Re: Permit to Install
Pickaway County
Application No. 01-549

June 1, 1983

PPG Industries Inc.
P. O. Box 457
Route 23 South
Circleville, Ohio 43113

Attention: John Richter

CERTIFIED MAIL

Dear Sir:

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions I urge you to read it carefully.

You are hereby notified that this action by the Director is final and may be appealed to the Environmental Board of Review pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Board of Review within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency and the Environmental Law Division of the Office of the Attorney General within three (3) days of filing with the Board. An appeal may be filed with the Environmental Board of Review at the following address:

Environmental Board of Review
250 East Town Street, Room 101
Columbus, Ohio 43215

Very truly yours,

Patricia P. Walling

Patricia P. Walling, Manager
Authorization & Compliance Section
Division of Air Pollution Control

Ohio Environmental Protection Agency
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JUN 22 1983

PPW/cm

cc: U.S. EPA
Central District Office - Industrial Wastewater
Central District Office - Air
Central Office - Bob Hodanbosi Steve White
Bob Phleps Peggy Vince

OhioEPA

Re: Permit to Install
Application No. 01-549
Pickaway County

PPG Industries, Inc.
P.O. Box 457
Route 23 South
Circleville, Ohio 43113

November 29, 1984

Ohio Environmental Protection Agency
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NOV 30 1984

Attention: John Richter

Dear Mr. Richter:

Your request for an extension of time for the Permit to Install #01-549 issued to you on June 1, 1983 is hereby granted.

Pursuant to rule 3745-31-06(C) of the Ohio Administrative Code, a permit to install can be extended on a one time basis by twelve (12) months from the date upon which it would have otherwise expired (December 1, 1984). Therefore, this permit to install will now terminate on December 1, 1985.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Board of Review pursuant to section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Board of Review within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency and the Environmental Law Division of the Office of the Attorney General within three (3) days of filing with the board. An appeal may be filed with the Environmental Board of Review at the following address:

Environmental Board of Review
250 East Town Street, Room 101
Columbus, Ohio 43215

Very truly yours,

Robert H. Maynard
Director
RHM/gs

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Vivian Davis Date 11/30/84

cc: U.S. EPA
Bob Hodanbosi, AQMPS
Bob Phelps, Public Wastewater Pretreatment
Steve White, DSHWM
Bob Miles, CDO
Ed Lim, HWEAB

Permit to Install
Terms and Conditions

Application No. 01-549

APS Premise No. 0165000007

Permit Fee: $7,295.00

Name of Facility: PPG Industries, Inc.

Person to Contact: John Richter

Address: P. O. Box 457
Route 23 South
Circleville, Ohio 43113

Location of proposed source(s): 3½ miles south of Circleville on Route U.S. 23, Circleville, Ohio

Description of proposed source(s): New air contaminant sources for a waste treatment and resource recovery facility with associated waste water pre treatment.

Date of Issuance: June 1, 1983

Effective Date: June 1, 1983

The above named entity is hereby granted a permit to install for the above described source(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described source(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

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EPA 3156

Substantial construction for installation must take place within eighteen months of the effective date of this permit. This deadline may be extended by up to twelve months, if application is made to the Director no less than sixty days before the expiration of this permit and the party shows good cause for any such extension.

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, examining records or reports pertaining to the construction, modification or installation of the above described source of environmental pollutants.

The proposed source shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

The specified permit fee must be remitted within 15 days of the effective date of this permit to install.

The appropriate District Office of the Ohio EPA or Local Air Pollution Control Agency shall be notified, in writing as to (a) the construction starting date (b) the construction completion date and (c) the date the facilities were placed into operation.

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A. SOURCE IDENTIFICATION

1. This permit shall apply to only those sources identified below:

	Source Identification	Ohio EPA Source Number
(a)	ERU Incinerator	N002
(b)	New 1000 Hp Back-up Boiler	B006
(c)	15,000 Gallon Aqueous Process Tank No. 1501	T002
(d)	15,000 Gallon Aqueous Process Tank No. 1502	T003
(e)	15,000 Gallon Aqueous Process Tank No. 1503	T004
(f)	15,000 Gallon Aqueous Process Tank No. 1504	T005
(g)	15,000 Gallon Aqueous Process Tank No. 1505	T006
(h)	15,000 Gallon Aqueous Process Tank No. 1506	T007
(i)	15,000 Gallon Aqueous Process Tank No. 1515	T008
(j)	15,000 Gallon Aqueous Process Tank No. 1516	T009
(k)	15,000 Gallon Aqueous Process Tank No. 1517	T010
(l)	15,000 Gallon Aqueous Process Tank No. 1518	T011
(m)	15,000 Gallon Aqueous Process Tank No. 1519	T012
(n)	15,000 Gallon Aqueous Process Tank No. 1520	T013
(o)	15,000 Gallon Aqueous Process Tank No. 1511	T014
(p)	15,000 Gallon Aqueous Process Tank No. 1512	T015
(q)	15,000 Gallon Aqueous Process Tank No. 1513	T016
(r)	15,000 Gallon Aqueous Process Tank No. 1514	T017
(s)	2100 Gallon Control Solvent Feed Tank No. 1521	T018
(t)	2100 Gallon Control Solvent Feed Tank No. 1522	T019
(u)	1700 Gallon Drum Pumpout Tank No. 1523	T020
(v)	1700 Gallon Drum Pumpout Tank No. 1524	T021
(w)	1700 Gallon Drum Pumpout Tank No. 1525	T022
(x)	4800 Gallon Overflow Tank No. 1526	T023
(y)	4800 Gallon Overflow Tank No. 1527	T024
(z)	8000 Gallon Fuel Oil Storage Tank No. 1536	T025
(aa)	8000 Gallon Caustic Soda Storage Tank No. 1538	T026
(bb)	2600 Gallon Decantation Vessel No. 1540	T027
(cc)	Plant Roadway and Parking Areas	F001
(dd)	300 Hp Emergency Diesel Generator	B007
(ee)	Bulk Liquid Unloading Facility	J002
(ff)	ERU Material Handling Operations	F002
(gg)	Ash and Slag Loading Facility	F003
(hh)	Three Drum Pumpout Stations	J003

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B. EMISSION LIMITATIONS

(1) As required under Rule 3745-31-05 of the Ohio Administrative Code (OAC) PPG Industries Inc. (PPG) shall install Best Available Technology on this facility. The Best Available Technology requirements are enumerated in the terms and conditions listed in this permit. These terms and conditions are also provided to insure compliance with any applicable provision of the Ohio State Implementation Plan, and the air pollution control requirements of the Ohio Administrative Code.

(a) Particulate Emissions

(i) Particulate emissions from the ERU Incinerator (N002) shall not exceed 0.05 grains per dry standard cubic foot corrected to 12% CO_2.

(ii) The particulate emissions shall be measured by Test Methods (1) to (5) in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources," with any modifications required by specific sampling needs or conditions as determined by the Director.

(b) Sulfur Dioxide

(i) Sulfur dioxide emissions from the ERU Incinerator (N002) shall not exceed 0.126 pounds of sulfur dioxide per million Btu's of heat input to the incinerator.

(ii) The sulfur dioxide emissions shall be measured by Test Method (6) in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources" with any modifications required by specific sampling needs or conditions as determined by the Director.

(iii) Compliance with sulfur dioxide emission limit shall be determined by calculating the rolling, weighted thirty-day average emission rate.

(c) Nitrogen Oxides

(i) Nitrogen oxides emissions from the ERU Incinerator (N002) shall not exceed 0.315 pounds of nitrogen dioxide per million Btu's heat input to the incinerator.

(ii) The nitrogen oxides emissions shall be measured by Test Method (7) in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources" with any modifications required by specific sampling needs or conditions as determined by the Director.

(d) Carbon Monoxide

(i) The emissions of carbon monoxide from the ERU Incinerator (N002) shall not exceed 0.245 pounds of carbon monoxide per million Btu's heat input to the incinerator.

(ii) The carbon monoxide emissions shall be measured by Test Method (10) in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources" with any modifications required by specific sampling needs or conditions as determined by the Director.

(e) Visible Emissions

(i) Visible emissions from the ERU Incinerator (N002) shall not exceed 20% opacity.

(ii) Unless otherwise specified, visible emissions from any other source shall not exceed 20% opacity.

(iii) The visible emissions shall be measured by Test Method (9) in Appendix A of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", with any modifications required by specific sampling needs or conditions as determined by the Director.

(f) Lead

(i) Lead emissions from the ERU Incinerator (N002) shall not exceed 0.003 grains of lead per dry standard cubic foot corrected to 12% CO_2.

(ii) The lead emissions shall be measured in accordance with test methods (1) to (5) in Appendix A of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources" with any modifications required by specific sampling needs and the addition of acid analysis as approved by the Director.

(iii) Compliance with the lead emission limit shall be determined by calculating the rolling, weighted thirty-day average lead emission rate.

(g) Asbestos

(i) Emissions from all material handling operations which handle asbestos or asbestos-containing waste material shall not exceed 0% opacity.

(ii) The asbestos emissions shall be measured in accordance with Test Method (9) in Appendix A of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources," with any modifications required by specific sampling needs or conditions as determined by the Director.

(iii) PPG shall not charge any asbestos-containing waste into the incineration system.

(2) As required under 40 CFR Section 264.343, PPG shall install and maintain the necessary equipment and controls to meet the following standards.

(a) Principal Organic Hazardous Constituents (POHC's)

(i) The ERU Incinerator (N002) shall achieve a destruction and removal efficiency of 99.99% for each POHC.

(ii) The destruction and removal efficiency shall be measured by a test methodology proposed by PPG and approved by the Director. Any proposal by PPG shall be consistent with U.S. EPA test methodology for POHC's and shall be submitted to Ohio EPA at least 90 days prior to testing.

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(b) Hydrogen Chloride (HCl)

(i) The emissions of hydrogen chloride from the ERU Incinerator (N002) shall not exceed the larger of four pounds per hour or 1% of the HCl in the stack gas prior to entering any pollution control equipment.

(ii) The HCl emissions shall be measured by a test methodology proposed by PPG and approved by the Director. Any proposal by PPG shall be consistent with U.S. EPA test methodology for HCl, and shall be submitted to Ohio EPA at least 90 days prior to testing.

(c) Particulate Matter

(i) Particulate matter emissions shall not exceed 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = (P_m) \times \frac{(14)}{(21-Y)}$$

where P_c is the corrected concentration of particulate matter, P_m is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas.

(ii) The particulate emissions shall be measured by Test Methods (1) to (5) in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". The oxygen concentration in the stack shall be measured using the Orsat method for oxygen analysis of dry flue gas, presented in Part 60, "Appendix A" (Method 3).

(iii) The emission limitation specified in (B)(2)(c)(i) is the U.S. EPA RCRA requirement for particulate matter from hazardous waste incinerators. PPG must comply with both the emission limitations in (B)(2)(c)(i) and (B)(1)(a)(i), whichever is more restrictive.

(3) As required under 40 CFR Part 61, PPG shall install and maintain the necessary equipment and controls to meet the following standards.

(a) Beryllium

(i) The ERU Incinerator (N002) shall not emit greater than 10 grams of beryllium over a 24-hour period.

(ii) The beryllium emissions shall be measured in accordance with test method 103 in Appendix B of 40 CFR, Part 61 "National Emission Standards for Hazardous Air Pollutants," with any modification required by specific sampling needs or conditions as determined by the Director.

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(b) Mercury

(i) Mercury emissions from the ERU Incinerator (N002) shall not exceed 3200 grams of mercury per 24-hour period from the incinerator.

(ii) The mercury emissions shall be measured in accordance with Test Method 101 in Appendix B of 40 CFR, Part 61 "National Emission Standards for Hazardous Air Pollutants" with any modifications required by specific sampling needs or conditions as determined by the Director.

(4) The emissions of organic compounds from the Special Drum Handling Pumpout Area (J003) shall be vented either through the incinerator combustion chamber or a regenerable activated carbon system. The incinerator shall destroy 99.99% of the organic vapors when in operation. The activated carbon system shall operate as a backup and at an average overall control efficiency of at least 95% for all organic compounds.

(5) The emissions of organic compounds from Storage Tanks No. 1501, 1502, 1503, 1504, 1505, 1506, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1524, 1525, 1526, 1527, and 1540 (T002 through T024, and T027) shall be vented either through an incinerator combustion chamber or a regenerable activated carbon system. The incinerator shall destroy 99.99% of the organic vapors when in operation. The activated carbon system shall operate as a backup and at an average overall control efficiency of at least 95% for all organic compounds.

(6) Fugitive Dust Sources

(a) PPG shall comply with all applicable requirements of the Ohio Administrative Code (OAC) and the applicable provisions herein, as they relate to the fugitive dust emission sources identified below, upon startup of the facility.

(b) Slag and Fly Ash Collecting and Handling (F002 and F003)

(i) Conveying of fly ash:

In accordance with the requirements of paragraph "B" of OAC 3745-17-08, PPG shall install a totally enclosed fly ash conveying system in order to eliminate any visible emission of fugitive dust into the ambient air during the transfer of fly ash.

(ii) Slag (bottom ash)(F003)

In accordance with the requirements of paragraph "B" of OAC 3745-17-08, PPG shall install the slag and bottom ash collecting system in order to eliminate any visible emission of fugitive dust into the ambient air during the collecting of slag and bottom ash. The trucks hauling slag and bottom ash shall be covered prior to leaving the plant property.

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(c) ERU Material Handling Operations (F002)

(i) PPG shall take all the necessary measures to minimize or eliminate the emission of fugitive dust from the material handling operations. All solid waste shall be stored in an enclosed area.

(d) Paved Road Segments and Parking Lots (F001)

(i) All paved road segments and parking lots shall periodically be swept or flushed of surface material in order to minimize or eliminate at all times, visible emissions of fugitive dust generated by vehicular traffic.

(e) PPG shall take all necessary measure to minimize or eliminate the emission of fugitive dust from construction and related activities.

(C) OPERATING PARAMETERS

(1) Temperature Restrictions

(a) A thermocouple shall be installed in the secondary combustion chamber at a point upstream of the point where secondary combustion air is introduced and shall be operated and continuously monitored by means of a recording temperature indicator at all times while the kiln is in operation. The thermocouple and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

(b) A spare thermocouple, which in the event of a thermocouple failure, can be used to replace a faulty thermocouple, shall be maintained in inventory.

(c) The temperature as indicated by the thermocouple located upstream of the point where secondary air is introduced in the secondary combustion chamber shall be maintained at a temperature in excess of the minimum temperature which has been demonstrated to be necessary to destroy 99.99% of each POHC at all times while waste is being fed to the kilns. In no case shall the temperature fall below 1600°F while waste is being fed to the kiln. A controlled feed device shall be installed on the kiln to maintain the temperature.

(d) A quarterly operating temperature report is to be submitted by PPG to the Central District Office of the Ohio EPA and copies to the Division of Hazardous Materials Management and Division of Air Pollution Control. The operating temperature report shall contain as a minimum, the date, time of occurence, cause, explanation and action taken for any temperature variations below combustion temperature requirements as described in (C)(1)(c).

(e) All temperature data recorded shall be maintained on file at the facility for a period of at least two (2) years. Such data shall be made available for inspection by any official of Ohio EPA, upon request.

(f) The Director reserves the right to require in the future that the minimum temperature in the secondary combustion chamber be higher then 1600°F during the combustion of certain or all waste materials.

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(2) Flow Rate Monitoring

The maximum total volumetric flow through the incineration system as monitored and recorded on a continuous basis at the induction fan shall not exceed 26,780 standard cubic feet per minute at 480°F. The volumetric flow rate shall be determined by the calibration chart of the induction fan or other flow monitoring equipment.

(3) Operation of Scrubber

(a) The scrubber shall be maintained in operation at all times while the kiln is being fed wastes except as provided by OAC 3745-15-06.

(b) The pH of the scrubbant to the scrubber shall be monitored and recorded on a continuous basis. The pH of the scrubbant to the scrubber shall be maintained above 7.0. These data shall be maintained on file at the facility for a period of at least two (2) years. Such data shall be made available for inspection by any official of the Ohio EPA upon request.

(c) An inventory of spare parts shall be maintained (such as scrubber nozzles, scrubber pumps and valves, pump motors, pump bushings and bearings, pump valve seals and packagings, fan bearings, motor to pump couplings or belts, motor to fan couplings or belts).

(4) Safeguards

Safeguard devices shall exist so that if any portion of the scrubbing systems or any two fields of the electrostatic precipitator should inadvertently fail, the kiln feed shall immediately switch to auxiliary "clean" fuel and cease the incineration of "typical" feed stock.

(5) Startup Procedures

(a) Startup of the incinerator shall begin with the heating of the cold combustion zone with natural gas, distillate fuel oil or waste materials which have been classified as hazardous solely due to their ignitibility. Alternate fuels may not be used unless the Director of the Ohio EPA has granted prior written approval. Feeding of waste materials to the kiln shall not commence until the temperature in the secondary combustion chamber, as measured by the thermocouple upstream of the point of introduction of secondary combustion air, has reached or exceeded that level demonstrated to be necessary to destroy each POHC to be burned. At no time shall waste materials be fed to the incinerator unless the temperature in the secondary combustion chamber has reached at least 1600°F.

(b) During the start-up period the emission limit specified in condition B(1)(c) of this permit shall not apply.

(c) Waste material shall not be fed to the incinerator until the electrostatic precipitator and scrubber have been started up and have achieved a stable operating condition.

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D. RECEIPT OF ADDITIONAL WASTES

(1) PPG shall notify the Ohio EPA at least sixty days in advance, of the receipt of any new waste which has not been previously approved in the PPG hazardous waste facility permit. Such notification shall include the quantity and quality of the waste, the method by which it will be treated, the manner and location in which it will be stored, and the date and methodology of the stack test to demonstrate compliance with the terms and conditions of this permit.

(2) The Director reserves the right to require additional performance testing of the incinerator using additional POHC's, should it be determined that such testing is necessary to ensure that the waste mixtures can be destroyed.

E. LIMITATIONS ON WASTE FUEL STOCK AND WATER WASTE

PPG Industries, Inc. at the Circleville facility shall comply with all state and federal laws and regulations including, but not limited, to the Toxic Substances Control Act of 1979. No polychlorinated biphenyls (PCB's) in excess of 50 p.p.m. will be incinerated at the Circleville facility unless PPG obtains an Ohio Permit to Install. No herbicides, pesticides, rodenticides, insecticides, or high-level or low-level radioactive wastes or other materials will be incinerated in violation of state and federal laws and regulations.

F. SAMPLING PROGRAM

(1) PPG Industries, Inc. shall develop a plan for the routine sampling and laboratory analysis of incoming wastes for the purpose of preventing polychlorinated biphenyls, in excess of 50 p.p.m., from being incinerated in the kiln and secondary chamber.

(2) All laboratory analyses shall be reported to PPG directly from the laboratory and retained on-site and available for inspection by the Ohio EPA for a minimum of two (2) years.

(3) Any sample analysis reporting in excess of 50 p.p.m. shall result in the immediate discontinuation of receipt of wastes from that supplier.

G. RECORDS OF MATERIALS RECEIVED

1. A record of materials received for disposal at the facility shall be maintained by PPG. The record shall contain as a minimum:

a. name of the PPG plant from which the material was received;

b. address and location of the facility from which the material was received;

c. date the material was received;

d. identification of the vehicle(s) transporting the material including the PUCO or other legal identification number and the license plate number;

e. amount of material and type of container;

f. description of the material including chemical composition.

2. The record of all material received at the facility shall be kept on file at the facility for at least two (2) years. The record shall be available for inspection by the Ohio EPA.

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H. RECORDS OF MATERIALS BURNED

(1) PPG shall maintain a record of the materials burned in the kiln. At a minimum, the record shall contain:

(a) the total hourly average mass feed rate to the kiln;

(b) the average hourly total heat input to the kiln;

(c) the average hourly ash content of the material fed to the kiln;

(d) the average hourly chlorine content of the material fed to the kiln;

(e) the average hourly sulfur content of the material fed to the kiln.

(2) The record of materials burned shall be maintained on file at the facility for a minimum of two years, and shall be available for inspection by the Ohio EPA.

I. ODOR CONTROL

PPG shall not allow the emission of any odor that results in a public nuisance as defined by OAC Rule 3745-15-07.

J. CONTINUOUS EMISSION MONITORING

(1) Carbon Monoxide

(a) PPG shall install, calibrate, maintain, and operate a continuous monitoring system for carbon monoxide on the incineration system stack.

(b) Within sixty days following the initial startup of the incinerator, PPG shall conduct performance specification tests on the system in accordance with the procedures set forth in 40 CFR, Part 60, Appendix B. A report on the results of the performance specification tests shall be submitted to the Ohio EPA within thirty days of completion of such tests.

(2) Opacity

(a) PPG shall install, calibrate, maintain, and operate a continuous opacity monitor and recorder to be installed on the stack serving the ERU incinerator

(b) The installation shall be in conformance with the requirements of 40 CFR, Part 60, Section 60.13.

(c) Excess emissions shall be defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour, up to 60 percent opacity need not be reported. Quarterly excess emission reports shall be submitted by PPG to Central District Office in accordance with 40 CFR, Part 60, Section 60.7. The reports shall be submitted by February 15, May 15, August 15, and November 15 of each year. Each report shall cover any excess emissions which occurred during the previous calendar quarter.

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K. OPERATING REQUIREMENTS DURING PRE-STACK TESTING PERIOD

(1) Prior to the reporting of the results of the performance testing required by Condition L of this permit, PPG shall feed to the incinerator no hazardous wastes listed in 40 CFR 261.33(e).

(2) No wastes shall be fed to the incinerator unless the temperature measured in the secondary combustion chamber is at least 2000°F.

(3) No more than 200 pounds per hour of halogens may be fed to the ERU Incinerator.

(4) This condition is not applicable when PPG is performing stack tests to measure incinerator performance and destruction efficiency.

L. STACK TESTING

(1) Particulate Emissions, Sulfur Dioxide, Nitrogen Dioxide, Carbon Monoxide, Hydrogen Chloride, Lead, Mercury, and Beryllium.

(a) PPG shall conduct, or have conducted, performance testing of the incinerator for particulates, sulfur dioxide, nitrogen dioxide, carbon monoxide, hydrogen chloride, lead, mercury, and beryllium in accordance with procedures outlined in this permit and shall submit a written report, signed by the source owner, or his authorized agent, describing the test procedures followed and the results of such tests. The Director or his representative shall be allowed to witness the tests, examine testing equipment and acquire, or cause acquisition and/or submission of, data and information necessary to provide adequate assurance that source operation, process operating parameters and other conditions together with testing procedures, provide a valid representation and proper characterization of the source's emissions and/or control equipment performance.

(b) Such testing shall be planned, scheduled and implemented so as to provide for:

(i) Prior written notification to the Ohio Environmental Protection Agency. Such notification shall be made thirty (30) days in advance and shall specify the source operating parameters, the proposed test procedures and the time, date, place and person(s) conducting such tests.

(ii) Submittal of the particulate test results report within thirty (30) days after the test completion, and all other results in ninety (90) days.

(2) Principal Organic Hazardous Constituents

(a) PPG shall conduct, or have conducted, performance testing of the ERU Incinerator for selected Principal Organic Hazardous Constituents (POHC's). At least ninety days before testing PPG shall propose for approval by the Director a test methodology for each selected POHC which will be burned in the ERU Incinerator.

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(b) The Director or his representative shall be allowed to witness the tests, examine testing equipment and acquire, or cause acquisition and/or submission of, data and information necessary to provide adequate assurance that source operation, process operating parameters and other conditions, together with testing procedures, provide a valid representation and proper characterization of the source's emissions and/or control equipment performance.

(c) Such testing shall be planned, scheduled and implemented so as to provide for:

(i) Prior written notification of the Ohio Environmental Protection Agency. Such notification shall be made ninety (90) days in advance and shall specify the source operating parameters, the proposed test procedures and the time, date, place and person(s) conducting such tests.

(ii) Submittal of the test results report within ninety (90) days after the test completion.

M. OPERATING HOURS

PPG shall prepare and submit to Central District Office an annual report which lists the hours of operation for the incinerator. The report shall be submitted by February 15 of each year and shall cover the operating hours of the previous calendar year.

N. NESHAPS (Benzene)

This facility may not accept wastes containing greater than 10% by weight benzene. PPG must apply for and obtain a Permit to Install which includes a review of the National Emission Standards for Hazardous Air Pollutants requirements for benzene, before PPG may accept such wastes.

O. MALFUNCTION REPORTING

In the event that an emission source or any air pollution control equipment should malfunction in such a manner as to cause a violation of the terms and conditions of this permit, or on other applicable emission limitation, PPG shall immediately notify Central District Office in accordance with rule 3745-15-06.

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P. EMERGENCY DIESEL GENERATOR

Except for routine testing and maintenance, the Emergency Diesel Generator (OEPA source number B007) shall be used only in the event of a loss of electrical power to the incineration system. Feeding of waste materials to the incineration system shall be suspended at all times while the Emergency Diesel Generator is in operation.

Q. 1000 Hp BACK-UP BOILER

(1) Sulfur dioxide emissions from the Back-up boiler shall not exceed 0.5 pounds of sulfur dioxide per million Btu's heat input to the boiler.

(2) Particulate emissions from the Back-up boiler shall not exceed 0.02 pounds of particulate per million Btu's heat input to the boiler.

R. FUEL OIL STORAGE TANK (T025)

The Fuel Oil Storage Tank No. 1536 shall be equipped with submerged fill loading.

S. PSD APPLICABILITY

In order for this new installation not to be considered a "major modification" under U.S. EPA Prevention of Significant Deterioration regulations (40 CFR 52.21), upon startup of the incinerator the following equipment must be shutdown:

(1) Twelve 4.2 MMBTU/Hr gas/oil fired boilers (B003 & 4),
(2) One inert gas generator,
(3) One liquid waste incinerator (N001).

PSD allows net annual emissions increase from a modification as shown in column 1 of Table 1 below. Based on 365 days, the daily emissions are shown in column 2. Emission reductions will occur contemporaneously because of the shutdown of existing equipment. Column 4 is the sum of columns 2 and 3, and represents the increment available for operation of the Energy Recovery Unit because of the credits available from reductions.

Table 1
Permitted Emissions From The
Energy Recovery Unit

Pollutant	PSD Review Criteria (tons/year)	(pounds/day)	Offset Credit (pounds/day)	Available Increment (pounds/day)
CO	100	547.95	83.29	631.24
NO_x	40	219.18	276.44	495.62
SO_x	40	219.18	10.71	229.89
TSP	25	136.99	22.3	159.29

Total daily emissions from the ERU can be defined by four sets of equations using two variables. The variables are daily steam output from the heat recovery boiler and steam output from fuel-fired boilers. The constants are calculated from emission factors. Two cases apply, depending on the choice of fuel in the boilers.

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Case 1 - Natural Gas

where X = heat recovery boiler output
Y = fuel-fired boiler output

Carbon Monoxide = 0.325 (X thousand lbs) + 0.02062 (Y thousand lbs)

Nitrogen Oxides = 0.458 (X thousand lbs) + 0.1456 (Y thousand lbs)

Sulfur Oxides = 0.172 (X thousand lbs) + 0.00728 (Y thousand lbs)

Particulates = 0.155 (X thousand lbs) + 0.01213 (Y thousand lbs)

Case 2 - Fuel Oil

where X = heat recovery boiler output
Y = fuel-fired boiler output

Carbon Monoxide = 0.325 (X thousand lbs) + 0.04 (Y thousand lbs)

Nitrogen Oxides = 0.458 (X thousand lbs) + 0.176 (Y thousand lbs)

Sulfur Oxides = 0.172 (X thousand lbs) + 1.152 X S% (Y thousand lbs)

Particulates = 0.155 (X thousand lbs) + 0.016 (Y thousand lbs)

The maximum allowable values (under PSD regulations) of the resultant of these equations are those given in the fourth column of Table 1. The maximum values of X and Y are set by the steam generating capacity of the boilers:

Maximum X = 1008 thousand pounds/day (42 thousand lbs/hr)
Maximum Y = 1159.2 thousand pounds/day (48.3 thousand lbs/hr)

PPG shall operate the ERU, peaking boilers, and stand-by boilers in such a manner so that the amount of emissions in column 4 of Table 1 is not exceeded.

When burning natural gas, the limiting factor occurs when the incinerator is operating at 71% capacity or greater. The peaking and stand-by boilers are then not allowed to operate at capacity.

For Case 2, SO_2 is the limiting factor and steam generation depends on the sulfur content of the oil. At the allowable limit of 0.5% sulfur in the oil, the maximum possible steam generation at the facility is 1106 thousand pounds per day. This would occur with the incinerator operating at full load. As incinerator usage drops the maximum allowable steam generation would drop. With the incinerator down, the maximum possible steam generation from the boilers would be 399 thousand pounds per day when using 0.5% sulfur oil.

PPG shall install operational controls so the Case 1 and Case 2 equations are never exceeded. Also PPG shall install monitoring devices that would allow EPA personnel during a plant inspection to determine compliance with the Case 1 and Case 2 equations.

T. AIR QUALITY AND METEOROLOGICAL MONITORING

1. PPG Industries, Inc. shall install, calibrate, maintain, and operate the following ambient air quality monitoring and meteorological equipment in the vicinity of the Circleville, Ohio facility.

   (a) Two wind speed and wind direction instruments, one to be installed at the monitoring location and one on plant property.

   (b) Instrumentation for the measuring and recording of total daily precipitation.

   (c) One high volume sampler for the measuring of total suspended particulates. The sampling is to be performed on a once every three day cycle.

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(d) A continuous hydrocarbon analysis for the measuring of non-methane organic compounds.

(e) One continuous instrument for the measurement of sulfur dioxide.

(f) One continuous instrument for the measurement of oxides of nitrogen.

(g) The ambient air quality and meteorological measurement instrumentation shall be distributed in the following manner:

(i) Site No. 1 - High volume sampler, continuous sulfur dioxide monitor, continuous nitrogen dioxide monitor, continuous hydrocarbon monitor, and wind speed and direction instrumentation.

(ii) Site No. 2 - (Plant property) - Wind speed and direction and precipitation instrumentation.

2. The location and siting of the monitors shall be in conformance with quality assurance procedures of Ohio and U.S. EPA. Nine months after the effective date of this Permit to Install, PPG Industries, Inc. shall present for approval by the Director of Ohio EPA, a detailed plan for the execution of this section. All monitors shall use U.S. EPA reference methods or meet U.S. EPA monitoring guidance under the prevention of Significant Deterioration requirements.

3. All ambient air quality and meteorological equipment shall be installed and in operation at least 90 days before the ERU Incinerator is to be operational.

4. The data from the monitoring equipment shall be submitted to Ohio EPA in a form and manner prescribed by the Director.

5. PPG Industries, Inc. shall continue to monitor air quality as described in 1 (a) through (g) of this Order for a period of three years from the date of startup of the ERU Incinerator at the plant.

6. After three years of monitoring, the Director may extend the terms of this Order for one year increments. In determining the need for the continuation of ambient air quality montioring, the Director shall consider the concentration measured by the monitors with respect to the Ohio and National Ambient Air Quality Standards, any increases or decreases in concentration of air pollutants measured by the ambient air quality monitors, and the value of the ambient air quality data in fulfilling the goals and requirements of the Clean Air Act and Chapter 3704 of the Ohio Revised Code.

U. WASTEWATER SPECIAL CONDITIONS:

Within sixty (60) days after construction, but prior to operation of the incinerator the permittee shall submit to the Ohio EPA Central District Office for their review a complete set of "as-built" detailed scaled engineering drawings showing in plan and evaluation view all pipes, sewers, drains, catch basins, valves, etc. used to collect and transport wastewater and runoff from the energy recovery facility. The plans shall include the monitoring station.

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(b) Mercury

(i) Mercury emissions from the ERU Incinerator (N002) shall not exceed 3200 grams of mercury per 24-hour period from the incinerator.

(ii) The mercury emissions shall be measured in accordance with Test Method 101 in Appendix B of 40 CFR, Part 61 "National Emission Standards for Hazardous Air Pollutants" with any modifications required by specific sampling needs or conditions as determined by the Director.

(4) The emissions of organic compounds from the Special Drum Handling Pumpout Booth (J003) shall be vented through the incinerator combustion chamber which shall destroy 99.99% of the organic vapors when in operation. During process unit (incinerator) shutdowns, the Special Drum Handling Pumpout Booth operations shall also be shutdown.

(5) The emissions of organic compounds from Storage Tanks No. 1501, 1502, 1503, 1504, 1505, 1506, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, and 1540 (T002 through T024, and T027) shall be vented either through an incinerator combustion chamber or a regenerable activated carbon system. The incinerator shall destroy 99.99% of the organic vapors when in operation. The activated carbon system shall operate as a backup and at an average overall control efficiency of at least 95% for all organic compounds.

(6) Fugitive Dust Sources

(a) PPG shall comply with all applicable requirements of the Ohio Administrative Code (OAC) and the applicable provisions herein, as they relate to the fugitive dust emission sources identified below, upon startup of the facility.

(b) Slag and Fly Ash Collecting and Handling (F002 and F003)

(i) Conveying of fly ash:

In accordance with the requirement of paragraph "B" of OAC 3745-17-08, PPG shall install a totally enclosed fly ash conveying system in order to eliminate any visible emission of fugitive dust into the ambient air during the transfer of fly ash.

(ii) Slag (bottom ash) (F003)

In accordance with the requirements of paragraph "B" of OAC 3745-17-08, PPG shall install the slag and bottom ash collecting system in order to eliminate any visible emission of fugitive dust into the ambient air during the collecting of slag and bottom ash. The trucks hauling slag and bottom ash shall be covered prior to leaving the plant property.