OhioEPA
State of Ohio Environmental Protection Agency
P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149

Toward A Cleaner Environment
15 Year Anniversary
1972 - 1987

Richard F. Celeste
Governor

March 18, 1988

Re: Modification to Permit to Install No. 01-549

Pickaway County

PPG Industries, Inc.
John C. Richter, Mgr.
Energy Recovery Unit
P.O. Box 457, Rt. 23 South
Circleville, Ohio 43113

CERTIFIED MAIL

Dear Sir:

Enclosed please find a modification to the Ohio EPA Permit to Install referenced above which will modify the terms and conditions.

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, 236 East Town Street, Room 300, Columbus, Ohio 43215.

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations Section
Division of Air Pollution Control

Enclosure

cc: US EPA
Central District Office - Air & Wastewater
Bob Hodanbosi
Paul Flannigan - Hazardous
Jim Adair - Hazardous Waste Facility Board

Issuance Date: Mar. 18, 1988

Effective Date: Mar. 18, 1988

OHIO ENVIRONMENTAL PROTECTION AGENCY

MODIFICATION TO PERMIT TO INSTALL NO. 01-549

Name of Applicant: PPG Industries Inc.
Address: Rt. 23 South, P.O. Box 457
City: Circleville, Ohio 43113
Telephone: (614) 474-3161

On March 31, 1987, the Ohio EPA received a request to modify the Permit to Install #01-549, issued with respect to proposed air contaminant sources for an Energy Recovery Unit.

The Permit to Install issued to PPG Industries Inc. (PTI No. 01-549) is hereby modified in the following manner: Special terms and conditions as follows:

Page 3: delete line (b) and (z) and change lines (h) thru (n) to read "15,000 Gallon Organic Process Tank..."; Page 13: delete entire paragraph Q; Page 14: delete entire paragraph R and item (1) paragraph S; Page 15: change Maximum Y = 1159.2 thousand pounds/day (48.3 thousand lbs/hr) to Maximum Y = 1305.6 thousand pounds/day (54.4 thousand lbs/hr).

The reason for this modification is: To reflect the minor changes in the construction of the plant.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, 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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

Ohio Environmental Protection Agency

Richard L. Shank

Director

A. SOURCE IDENTIFICATION

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

	Source Identification	Ohio EPA Source Number
(a)	ERU Incinerator	N002
(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 Organic Process Tank No. 1506	T007
(i)	15,000 Gallon Organic Process Tank No. 1515	T008
(j)	15,000 Gallon Organic Process Tank No. 1516	T009
(k)	15,000 Gallon Organic Process Tank No. 1517	T010
(l)	15,000 Gallon Organic Process Tank No. 1518	T011
(m)	15,000 Gallon Organic Process Tank No. 1519	T012
(n)	15,000 Gallon Organic 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 Drump 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
(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

(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.

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.

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:

(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)	PSD Review Criteria (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.

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 = 1305.6 thousand pounds/day (54.4 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 thousands 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.