



PPG INDUSTRIES, INC. INDUSTRIAL CHEMICAL DIVISION P. O. BOX 1000 LAKE CHARLES, LA. 70601

J. R. FARST
Assistant Works Manager

November 17, 1977

Mr. Gus Von Bodungen
Louisiana Air Control Commission
P.O. Box 60630
New Orleans, LA 70160

Re: Permit Application - No. 3 Process Waste Incinerator

Dear Mr. Von Bodungen:

PPG is presently operating two permitted high temperature process waste incinerators for the thermal destruction of liquid and gaseous chlorohydrocarbon waste. PPG plans to install a third incinerator for the purpose of thermal incineration of vinyl chloride monomer (VCM) from the present manufacturing unit and the VCM tank car loading facilities.

The incinerator combustion chamber will operate at 2200° F. The combustion gases will pass through the heat recovery boiler system for energy conservation. The heat recovery boiler system will produce 50,000 lbs/hr of 185 psig steam. The No. 3 Incinerator will operate parallel to the two existing incinerators. Liquid organic waste and gaseous vents from existing operating units will be integrated into the feed system of the new incinerator system.

The incinerator is designed with a primary and secondary scrubbers with adequate column design and packing for gas distribution for scrubbing. The incinerator scrubber system is designed to meet the VCM Federal emissions standards. PPG is installing VCM and chlorohydrocarbon analytical instrumentation for monitoring the secondary scrubber stacks from the No. 3 Incinerator and the No. 1 and 2 incinerators.

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Our proposed application for the No. 3 Incinerator is attached. We are sending only two copies and one EIQ for you and your staff to review. We realize additional copies will be needed for the Commission members as the proposed permit is finalized. C. A. Burns, at 318-882-1200, ext. 2370, will assist you and your staff.

Please be assured of our continued cooperation with your staff and the Commission.

Very truly yours,



JAMES R. FARST

/as

Attachment

cc: C. A. Burns
W. J. Peard
J. E. Wyche III

bcc: T. G. Taylor (letter only)
G. K. Jordan "
J. Arendt "
T. Ziehler "
L. Joiner "
T. C. Jeffery "

APPLICATION FOR
APPROVAL OF EMISSIONS

For: Installation of Third Process Waste

Incinerator

(Revised April 1, 1975)

Send 14 copies to:

Louisiana Air Control Commission
P. O. Box 60630
New Orleans, Louisiana 70160
Attention: Technical Assistance

1. GENERAL INFORMATION

Name of person or company requesting permit:

PPG Industries, Inc., Chemical Division, U.S.

Address: P.O. Box 1000, Lake Charles, LA 70601

Responsible person and his Title C. A. Burns

Environmental Control Specialist

Date submitted: November, 1977 Telephone No. 318-882-1200

2. GEOGRAPHICAL LOCATION OF PLANT

Description of location of plant or establishment and/or map section showing same: _____

Chemical Plant, Calcasieu Parish, Louisiana

Section 3 and 4

Township 10-E, Range 9-W

Southwest District, Louisiana

adjourning property on map section or list below.
any residential area near the plant or establishment and give distance from
the plant or establishment: _____

See Exhibit I - PPG Area Land Allotment

- Drawing #32 A-602.7

3. LOUISIANA AIR CONTROL COMMISSION EMISSION INVENTORY QUESTIONNAIRE.

A completed Emission Inventory Questionnaire (copy attached) is required. If a now 6 page questionnaire for this location has been previously submitted, give date of submission June 10, 1977. A completed "revised" Emission Inventory Questionnaire must also be submitted with this application. The Emission Inventory Questionnaire must be completed showing the entire emissions of the facility after modifications and/or additions.

Estimated starting date
of construction: March, 1978

Estimated date opera-
tion will begin: October 21, 1978

Facility: Yes

Addition: Yes

Give a brief description of proposed action and attach such information as flow diagrams, schematic diagrams, drawings, etc. needed to convey an understanding of the processes involved in the plant or establishment."

PPG is installing a third process waste incinerator to be operated parallel with the existing two permitted incinerators. The No. 3 incinerator will give PPG improved flexibility in the thermal decomposition of chlorohydrocarbons from the several operating units; however, the third incinerator system will be the control device for the present vinyl chloride monomer manufacturing and tank car loading facilities. See Exhibit II - Schematic Flow Sheet from the present VCM facility and Exhibit III Schematic flowsheet for the VCM tank car loading facility. The No. 3 incinerator system will have a waste heat boiler for energy conservation. The combustion gases from the incinerator pass through the heat recovery boiler (50 M lb/hr of 185 psig steam) system and exits through a primary (acid absorber) scrubber and thence through the secondary scrubber system.

IDENTIFICATION AND LOCATION OF EMISSION SOURCES

Enclose a sketch showing specific location of point or points of emission. Show approximate distance (in feet) of all such points from property line. (Each emission source shall be numbered consecutively in the year of permit request. For example, the first for which a permit is requested in 1973 would be designated as 1-73. See Exhibit IV - Stack Location from property line.

Identification Number	Name and Description of Source
1-77	No. 3 Incinerator Secondary Scrubber Stack

Identification Number	E M I S S I O N			S T A C K			
	Rate SCF/ SEC	Temp. OF	Exit Velocity Ft./Sec.	Diam. Feet	Elev. Above Grade	Can be Sampled	
						Yes	No
1-77	285	160	50.9	3"	100	Yes	

SUMMARY OF EMISSIONS AND THE EFFECTS ON AMBIENT AIR

Particulate Matter _____ ☒ HC _____ ☒ NO_x ☒ Other HCl & Cl₂ (Check One)
 H₂ ☒ CO

Point Source (indicate # on map) 1-77	EMISSIONS lbs/hr		Process Height tons/hr	Concentration of Pollutant Gases in Discharge Gas		Heat? Input BTU	Ringel- mann Number or Opacity
	With Control Apparatus (Max)	Without Control Apparatus		PPH	ug/m ³		
Particulate	12.4	NA	NA	150*	19.4 x 10 ⁴	NA	**
CO	4.0	NA	NA	50	6.3 x 10 ⁴	NA	NA
NO _x	26.3	NA	NA	200	41.1 x 10 ⁴	NA	NA
HCl	3.0	NA	NA	32.5	5.3 x 10 ⁴	NA	NA
Cl ₂	5.0	NA	NA	25.4	8.0 x 10 ⁴	NA	NA
Hydrocarbon	1.0	NA	NA	5.5	1.5 x 10 ⁴	NA	NA

*PPG by wt; NA - Not applicable

** Unabl to estimate

EFFECT ON AMBIENT AIR

Concentration - 24 Hour Average

** Manufacturers Engineering estimation

	Property Line Maximum		Stability Class	Wind Speed m/sec	Max. Ground Level and Locations **			Stability Class		Wind Speed m/sec
	PPH	ug/m ³			PPH	ug/m ³	Dist.	Wind Dir.		
Part	--	--	--	--	0.08	38	2000 E 0 S	W	A	4
CO	--	--	--	--	0.009	12	2000 E 0 S	W	A	4
NO _x	--	--	--	--	0.17	345	2000 E 0 S	W	A	4
HCl	--	--	--	--	0.002	3	0 W 0 S	W	A	1
Cl ₂	--	--	--	--	0.001	4	0 W 0 S	W	A	1
HC	--	--	--	--	0.23	517	2000 W 2000 N	SE	D	1

** Coordinates referenced to plant origin. Dispersion calculations by Briggs-Turner Equations.
 All plants as required by LACC.

PROPOSED AIR POLLUTION CONTROL

List the air pollution abatement measures that will be utilized to control the emissions from the sources for the plant or establishment. If no facilities are contemplated, list the steps which will be taken to prevent the emission of sufficient quantities of pollutants to result in undesirable levels. Give the source and then the abatement method for each source. Please include information such as drawings, manufacturer literature, specification, capacities and efficiencies needed for evaluation of such control equipment and techniques used in controlling each source. Please include data that each estimated data operation will begin. Any information about the method used for abating the source will facilitate the evaluation of the application.

Stack No. 1-77 - Process Waste Incinerator. The No. 3 Incinerator will be the control device for the present vinyl chloride monomer (VCM) plant and present VCM tank car loading facilities. The No. 3 Incinerator system will operate parallel to the two existing incinerators. Liquid organic waste from the Bottoms Plant and gaseous waste from the liquid-phase EDC, OHC-EDC, Per/Trichloroethylene, "Tri-Ethane" II, and the VCM will be incinerated. The incinerator unit is being manufactured by Trane Thermal Company, Conchohocken, Pennsylvania.

The No. 3 Incinerator operating temperature of the combustion chamber will be 2200° F. and retention time will be a minimum of 0.75 seconds. The combustion air capacity is designed at 750,000 scfh. The No. 3 Incinerator will be equipped with an auxiliary burner for added flexibility in operating the system. The combustion gases from the incinerator pass through the heat recovery boiler system and thence to the scrubbers. The incinerator will have a primary (acid absorber) scrubber and a secondary scrubber. Each of the scrubbers is designed for adequate gas distribution for scrubbing. Details are shown on Exhibit V, attached. The secondary scrubber will be monitored from the stack with analytical instrumentation for VCM and chlorohydrocarbons and in accordance with requirements of EPA regulations.

Exhibit V - Schematic of No. 3 Process Waste Incinerator System. The combustion of the vent gases from the present VCM facility, i.e., manufacturing unit and VCM tank car loading, is shown as Exhibit VI. The No. 3 Incinerator vent gas flow rate is shown as Exhibit VII.