

ATTACHMENT

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Subject: PPG Industries Ohio, Inc.  
Ohio RCRA Permit Number 01-65-0641  
USEPA RCRA Identification Number OHD004304689  
RCRA Permit Renewal Application Section M

PPG Industries Ohio, Inc. (PPG) owns and operates the Energy Recovery Unit (ERU) that is subject to federal and state regulations applicable to the incineration of hazardous waste.

Please find enclosed Section M Subpart BB Air Emission Standards for Equipment Leaks and Subpart CC Air Emission Standards for Tanks, Surface Impoundments and Containers submitted to fulfill the RCRA permit renewal application.

Thank you, and please call if you have any questions.

*Maura C. LaGreca*

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cc: L. Leffler - ERU

Section M Subpart BB Leak Detection and Repair Program

*chronological order*

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M. Introduction

This section of the Permit Application provides information required in 40 CFR 270.25 for the Leak Detection and Repair Program (LDRP) at the PPG Circleville resin manufacturing facility and the Energy Recovery unit.

M.1 Hazardous Waste Management units

PPG Circleville has equipment regulated by 40 CFR 264 Subpart BB located within the following hazardous waste management units that are subject to the permitting requirements of 40 CFR Part 270:

Energy Recovery unit material handling operations, which consist of:

Tank Wagon unloading equipment; and

Container Processing Area (drum pumpout pumps and piping); and

Transfer piping and pumps associated with storage tanks; and

Waste feed piping and equipment to incinerator.

Energy Recovery Unit Incinerator System.

Manufacturing Facility, Aqueous Waste Storage Tank ancillary equipment.

Manufacturing Facility, organic waste storage tank ancillary equipment, which consists of:

Storage Tank 1707 ancillary equipment; and

Storage Tank 1708 ancillary equipment; and

Storage Tank 1709 ancillary equipment; and

Storage Tank 1710 ancillary equipment.

## M.2 Methods of Compliance

### M.2.1 Applicability

Analyses of waste streams which contact equipment in each of the hazardous waste management units listed above have been examined to determine applicability of Subpart BB. This evaluation was done in accordance with the test methods and procedures provided in 40 CFR 264.1063(d). Documentation of the findings of this investigation are included in the PPG Circleville facility operating log and can be summarized as follows:

Analysis of residues generated from incineration at the Energy Recovery unit during Principle Organic Hazardous Constituents (POHC) tests demonstrate that organic concentration of hazardous waste contacting equipment in the Energy Recovery unit Incineration System is less than 10 percent by weight and Subpart BB is not applicable.

Hazardous waste with organic concentration of at least 10 percent by weight contacts equipment in all of the other hazardous waste management units listed above. Equipment in these units is managed as light liquid or gas/vapor service. All equipment for which periodic inspection and monitoring is required is tagged with an equipment identification number which corresponds to the Equipment ID Number on Equipment Lists in Attachment 2.

### M.2.2 Leak detection monitoring

#### M.2.2.1 Pumps, light liquid service

Pumps in light liquid service designated as "Monthly LDRP 264.1052(a)" under

Methods of Compliance in Equipment Lists in Attachment 2 shall be monitored monthly to

detect leaks using a TLV sniffer in accordance with 40 CFR 60 Reference Method 21. If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected. Each of these pumps will also be checked by visual inspection each calendar week for indications of liquid dripping from the pump seal.

If a leak is detected (either visually or via instrument reading), the leaking pump is tagged and repaired as soon as practicable. A first repair attempt shall be made within 5 days, and the repair shall be completed within 15 days except as provided in 264.1059.

#### M.2.2.2 Agitators, light liquid service, top mounted

Top mounted agitators in light liquid service designated as "Monthly LDRP 264.1052(a)" under Methods of Compliance in Equipment Lists in Attachment 2 shall be monitored monthly to detect leaks using a TLV sniffer in accordance with 40 CFR 60 Reference Method 21. If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected.

If a leak is detected the leaking agitator is tagged and repaired as soon as practicable. A first repair attempt shall be made within 5 days, and the repair shall be completed within 15 days except as provided in 264.1059.

#### M.2.2.3 Agitators, light liquid service, side mounted

Side mounted agitators in light liquid service designated as "Monthly LDRP 264.1052(a)" under Method of Compliance in Equipment Lists in Attachment 2 shall be monitored monthly to detect leaks using a TLV sniffer in accordance with 40 CFR 60

Reference Method 21. If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected. Each of these agitators will also be checked by visual inspection each calendar week for indications of liquid dripping from the agitator seal.

If a leak is detected (either visually or via instrument reading), the leaking agitator is tagged and repaired as soon as practicable. A first repair attempt shall be made within 5 days, and the repair shall be completed within 15 days except as provided in 264.1059.

#### M.2.2.4 Pumps, light liquid service, seal less

Pumps in light liquid service, designated as "No Detectable Emissions 264.1052(e)11 under Method of Compliance in Equipment Lists in Attachment 2, have no externally actuated shaft penetrating the pump housing. These pumps are initially tested for compliance using a TLV sniffer in accordance with 40 CPR 60 Reference Method 21 and operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background. These pumps shall be annually retested for compliance.

#### M.2.2.5 Pressure Relief Devices in gas/vapor service

Pressure relief devices, designated as "Monitor after pressure release" under Method of Compliance in Equipment Lists in Attachment 2 operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background except during a pressure release.

After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as soon as practicable, but no later than 5 calendar days after each pressure release.

#### M.2.2.6 Sampling connections

Pipe fitting of existing sampling connections are designed to meet the requirements of 40 CFR 254.1055 (sampling connection systems) and 264.1056 (open-ended valves or lines). The design allows inert gas under pressure (nitrogen) to purge any waste in the sample line back into the storage tank in order to obtain a representative sample, and vent the sample bottle to the storage tank head space while it is being filled.

#### M.2.2.7 Open-ended valves or lines

Each open-ended valve or line in applicable hazardous waste management units shall be equipped with a cap, blind flange, plug, or a second valve. The open ends shall be sealed at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

#### M.2.2.8 Valves in Gas/Vapor or Light Liquid Service

PPG has elected to comply with the alternative standards of 40 CFR 264.1061 for valves which allow no greater than 2 percent of the valves to leak and has notified the



Regional Administrator (see Attachment 1). Affected valves are designated in Attachment 2 Equipment Lists under Method of Compliance as "Alternative standard 264.1061".

PPG will conduct a performance test of affected valves prior to expiration of the existing RCRA Permit, and annually thereafter. All valves within a hazardous waste management unit shall be monitored within one week to detect leaks using a TLV sniffer in accordance with 40 CFR 60 Reference Method 21. If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected. The leak percentage shall be determined by dividing the number of affected valves for which leaks are detected by the total number of affected valves within the hazardous waste management unit. Any valve leaks detected will be tagged and repaired as soon as practicable. A first repair attempt shall be made within 5 days, and the repair shall be completed within 15 days.

If PPG decides to no longer comply with the 40 CFR 264.1061 alternative standards for any hazardous waste management unit, PPG will notify the Regional Administrator in writing that the work practice standard described in 40 CFR 264.1057 (a) through (e) will be followed.

#### M.2.2.9 Flanges and other connectors

Flanges and other connectors shall be monitored within 5 days using a TLV sniffer in accordance with 40 CFR 60 Reference Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected. If a leak is detected, it will be tagged and repaired as soon as practicable. A first repair attempt shall be made within 5 days, and the repair shall be completed within 15 days.

### M.3 Leak Detection Test Methods and Procedures

A description of the leak detection method and the equipment currently used to comply with 40 CFR 264.1063(b) and (c) is included as Attachment 3.

### M.4 Recordkeeping Requirements

Documentation is recorded in the facility operating record to include: Equipment lists and location reference drawings shown in Attachment 2, a summary equipment list of all equipment designated for no detectable emissions under the provisions of 264.1052(e) signed by the owner or operator (see Attachment 2), and determination of percent by weight total organics in the waste stream of each affected hazardous waste management unit.

Inspection/monitoring lists for equipment leak detection and performance tests required by the 264.1061 alternative standards are generated from the facility's preventive maintenance management system at the frequency required for each type of equipment cited above. Completed inspections, monitoring, and performance tests are maintained in the facility operating record.

When a leak is detected as specified in 264.1052, 264.1057 and 264.1058:

1. A weatherproof and readily visible identification, marked with the equipment identification number, the date the evidence of a potential leak was found, if applicable, and the date the leak was detected is attached to the leaking equipment.
2. The identification on equipment, except on a valve, may be removed after it has been repaired.
3. The identification on a valve is removed only after it has been monitored for 2 successive months and no leak has been detected during those 2 months.

When a leak is detected, the following information is recorded in an inspection log that is maintained as part of the PPG Circleville facility operating record for no less than three years:

1. The instrument, operator, and equipment identification number.
2. The date evidence of a potential leak was found if applicable.
3. The date leak was detected and the dates of each attempt to repair the leak.
4. Repair methods applied in each attempt to repair the leak.
5. "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm.
6. "Repair delayed" and the reason for delay if the leak is not repaired within 15 calendar days after discovery of the leak.
7. Documentation supporting the delay of repair of a valve in compliance with 264.1059(c).
8. The signature of the owner/operator (or designate) whose decision it was that the repair could not be effected without a hazardous waste management unit shutdown.

9. The expected date of successful repair of the leak, if a leak is not repaired within  
15 calendar days.

Section M

Attachment 1

Notification of Regional Administrator

Section M

Attachment 3

Leak Detection Method

### Leak Detection Method

The instrument used to monitor equipment for leak detection shall meet the performance criteria for 40 CFR Part 60 Reference Method 21. The instrument currently used is a catalytic oxidation type, Bacharach Instrument Company, model 0023-7356 TLV Sniffer.

The instrument shall be calibrated before use on each day of its use for compliance monitoring and performance testing. The instrument will be warmed up for ten minutes and zero adjustment will be made. The instrument will be calibrated by introducing calibration gas value. Calibration gas will be propane (response factor 1.14) at 500 ppm for monitoring equipment designated for no detectable emissions under 264.1052(e) or pressure relief devices 264.1054. Propane and 10,100 ppm will be used for calibration when monitoring all other equipment in this program.

To monitor equipment for leak detection, the instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21. Examples of application of this Method to particular equipment types are as follows:

**Valves:** Place probe at the interface where the valve stem exits the packing gland and sample the circumference accessible within the configuration of the valve bonnet. Also place the probe at the interface of the packing gland take-up flange seat or packing nut and sample the periphery. Also sample faces of any multipart valve body assembly where leaks could occur.

**Centrifugal or Rotating Displacement Pumps and Rotating Agitators:** Place probe within 1 cm of the pump shaft and seal or packing gland interface and sample the circumference accessible within the configuration of the pump housing.

**Air Diaphragm Pumps:** For all gasketed pump housing joint surfaces which contain the material being pumped, place the probe at the outer edge of the flange-gasket interface and sample while traversing the edge of the interface.

**Pressure Relief Devices:** Traverse sealing gasket seat interface if accessible. For a device equipped with an outlet extension, or horn, place the probe at approximately the center of the exhaust area to atmosphere.

**Flanges and Other Connections:** For welded flanges, place the probe at the outer edge of the flange-gasket interface and sample the circumference of the flange. Sample other types of joints, such as threaded connections, with a similar traverse.

When equipment is tested for compliance with no detectable emissions as require in 264.1052(e) or 264.1054, the background level shall be determined as set forth in Reference Method 21. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.