FORM EQP 5111 ATTACHMENT A6
PREPAREDNESS AND PREVENTION

This document is an attachment to the Gage Products Company's, limited storage facility (Gage LSF) 2024 RCRA permit renewal application 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 299.9504, R 299.9508, and R 299.9606 and Title 40 of the Code of Federal Regulations (CFR) §§264.30 through 264.37 establish requirements for preparedness for and prevention of releases of hazardous wastes or constituents at hazardous waste management facilities. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application attachment addresses requirements for preparedness for and prevention of releases of hazardous wastes or constituents at the following hazardous waste management facility at Gage LSF located in Ferndale, Michigan.

(Check as appropriate)

Applicant for Operating License for Existing Facility:

- ☒ No waiver requested
- ☐ Waiver requested for one or more units for required equipment
- ☐ Waiver requested for one or more units for required aisle space

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

- ☒ No waiver requested
- ☐ Waiver requested for one or more units for required equipment
- ☐ Waiver requested for one or more units for required aisle space

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

LIST OF APPENDICES

INTRODUCTION

Gage LSF has implemented measures and equipment that comply with the facility preparedness and prevention requirements and does not wish to request a waiver from preparedness and prevention requirements under 40 CFR 264, Subpart C. Requirements of this subpart are primarily addressed in Attachments C1 (Use and Management of Containers), C2 (Tank Systems), A5 (Inspection Requirements), and A7 (Contingency Plan) of this application.

Additional measures required by 40 CFR 270.14(b)(8), "Preventive Procedures, Structures and Equipment" and 40 CFR 270.14(b)(9), "Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes" are contained in Appendix A6-1 and A6-2 of this attachment.

A6.A REQUIRED EQUIPMENT

[R 299.9606 and 40 CFR §264.32]

A6.A.1 Internal Communication System

[R 299.9606 and 40 CFR §264.32(a)]

Internal communications are discussed in Attachment A1 (Part A and B) and Attachment A7, Appendix A7-3 (Emergency Equipment Information).

A6.A.2 Emergency Response Communication System
[R 299.9606 and 40 CFR §264.32(b)]

Emergency response communications are discussed in Attachment A1 and Attachment A7, Appendix A7-3.

A6.A.3 Fire, Spill, and Decontamination Equipment
[R 299.9606 and 40 CFR §264.32(c)]

Fire, Spill, and Decontamination Equipment are discussed in Attachment A7, Appendix A7-3.

A6.A.4 Adequate Water Volume
[R 299.9606 and 40 CFR §264.32(d)]

Adequate water volumes are discussed in Attachment A7, Appendix A7-3.

A6.B TESTING AND MAINTENANCE OF EQUIPMENT
[R 299.9606 and 40 CFR §264.33]

Testing and maintenance of equipment are discussed in Attachment A5, Attachment C1, and Attachment C2.

A6.C ACCESS TO COMMUNICATIONS OR ALARM SYSTEM
[R 299.9606 and 40 CFR §264.34]

Access to communications or alarm systems are discussed in Attachment A7 Appendix A7-3.

A6.C(1) Multiple Employees Present
[R 299.9606 and 40 CFR §264.34(a)]

Access to communications or alarm systems for multiple employees present are discussed in Attachment A7 Appendix A7-3.

A6.C(2) Single Employee Present
[R 299.9606 and 40 CFR §264.34(b)]

Access to communications or alarm systems for a single employee present are discussed in Attachment A7 Appendix A7-3.

A6.D REQUIRED AISLE SPACE
[R 299.9606 and 40 CFR §264.35]

Aisle space requirements are addressed in Attachments C1, C2, and A7 Appendix A7-3.

A6.E STATE AND LOCAL AUTHORITIES
[R 299.9606 and 40 CFR §264.37]

A6.E.1 Arrangements with State and Local Authorities
[R 299.9606 and 40 CFR §264.37(a)(1)]

Arrangements with State and Local Authorities, including police, fire departments, hospitals and emergency response teams, is discussed in Attachment A, Appendix A7-1 (Documentation of Arrangements with Local Authorities).

A6.E.2 Refusal of State or Local Authorities to Enter into Emergency Response Agreements
[R 299.9606 and 40 CFR §264.37(b)]

Arrangements with State and Local Authorities are discussed in Attachment A7, Appendix A7-1.

Appendices

Appendix A6-1

Prevention Procedures, Structures, and Equipment

Appendix A6-1

PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT [40 CFR 270.14(B)(8)]

1.1 Unloading/Loading Operations [40 CFR 270.14(b)(8)(i)]

Tank Trucks, Storage Tanks and Containers:Hazardous wastes are delivered to the bulk tank storage area of the Limited Storage Facility via bulk tank trailers. Wastes are delivered to the container storage building of the Limited Storage Facility via 55-gallon drums. Incoming waste loads enter the facility at the Silman Avenue gate and proceed to the enclosed truck and container unloading area within the Limited Storage Facility. Two of the three bays are designed for unloading bulk tankers, with one bay being designed for the unloading of containers. The following standard operating procedures for material loading/unloading transfers are implemented whenever bulk or containerized wastes are loaded/unloaded at the Gage Products facility:

- After the tank truck has come to a complete stop, the brakes are set, the wheels chocked, and for bulk tankers the vehicle is grounded.

- Verification of the manifest and the approved profile is completed prior to unloading.

- Sampling of each load and waste characterization is performed before a tank trailer or any containers are unloaded.

- Prior to transfer operations, the designated tank is checked by visual observation to ensure there is sufficient capacity for a material transfer. Prior to unloading containers all aisle ways are confirmed clear and specific containers to be unloaded are located and visually identified.

- The driver (or facility personnel) remains in direct visual observance of transfer operations at all times during the unloading process. The operation is not left unattended.

- All ancillary equipment used in the unloading process is inspected to ensure that flexible hosing and fittings are in good condition and securely connected between the trailer or drum and hard piping to the bulk tank prior to beginning unloading. Then the safety release valve on the truck is released or the release valve or bung on the drum is slowly cracked to relieve any buildup of pressure in the container. All hoses are also inspected for leakage after unloading has commenced, during the unloading process, and after the procedure has been completed. All containers are inspected during and following unloading procedures for the purpose of locating any container leaks that may have developed so over packing and leakage cleanup, if any, can be addressed immediately. There are caution signs posted stating that smoking during loading/unloading operations is not allowed. Pails and absorbent materials are available in case a leak develops during all unloading procedures.

- Personnel working in the area wear a hard hat, protective gloves and appropriate eye protection during the procedure while opening and closing valves and connecting or disconnecting hoses.

- After checking that enough space is available in the designated bulk tank, valves are opened and material is pumped from the tank trailer into processing equipment or to a designated bulk storage tank following a work instruction. The tank trailer/container number and contents on the shipping paper is cross checked with the contents in the intended receiving storage tank to

ensure differing or incompatible products are not mixed. Container unloading is started by utilizing the drum transfer pump to pump material into a subsequent bulk tank or into the recycling system. All mechanical equipment is checked and inspected during the transfer process to ensure that it's functioning properly.

- Once transfer unloading is complete, the trailer is inspected and all means are used to remove any sediment which remains along the walls and bottom of the tanker. If trailer cannot be emptied, personnel will notify transportation so that an off-site clean-out can be arranged with a licensed facility. Also the volume of material unloaded is recorded.

- Finally, valves are closed, flexible hose is disconnected, grounding cable is removed and hatches or drum lid are closed re-secured. Tanker trailers are then moved from under the awning containment area and parked in a non-restricted area. Empty drums are returned to storage prior to being sent to a drum reconditioner. If any spills have occurred during the transfer operations, the material will accumulate in the blind sump which is located in the center of the unloading area. Each tank is equipped with a high-level alarm control which has two settings to prevent spills and overflows from the bulk storage tanks. At the first setting, an audible alarm occurs. When the level for the second setting is reached, the transfer is automatically shut off, interrupting the flow of material from the truck into the tank. The drum unloading personnel monitor the transfer and control how much material is transferred into the receiving tank. Material transfer level in the bulk tank can be verified between each drum transfer if necessary.

Figures A-1and S-4 show the design details and layout of each storage area. Appendix D-2 provides the basis of design for each storage area and Appendix D-3 provides a demonstration for secondary containment for the bulk tank storage area. In summary, the container storage building and bulk tank storage portion of the Gage facility are designed as follows:

The container storage building measures approximately 62.8' x 66'. There are two main sections of this building, the container storage area and the tank truck loading/unloading area. The container storage area is located along the western side of the building, and measures approximately 54'4" x 20'7". It has room for six rows of containers, and the floors slopes toward a sump which measures 2' x 6' x 3', and has a 695 gallon capacity. In the container storage area, the drums are arranged in single rows of pallets. If necessary, pallets are stacked two layers high. A 24-inch aisle is maintained between each row, allowing for inspection access. An aisle measuring no less than 12 feet is maintained to allow for the access of emergency equipment, if necessary. With regards to squirt protection, drums are stored from 3'-6' feet from storage area curbing depending upon their storage arrangement (stacked or single layer configuration) per the squirt calculations (refer to Section D). The storage area is enclosed with panels to allow for natural ventilation. There are four (4) loading/unloading pump stations within the container storage building, located along the south wall and one container-unloading bay. The floor of the loading/unloading area slopes towards the center of the building, where there is a sump which measures 6' x 24' x 5', and has a 9,000 gallon capacity.

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 bay, to the secondary containment, a blind sump. The truck bay sump measures 6' x 24' x 5'. The lower point of the bay area (at the drain) is 9 inches below the outer edges of the bay. The containment volume of the bay is 9,000 gallons and well exceeds the requirement that the secondary containment system contain 10% of the volume of waste stored in the area. 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 drum storage area and towards the storm sewer.

The bulk tank storage area consists of five vertical tanks and measures 49' x 36'. Three tanks have volume capacities of 6,000 gallons each, the fourth tank has a 3,250 capacity and the fifth tank has a 1,000-gallon capacity for a maximum storage capacity of 22,250 gallons. All tanks are located within a sheltered secondary containment structure consisting of a sloped concrete floor, and concrete walls to provide sufficient area to contain 150% (9,000 gallons) of the largest tank within the storage area. The tank storage area has a micro-silica concrete floor and walls and a structural steel framed pitched roof shelter to prevent rain from entering the area. All tanks are equipped with protective sheathing squirt protection, which has been installed around the outside perimeter of the bulk storage tanks. There are also overfill protection devices on each bulk storage tank. The bulk tank storage area is located approximately 43 feet from Gage's south property line.

The container storage building, drum storage, tank truck areas and the bulk tank farm are constructed of micro silica concrete from W.R. Grace & Co. ("Force 10,000"), corrosion resistant linings (Ceilcrete 6650B), and acid and base resistant linings (Ceilcrete6650AR) in the storage area for corrosives. Manufacturer’s product specification information is contained in Appendix D-2.

During unloading operations, any spills or leaks are promptly removed by the use of industrial absorbent or washed into a sump located in the unloading area. The unloading area floor is designed to contain and prevent the runoff of spilled materials. The entire unloading area, with a total containment capacity of 9,000 gallons, is sloped toward the centrally located sump.

The contained unloading area also provides the secure transfer of on-site generated hazardous wastes. Hazardous wastes produced during the recycling process are temporarily stored in segregated waste tanks located in an area immediately adjacent to the Limited Storage Facility tank farm. Ancillary equipment leading from these hazardous waste storage tanks pump those wastes into bulk tankers or railcars for off-site disposal.

Container Storage Facility:

Containers of hazardous wastes are delivered to the third bay in the unloading area. As indicated in Figure A-1, the third bay is designed to unload freight vans. A dock leveler provides safe handcart or forklift truck off-loading of incoming containers. All incoming containers are checked against the manifest for proper labeling and marking. Samples are taken and analyzed for proper waste characterization per the Waste Analysis Plan. Following acceptance, 55-gallon drums are loaded onto wooden pallets and moved into the container storage area. The designed containment of the container storage area, including floor area is 2,750 gallons. The container unloading dock, as noted, is part of the unloading area, which is designed to contain any spills or leaks that may occur during unloading operations. The container unloading dock is equipped with a hydraulic leveler and bumper. The unloading of containerized hazardous wastes follow procedures similar to those outlined for unloading bulk tankers.

1.2 Runoff [40 CFR 270.14(b)(8)(ii)]

Concrete dike walls have been constructed to enclose and contain the storage tanks and prevent the escape of any spill or contaminated runoff (see Section D-1). In addition a roof covers the tank farm. All accumulated precipitation noted during an inspection will be removed from the secondary containment system within 24 hours, or in as timely a fashion as possible, and disposed of in accordance with all

applicable state and federal regulations. Surface runoff, from the area immediately surrounding the Limited Storage Facility, is controlled by concrete surfaces that direct runoff to on-site and street drains.

Spill control structures, including the dike walls surrounding the tank area and the specially designed, enclosed Limited Storage Facility, are inspected daily. Those daily inspections also check the unloading and container storage areas and their respective spill collection sumps for corrosion, cracks, and signs of spills and leaks.

Runoff from the container storage area is prevented due to the enclosed nature of the Limited Storage Facility and the containment design where the floor is sloped toward the sump. Rows of pallets are placed 24 inches apart to allow adequate aisle space between rows for access of inspection personnel. A large aisle (at least 12 feet) is maintained to allow for unobstructed movement of fire-protection equipment or spill-control equipment through the drum storage area. A graded external concrete ramp allows smooth and accessible movement of forklift trucks in and out of the Limited Storage Facility. A smooth concrete aisle way leads from the unloading dock to the container storage area.

1.3 Water Supplies [40 CFR 270.14(b)(8)(iii)]

The contamination of water supplies is averted at the facility by the prevention of spills, leaks, or contaminated runoff from discharging onto unprotected ground. The containment structures, drainage control features, and spill response procedures all serve to reduce the potential of water supplies becoming contaminated from waste-handling activities at the site.

1.4 Equipment and Power Failure [40 CFR 270.14(b)(8)(iv)]

Hazardous-waste transferring operations, into the recycling process or into tank storage, rely on properly functioning equipment and a reliable supply of electricity. All waste-transfer equipment is checked prior to starting up the transfer process to assure that it is in good operating condition. Material is transferred according to an operating procedure that outlines steps to be followed when beginning the waste-transfer processes. Any malfunctioning equipment will be identified and corrected. Routine maintenance, according to an established schedule, also assures that equipment in good condition is available during the waste-transfer processes.

If a power failure occurs at the facility, all waste-transfer processes cease. No adverse results will occur from a power failure.

1.5 Personal Protection Equipment [40 CFR 270.14(b)(8)(v)]

General information on the major hazardous constituents of the hazardous waste accepted at the Gage Products' Limited Storage Facility is provided on the waste profiles. Information for the various chemicals regarding toxicity, fire and explosion hazards, protective-equipment recommendations, and first aid can be found on Material Safety Data Sheets for the individual constituents. Available protective equipment is presented in the Contingency Plan (Section G). Use of protective equipment is covered in the initial and annual personnel training programs (Section H) which satisfies the Occupation Safety and Health Standards in 29 CFR 1910 Subpart I - Personal Protective Equipment.

Appendix A6-2

Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes

APPENDIX A6-2
PREVENTION OF REACTION OF IGNITABLE, REACTIVE AND INCOMPATIBLE WASTES
[40 CFR 270.14(b)(9) and 264.17]

Introduction

A variety of precautions have been implemented at Gage Products Company's limited storage facility (Gage LSF) to prevent the potential reaction between ignitable, toxic, and corrosive wastes. One of the first of these precautions is the characterization of incoming wastes through a thorough waste-analysis program that provides accurate and precise information on the physical and chemical properties of the waste so that the waste can be handled safely according to its identified properties. The waste-acceptance process also assures that certain waste types not accepted by Gage LSF, such as explosive wastes. Waste characterization determines which wastes can be compatibly and safely stored or mixed. Based on waste characterization, Gage LSF will reject shipments if it is determined that the waste cannot be safely handled by the facility. Incoming wastes are also subject to segregation by information contained within the shipment manifest and the verification of that information by pre-unloading Fingerprint Analysis. Based on this pre-unloading information, incoming wastes are only stored with compatible wastes in bulk storage and segregated to specified areas within the container storage area.

Areas at the facility where ignitable wastes are being stored are appropriately identified through the use of labels and signs. "No Smoking" signs are prominently displayed wherever a hazard exists from ignitable wastes. The wastes are also separated or protected from sources of ignition, such as open flames, smoking, cutting, and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, and radiant heat. If any type of hot work is to be done in the Gage LSF, a "hot work permit" must be issued by a Permit Authorizing Individual to ensure that all work within the facility conforms to these necessary hazard-prevention procedures.

1.1 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes [40 CFR 264.17(a)]

As a precaution to eliminate ignition, the solvent wastes are stored in containers that are approved by the Department of Transportation or in bulk storage tanks that are compatible with the wastes and are stored in areas away from compounds with which they are incompatible. The wastes are also separated or protected from sources of ignition that include open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, static electricity, and radiant heat. At all times, smoking and open flame are not allowed at the facility without an issued “hot work” permit. "No Smoking" signs are conspicuously placed around the Gage LSF. If any type of hot work is to be done in this area, a "hot work” permit must first be obtained from appropriate personnel. This permit ensures that all work within the areas will conform to these necessary hazard-prevention conditions.

1.2 General Precautions for Handling Ignitable or Reactive Wastes or Accidentally Mixing Incompatible Wastes [40 CFR 264.17(b)]

The procedures and precautions discussed in Appendix A6-1 are used when handling ignitable wastes and incompatible wastes at the Gage LSF.

1.3 Management of Ignitable or Reactive Wastes in Containers (40 CFR 264.176)

Precautions taken in the Gage LSF's drum storage area to prevent accidental fire and explosion include the proper storage of containers (e.g., stacking, aisle space, and labeling and sealing of containers), the design of the containment areas with sumps to collect any spilled materials, and the posting of appropriate warning signs. In addition, fire and spill-control equipment is available throughout the Gage LSF building. The entire Gage LSF building is protected by an overhead sprinkler system. The contingency plan, Attachment A7, provides a listing of the location and type of emergency equipment at each location.

Prior to storage, each container is checked for appropriate labels and markings. An in-house label which indicates an inventory number for the container, the contents of the container, the date it was received, and the carrier is also applied to each container. Containers are stored on pallets to minimize contact with precipitation, leaks or spills; and they are never stacked more than two containers high (see Attachment A5, Appendix A5-5, Drum Storage Configuration). A minimum of 12 feet is maintained in the aisle to allow access for a forklift without risk of damaging containers by scraping or puncturing.

The container storage area is located approximately 90 feet from the closest company property line.

1.4 Management of Incompatible Wastes in Containers (40 CFR 264.177)

All incoming containerized wastes are subject to a thorough pre-shipment waste characterization process and to an on-site scrutiny of the manifest and container labels. The incoming wastes must also be verified by Fingerprint Analysis. Based on the information obtained from these several sources the wastes are segregated accordingly within the container storage area.