



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

A. T. RAETZSCH *Works Manager*

May 24, 1974

Mr. James F. Coerver, Assistant Director
Bureau of Environmental Health
Louisiana Air Control Commission
P. O. Box 60630
New Orleans, Louisiana 70160

Dear Mr. Coerver:

A proposed 450 TPD "TRI-ETHANE"^(R) plant currently in the design phase is expected to receive Board approval in July 1974. This plant will utilize newly-developed PPG technology which minimizes process emissions.

Process design features which minimize emissions are:

1. The process has no major aqueous operating steps. It's a clean process; all by-products from the process are usable as feedstock within the chloro-organic complex.
2. Residues from the product purification collected as "bottoms" at the Dopp kettle will be fed to the existing incinerators. This stream will not cause existing incinerator capacity to be exceeded. Permit for incinerators is based on capacity when granted.
3. Storage tanks with non-exempt materials will be vented through refrigerated absorption system for recovery of organic materials.
4. Emergency and start-up vent scrubber for hydrogen chloride removal will be available but used only 5 - 10 times per year for 4 - 6 hours each. Scrubber water will be cooling tower blowdown.

Our proposed application for the new "TRI-ETHANE"^(R) plant facility is attached. We are sending only three copies for you and your staff to review. We realize additional copies will be required for the Commission members as

Mr. James F. Coerv r
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the proposed permit is finalized. C. A. Burns at 318-882-1200, Ext. 370,
will assist you and your staff.

It is estimated that the New "Tri-Ethane" plant will employ 250 construction
workers during the building phases in 1975-76. There will be approximately 75
permanent employees added to the local payroll due to this expansion.

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

Very truly yours,



A. T. Raetzsch

ATR:edh

Enclosure

cc: T. G. Taylor
A. R. Richard/E. G. Laukonen
C. A. Burns

APPLICATION FOR
APPROVAL OF EMISSIONS

(Revised January 20, 1973)

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. - INDUSTRIAL CHEMICAL DIVISION

Address: Post Office Box 1000 - Lake Charles, Louisiana 70601

Responsible Officer: C. A. Burns Telephone No. 318-882-1200

Date Submitted: May 24, 1974

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 10-8, Range 9-W

Southwest District, Louisiana

Show ownership and use of adjoining property on map section or list below.

List any residential areas near the plant or establishment and give distance from the plant or establishment: _____

See Exhibit I - PPG Area Land Allotment - SK-6084

3. LOUISIANA AIR CONTROL COMMISSION EMISSION INVENTORY QUESTIONNAIRE.

A completed Emission Inventory Questionnaire (copy attached) is required. If a new 6 page questionnaire for this location has been previously submitted, give date of submission February 1974 * . 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: 1975

Estimated date opera-
tion will begin: 1976

New Facility: Yes

Addition: No

"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."

A 450 TPD Tri-Ethane ^(R) Plant is proposed for construction. The outstanding

feature of this plant is that it utilizes newly developed technology whereby all

byproducts are used within the chloro organics complex. Significant engineering

cost is now aimed at getting PPG board approval in July, 1974, for this facility.

(See Exhibit II, PPG dwg. no. for proposed plant layout) All non-exempt storage

will be vented through a refrigerated absorber system. An aqueous vent scrubber

will be used only for emergencies and 5 - 10 times per year for plant startups

(4 - 6 hours each).

* Does not include emissions from the proposed 1500 TPD diaphragm cell chlorine plant for which permit has already been granted (Re: our application dated August 15, 1973).

SL 043497

4. 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.

Identification Number	Name and Description of Source
2-74	1,1-Dichloroethane (DCE) Tank Vent Scrubber Stack
3-74	Battery Limits Methylchloroform (MC) and Stabilizer Storage Tank Vent Scrubber Stack
4-74	Emergency and Startup Scrubber Vent
5-74	MC Dock Storage Tank Vent 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
2-74	4.1	20	2.7	0.16	50	X	
3-74	9.5	20	6.7	0.16	50	X	
4-74 *	35.4	120	22.0	0.67	60	X	
5-74	13.4	20	9.3	0.16	50	X	
			SL 043498				
5-10 times/year for 4-6 hours each.							

SUMMARY OF EMISSIONS AND THEIR EFFECTS ON AMBIENT AIR

Point Source (Indicate # on map)	EMISSION lbs/hr			Process Weight tons/hr	Concentration of Pollutant Gases in Discharge Gas		Heat Input BTU	EFFECT ON AMBIENT AIR					Ringel- mann Number or Opacity
	Air Contam- inants	With Control Apparatus	Without Control Apparatus		Concentration								
					At Nearest Property Line **			Max. Ground Level and Locations **					
					PPM	ug/m ³		PPM	ug/m ³	Dist.			
2-74	1,1-DCE	4.2	93.9		6.7×10^4	3.0×10^8		<0.01	<0.01	0.01	23.4	855 ft	
3-74	MC	9.7	53.8		3.9×10^4	2.3×10^8		<0.01	<0.01	0.01	54.0	856 ft	
4-74	HCl	Nil	2000.0		Nil	Nil		-	-	-	-	-	
SL 043499	VC	2.4	2.4		6.6×10^3	1.5×10^7		<0.01	<0.01	<0.01	8.4	1077 ft	
	DCE	8.4	8.4		1.5×10^4	6.6×10^7		<0.01	.01	.01	29.0	1077 ft	
	MC	4.8	4.8		6.1×10^3	3.7×10^7		<0.01	.01	<0.01	11.0	1077 ft	
	TCE	23.2	46.3		3.0×10^4	1.8×10^8		<0.01	.03	.01	81.0	1077 ft	
5-74	MC	10.0	145.0		3.9×10^4	2.3×10^8		0.01	31.30	0.01	55.5	857 ft	

Total amount of particulate N. A. lbs/hr.

1. PPM as used in this form refers to parts per million by volume.
2. Heat Input. The aggregate of heat content of all fuels whose products of combustible pass through a stack or stacks. This information should be included for fuel burning equipment³ only.
3. Fuel Burning Equipment. Any stationary contrivance used in the process of burning fuel or combustible material for the primary purpose of producing heat or power by indirect heat transfer.
4. Process Weight. Any total weight of all materials introduced into any specific process which may cause emissions. Solid fuel charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.

Revised 10/12/73 to change PPM to volume from weight.

** Stability D 5 M/S

**** See Abbreviations - p. 8

5. 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 date that each estimated date operation will begin. Any information about the method used for abating the source will facilitate the evaluation of the application.

Three refrigerated tank vent absorbers (scrubbers), one aqueous startup and emergency

HCl scrubber, and existing waste incinerators will be utilized to control emissions from the

450 TPD Tri-Ethane Plant. Exhibit III shows a schematic of effluent control measures.

a. DCE STORAGE TANK VENT ABSORBER (See Exhibit IV)

Refrigerated (20°F), 1,1-Dichloroethane is passed through a packed tower counter-

current to tank vent stream during which effluent chlorinated hydrocarbons are reduced

from 93.9 lb./hr. to 4.2 lb/hr. This is a peak load on the scrubber since DCE will be

withdrawn from tankage at the same rate as it is being produced into tankage; hence,

no vent should be experienced through stack #2-74 during normal operation.

b. MC AND STABILIZER TANK VENT ABSORBER (See Exhibit IV)

The same scheme as a, above, except the absorbent will be 20°F refrigerated methyl-

chloroform. Continuous flow to the absorber is 53.8 lb./hr. methylchloroform which

is reduced to 5 lb./hr. During filling of a stabilizer storage tank (1.33 hrs. nearly

every day), an additional 4.7 lb./hr. of MC will be lost for a total loss through

stack #3-74 of 9.7 lb./hr. peak load.

c. EMERGENCY AND STARTUP SCRUBBER (See Exhibit V)

Between 5 and 10 times per year a plant startup will require scrubbing a stream of HCl

contaminated with chlorinated for 4-6 hours until it is of sufficient quality to be used

within the chloro organics complex. Cooling tower blowdown (plus extra water, if

necessary) will be used as the absorbent.

SL 043500

5. PROPOSED AIR POLLUTION CONTROL (continued)

d. DOCK STORAGE TANK SCRUBBER (See Exhibit IV)

The storage tank scrubber is identical to b, above.

e. WASTE INCINERATORS (See Exhibit VI)

Existing incinerators will receive liquid chlorinated hydrocarbon residues. The 370 lb./hr. of material fed will not cause existing incinerator capacity to be exceeded. Permits #168 and #234 were granted April 18 and October 30, 1973, respectively.

7. AUTHORITY

This application is submitted in accordance with the provisions of
the Regulations of the Air Control Commission, State of Louisiana.

PPG Industries, Inc.	See Below
Company	Signature of Responsible Officer
P. O. Box 1000, Lake Charles, La.	See Below
Address	Name of Responsible Officer
	See Below
	Title of Responsible Officer
	318-882-1200
	Telephone No.


Signature of Professional Engineer

A. T. Raetzsch, Works Manager
Name (typed) and Title

3121
Professional Engineering Registration No.

Louisiana
State Registered

SL 043502

ABBREVIATIONS

1,1-DCE or DCE

1,1-Dichloroethane

VC

Vinyl Chloride

TCE

1,1,2-Trichloroethane

MC

Methylchloroform

HCl

Hydrogen Chloride