepted wastes may also be off-loaded directly from the tank trailer to the recycle process. The Limited Storage Facility has a maximum capacity of 25,000 gallons. This storage reflects the potential total combined capacities of the container storage area plus the capacity of the bulk storage tanks in the tank farm. The facility has been designed to contain flammable liquids, in accordance with applicable BOCA, NFPA, and NEC for Class I, II, and III liquids. Engineering drawings of the container storage area have been provided in Attachment A1 as Appendix A1-5.

The basis of design for each storage area has been provided in Attachment A1, Appendix A1-4 and includes secondary containment calculations. The container storage building is described in the following section. Container storage layout information is also provided in Attachment A5, Appendix A5-5 Drum Storage Configuration.

C1.A DESCRIPTION OF CONTAINERS

[R 299.9614 and 40 CFR §264.171]

The container storage building is on the west end of Parcel C, west of the remanufacturing building. The container storage area of the building is used for storage of D001, D002, D005, D006, D007, D008, D011, F001, F002, F003, and F005 wastes. The container storage area is designed to have a maximum capacity of 2,750 gallons (maximum of fifty 55-gallon drums).

The container storage building measures approximately 62.8 feet by 66 feet. There are two main sections of this building: the permitted container storage area and the tank truck loading/unloading area. The

permitted container storage area is located along the western side of the building and measures approximately 50 feet 4 inches x 20 feet 7 inches. It has room for six rows of containers, and the floor slopes toward a sump, which measures 2 feet by 6 feet by 3 feet. The combination of the bermed / sloped containment floor and the sump have a combined capacity of 695-gallons, which exceeds the required secondary containment volume of 275 gallons (10 percent of the total volume stored or the largest container whichever is greater). The container storage area has a maximum capacity of 2,750 gallons, or fifty 55-gallon drums. The storage area is enclosed with panels to allow for natural ventilation. There are four loading/unloading pump stations within the container storage building, located along the south wall. The floor of the loading/unloading area slopes towards the center of the building, where there is a sump measuring 6 feet by 24 feet by 5 feet with a 9,000-gallon capacity. The container storage area is located more than 50 feet from the property line. The containment system is impermeable to the materials stored, sealed and free of cracks. The roof and walls prevent stormwater run-on. Any spilled materials are promptly removed from the containment system.

C1.B CONDITION OF CONTAINERS
[R 299.9614 and 40 CFR §264.171]

Hazardous wastes are shipped in DOT-approved and labeled containers. These containers are tested and certified by the manufacturer to meet DOT specifications.

Containers are inspected upon receipt and during regular inspections as outlined in Attachment A5. In the event repackaging is necessary, based on the inspection criterion of the containers, 85-gallon recovery drums are used. Following this inspection, the leaking or corroded 55-gallon drum is placed inside the recovery drum, and sealed tightly, or the material is recycled on-site or transferred to another DOT approved container.

C1.C COMPATIBILITY OF WASTE WITH CONTAINERS
[R 299.9614 and 40 CFR §264.172]

All containerized liquid hazardous wastes scheduled for temporary storage at Gage LSF are received and stored in containers meeting the packaging and compatibility requirements of the Department of Transportation regulations as specified in Volume 49 of the Code of Federal Regulations, Parts 172, 173 and 178.

C1.D MANAGEMENT OF CONTAINERS
[R 299.9614 and 40 CFR §264.173]

Containers temporarily stored within the confines of the Gage LSF container storage area are stored in accordance with the Specification 4-6 of the National Fire Prevention Association (NFPA) Standard – 30. In relation to the Class categories specified in Table 4-6 (a) of NFPA 30, those hazardous wastes meeting liquid Class definitions IB, and II are temporarily stored within the Gage LSF container storage area. NFPA 30 specification 4-6 states that containers storing flammable and combustible liquids may be stored in the quantities and arrangements specified in Table 4-6.1 (a), provided the storage is in accordance with NFPA 4-6.2. NFPA 4-6.2, simply stated, says that such a storage area must have an automatic sprinkler system installed in accordance with NFPA 13. The Gage LSF container storage area is protected with a dry-type sprinkler system designed per NFPA Standard 13. Its hydraulic capability has been calculated to provide extra hazard, Group II protection with a density of 0.37 gallons-per-minute over the most remote 2500 square-foot-area and 1,000 gallons-per-minute for hose demand.

According to NFPA 30 Table 4-6.1(a), a storage area with the above protection allows the storage of a maximum of 5,000 gallons per pile, a maximum of 15,000 gallons for the area and a maximum storage height of 6.5 feet. The maximum volume of the flammable/combustible liquids to be stored in the Gage

LSF container storage area is 2,750-gallons or approximately fifty (50) 55-gallon drums, compliant with the NFPA 30 Fire code.

Containers are loaded and unloaded in the Limited Storage Facility by means of a “grabber” high-lo. This device had bracketed arms capable of moving four 55-gallon drums at a time. Aisle space in the container storage area is sufficient to allow for unobstructed movement of the high-lo.

Incoming hazardous wastes destined for temporary storage at the Gage LSF are characterized to ensure that the wastes can be safely stored, handled, mixed, and made acceptable to Gage LSF for their recycling-process waste-management facilities. A detailed description of the compatibility testing procedures and characterization scheme is contained in Attachment A3, the Waste Analysis Plan. Rejected waste shipments are handled in accordance with 40 CFR 264.72 and the procedures identified in the Attachment A3 Waste Analysis Plan, Section A3.A.1. Accepted containers are placed in storage where they will remain sealed until they are recycled or removed for shipment, unless unusual circumstances require that they are opened again. The containers in storage are not opened, handled, or stored in a manner that could cause a leak, spill, or rupture. All containerized waste stored at the Gage LSF facility is handled as if it contains free liquids; therefore, 40 CFR 264.175 and 40 CFR 270.15 (b)(2) do not apply.

In the container storage area, the drums are arranged in single rows of pallets. A 24-inch aisle is maintained between each row, allowing for inspection access. A center aisle measuring no less than 12 feet is maintained to allow for the access of emergency equipment, if necessary. As described in Section C1.F.1 below, the containers are arranged so that, in the event of a spill or rupture from a drum that is stored at an elevation higher than the secondary containment level, the waste will be contained.

Drums containing D002 wastes are segregated from the other containers by means of a concrete curb. This segregation is to prevent the mixing of any leaked incompatible wastes. There is room for a maximum of 12 drums in this portion of the container storage area.

C1.E INSPECTIONS

[R 299.9614 and 40 CFR §264.174]

In accordance with the container inspection requirements of subpart CC of Part 264, all containers are inspected upon receipt and at least weekly thereafter, to ensure that they are in sound structural condition, closed tight and not leaking. All containers are handled with extreme caution to prevent rupture of the containers. While in storage, containers are opened only under unusual circumstances; thereby preventing spills, leaks, or emissions. These containers are equipped with a closure device that is secured in a closed position, and only opened when necessary to sample or remove the material from the container. Afterwards, the device is closed, within 15 minutes of completion, or if the operator leaves the vicinity of the container, whichever occurs first. The usual circumstances when containers would be opened include the rare instance when an additional sample of the waste must be obtained for analytical verification. Additional information on inspection schedules has been provided in Attachment A5.

C1.F CONTAINMENT

[R 299.9614 and 40 CFR §§264.175 and 270.15]

C1.F.1 Secondary Containment System Design and Operation for Containers with Free Liquids

[R 299.9614 and 40 CFR §§264.175(a) and 270.15(a)]

To minimize the potential of an accidental spill or discharge during the movement of containerized waste on site, only pallets in good condition and only main aisle-ways will be used. All transportation routes on the Gage property are paved and the potential for spillage onto unpaved areas is considered remote.

Emergency-response equipment, including absorbent material, absorbent booms, Visqueen, and spark resistant hand tools are available for each container storage area. In the event that a spill occurs outside in an area without a spill collection sump, immediate actions will be taken to contain and control the spill as per operational plans described in Attachment A7, “Contingency Plan”.

Disposal or recycle of the hazardous waste at a licensed hazardous waste facility is arranged soon after storage begins. The first option for the material is to recycle it at the Gage LSF Facility. When that is not possible, a treatment or disposal facility is selected. When an appropriate facility to treat, recycle, recover, or dispose of the containerized hazardous wastes has approved the wastes, the containers are removed from the storage area by trained Gage LSF personnel, transferred to licensed vehicles, and manifested to the next licensed waste facility according to state and federal regulations.

The container storage area containment pad is constructed of reinforced concrete and is free of cracks or gaps. It is sufficiently impervious to contain any leaks and spills until the material is detected and removed. A protective coating has been applied to the concrete floor and curbs. This coating provides an impervious barrier that is an abrasion-resistant sealant appropriate for all materials and wastes stored in this area. All drums stored in this area are stored on pallets, thereby preventing the drums from contacting the concrete or any accumulated liquids. The tank truck loading/unloading area of the container storage building is comprised of three separate “bays”. The floor area slopes toward the center of the area, to secondary containment, a blind sump. Attachment A1, Appendix A1-5 contains engineering drawings of the limited storage facility.

The loading/unloading bay sump measures 6 feet by 24 feet by 5 feet. The lowest point of the bay area (the floor level grating) is 9 inches below the outer edges of the bay. The containment volume of the bay is 9,000 gallons. The 9,000-gallon capacity of the bay well exceeds the requirement that the secondary containment be able to contain 10 percent of the volume of waste stored in the area. Attachment A1, Appendix A1-4 contains the calculations of the volume of the secondary containment system.

C1.F.1(a) Requirement for Base or Liner
[R 299.9614 and 40 CFR §§264.175(b)(1) and 270.15(a)(1)]

Information on the sufficiently imperviousness of the container containment system has been provided in Attachment A1, Appendix A1-4. The containment area is routinely inspected and any cracks or gaps in seals are immediately repaired.

C1.F.1(b) Containment System Drainage
[R 299.9614 and 40 CFR §§264.175(b)(2) and 270.15(a)(2)]

Design drawings showing the containment base slope and containment system has been designed to prevent containers from contacting accumulated liquids and is provided in Attachment A1, Appendices A1-4 and A1-5.

C1.F.1(c) Containment System Capacity
[R 299.9614 and 40 CFR §§264.175(b)(3) and 270.15(a)(3)]

Design drawings showing the containment system has been designed to provide 10 percent of the volume of containers or the volume of the largest container has been provided in Attachment A1, Appendices A1-4 and A1-5.

The loading/unloading bay sump measures 6 feet by 24 feet by 5 feet. The lowest point of the bay area (the floor level grating) is 9 inches below the outer edges of the bay. The containment volume of the bay is 9,000 gallons. The 9,000-gallon capacity of the bay well exceeds the requirement that the secondary

containment be able to contain 10 percent of the volume of waste stored in the area. Attachment A1, Appendix A1-4 contains the calculations of the volume of the secondary containment system.

C1.F.1(d) Control of Run-on

[R 299.9614 and 40 CFR §§264.175(b)(4) and 270.15(a)(4)]

Run-on is prevented from entering the container storage area by the roof of the building (which extends over the drum storage area) and by the concrete sloping away from the container storage area. The concrete area outside of the storage building provides for drainage away from the drum storage area and towards the storm sewer.

C1.F.1(e) Removal of Liquids from Containment System

[R 299.9614 and 40 CFR §§264.175(b)(5) and 270.15(a)(5)]

The containment area is inspected daily and, in the unlikely event that any accumulated liquids are present, these liquids will be removed within 24 hours. If the source of the liquids is known to contain hazardous waste constituents, the liquids will be drummed and stored in the area until arrangements have been made for disposal at a licensed hazardous waste disposal facility. If the source of the liquid is not known, or if it is suspected that the liquid does not contain hazardous waste constituents, the liquid will be analyzed for hazardous constituents as described in Attachment A3, Section A3.A.2 of this application. If no hazardous constituents are detected in the analysis, the water is pumped to the combined storm/sanitary sewer which go to the Great Lakes Water Authority (GLWA) treatment plant prior to release to the Detroit River. If the accumulated liquid is found to contain hazardous constituents, the liquid is drummed and stored in the area until arrangements have been made for disposal at a licensed hazardous waste disposal facility.

C1.F.2 Secondary Containment System Design and Operation for Containers with No Free Liquids

[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(1)]

This Section is not applicable, the container storage area was designed to store containers with liquids.

C1.F.2(a) Containment System Drainage

[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(2)]

This Section is not applicable, the container storage area was designed to store containers with liquids.

C1.F.2(b) Container Management

[R 299.9614 and 40 CFR §§264.175 and 270.15(b)(2)]

This Section is not applicable, the container storage area was designed to store containers with liquids.

C1.G SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE

[R 299.9614 and 40 CFR §§264.176 and 270.15(b)(2)]

Attachment A6, Appendix A6-1 and A6-2 contain procedures to prevent the reaction of ignitable, reactive and incompatible waste including how to manage hazardous waste that is incompatible with any waste or other materials stored nearby in other containers or tanks. Attachment A1, Appendix A1-5 contains

engineering drawing of the container containment system. Drawings show containers holding ignitable or reactive waste are located at least 15 meters (50 feet) from the facility's property line.

C1.H SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

[R 299.9614 and 40 CFR §§264.177(c) and 270.15(b)(2)]

Attachment A6, Appendix A6-1 and A6-2 contain procedures to prevent the reaction of ignitable, reactive and incompatible waste including how to manage hazardous waste that is incompatible with any waste or other materials stored nearby in other containers or tanks. Attachment A1, Appendix A1-5 contains engineering drawing of the container containment system.

C1.I CLOSURE

[R 299.9614 and 40 CFR §264.178]

The closure of the container storage area is addressed in Attachment A11, the Closure and Postclosure Care Plan. If the facility is undergoing closure, the Closure Care Plan described in Attachment 11 will be followed to ensure that all hazardous waste and hazardous waste residues will be removed from the container storage area and the area's containment system. All residues will be decontaminated if removed in accordance with the plan.