



PPG Industries, Inc. Chemicals P.O. Box 1000 Lake Charles, Louisiana 70602

DATE: January 3, 1991 Overnite
TO: A. Porvaznik, G.O. 35E1
FROM: S. Kelley *S. Kelley*
SUBJECT: ACT No. LC-3017 (RES-2510)

Attached is the original of ACT No. LC-3017, Closed Dome Loading of Solvent Tank Cars and Trucks.

This ACT was signed by T. G. Brown on January 2, 1991 and is now being forwarded for General Office Approval.

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Attachment

cc:
R.J. Whitaker/G.P. Robert
J. Hopes/K. Adams
J.E. Fike, GO 36E1
T.G. Brown
B.H. McClendon
H.F. Wyatt
L.C. Joiner
L.C. Comeaux
M.E. Thierry
W.J. Peard
S.L. White
V. Matthews
G.K. Jordan
J.E. Meadows
J.P. Gray
Purchasing
ACT File

SL 091757

AUTHORIZATION FOR CAPITAL TRANSACTION

(ACT)

GROUP/STAFF DEPARTMENT Chemicals	LOCATION (Name) (No) Lake Charles - 254	BUDGET AMOUNT \$ 1,500,000	ACT No. LC-3017
STRATEGIC BUSINESS UNIT Chlorinated Solvents (CS)	PROJECT NAME Closed Dome Loading Of Solvent Tank Cars And Trucks		
FUNDS SUMMARY		CAPITAL BUDGET CHARGE	APPROVAL AMOUNT
ACQUISITION OF: PURCHASED or CONSTRUCTED ASSETS		\$ 1,640,300	\$ 1,640,300
LEASED ASSETS			
OTHER ASSETS			
TOTAL ASSETS		\$ 1,640,300	\$ 1,640,300
DISPOSITIONS			
WORKING CAPITAL (Memo Only)			
PROJECT DESCRIPTION:			

This ACT requests the funds to provide facilities to collect vapors generated during the loading of chlorinated solvent tank cars and tank trucks and send the vapors to an existing incinerator for destruction. These facilities are necessary to meet the requirements of the Louisiana Title 33 Environmental Quality Act (Part III - Air). Vents from solvent drum loading in the "B" Shipping building will also be collected and adsorbed onto a carbon bed.

An additional ACT to collect and dispose of chlorinated solvent vapors generated during the loading of solvent ships and barges will be forthcoming during 1991.

This ACT has been reviewed and approved by the Lake Charles Manager of Environmental Affairs. Upon completion of this project, chlorinated solvent emissions to the atmosphere will be reduced by 38,000 lbs/yr.

CONTACT: G. P. Robert / B. A. Hopkins

RES - 2510

INVESTMENT CATEGORY				BUSINESS CATEGORY - INVESTMENT GUIDELINE			
☒ 1. Environmental, Health, Safety ☐ 2. Energy Conservation or Conversion ☐ 3. Maintain Existing Productivity ☐ 4. Add Capacity ☐ 5. Cost Savings ☐ 6. New Ventures, Acquisitions, Divestitures				☐ 3. Top Capital Priority ☐ 4. New Business ☐ 5. Limited Investment ☒ 6. Strategically Important ☐ 7. Exit or Probationary			
START CONSTRUCTION Apr 1991	START-UP DATE Sept 1991	ECONOMIC LIFE 15 Years	IRR N/A	PAYBACK N/A	PROJ. AVG. ROI N/A		
Thousands of Dollars	START-UP	OPERATING YEARS				ROI AVERAGES	
	1991	1992	1993	1994	1995	1996	1st 5 Years 2nd 5 Years
P-T,P-I EARNINGS							
GROSS ASSETS	1,640	1,640	1,640	1,640	1,640	1,640	
ROI, %							
LAKE CHARLES RECOMMENDATIONS (Name, Date)							
WJP 12/5/90 SLW 12/11/90 GKJ 12/11/90 JEM 12/11/90 JPG 12/18/90 TGB 12/18/90							
GROUP/STAFF RECOMMENDATIONS (Name, Date)						GROUP/STAFF REVIEW (Name, Date)	
						CONTROLLER ENVIRONMENTAL	
CORPORATE REVIEW (Name, Date)							
CONTROLLER		ENVIRONMENTAL			INTERNATIONAL		
CORPORATE APPROVAL (Name, Date)							

Purpose of this ACT

This ACT requests funds to install facilities to collect vapors generated during the loading of chlorinated solvent tank cars and tank trucks and to send the vapors to an existing incinerator for incineration. These facilities are necessary to meet the requirements of the Louisiana 33 Environmental Quality ACT Part III - Air as amended and issued in 1990.

This project is included in the proposed 1991 Capital Forecast at Lake Charles for \$1,500,000. Also included in the proposed 1991 Capital Forecast is \$1,000,000 for the closed loading of chlorinated solvent ships and barges. An ACT to address the disposing of vapors from the solvent ship and barge loading will be submitted during 1991.

Project Discussion

At the present time, vapors generated during the filling of chlorinated solvent tank cars, tank trucks and drums are vented to the atmosphere. This mode of loading will no longer be allowed due to an amendment to the Louisiana Environmental Quality ACT. This amendment requires that vapors generated during the loading of a product having a vapor pressure of 1.5 PSIA or greater at loading conditions be controlled and disposed of by means of incineration, flaring, carbon adsorption, chilling or using other approved devices or methods.

This ACT requests funds to provide facilities to collect vapors from the "B" solvent rack loading operation for tank cars and trucks and vent such vapors to an existing incinerator. Vents from solvent drum loading in the "B" shipping building will be collected and adsorbed onto a carbon bed. Meters will be installed in the loading or fill lines for all solvent cars and trucks and for VDCM and EC trucks and for EC cars in order to prevent overfilling of these containers.

Due to the pressure requirements of the feed to the incinerator, tank trucks having an internal design pressure less than 25 PSIG can no longer be loaded unless a carbon adsorption system is installed. This project will not install such a carbon adsorption system because at present only two customers are using tank trucks with a design pressure below 25 PSIG. However, if market conditions so dictate, a carbon adsorption system or other effective method will be installed so as to allow for loading low internal design pressure tank trucks. Additional funds for this system will be necessary and will be requested via a scope change to this ACT or via a separate ACT.

In addition, facilities will be included to allow the isolation of the Perchlor/Trichlor, TriEthane and EDC products. The flushes of these products will be collected and sent back to the individual units, rather than being sent to the Waste Recovery Unit. This feature will reduce product losses.

Fire protection will be installed at the "B" solvents loading rack and will be provided for the VDCM/EC truck filling spots.

A Level 2 Reliability Study has been completed and the Lake Charles Operations Review Committee (ORC) has approved the project. A Reliability Level 3 Study will be conducted at the Lake Charles Plant before the construction begins.

Environmental Discussion

A construction permit is not required because the implementation of this project will effect a reduction of emissions to the atmosphere. The proper governmental authorities will be notified of PPG's intent to construct prior to commencing construction.

The spent carbon adsorbent will be saturated with organics. This generated solid, hazardous waste will be disposed of along with similar solid, hazardous waste in the complex.

Approximately 1,000,000 pounds per year of product flushes will be sent back to the processing units of origin, rather than processing through the Waste Recovery Unit. This will result in a decreased product loss to incineration by using the more efficient process units' equipment for product recovery and thus aids in the Lake Charles complex's "Waste Minimization" effort.

The operation of the facilities requested in this project will reduce emissions to the atmosphere by the following estimated amounts:

Perchloroethylene	950 lbs/yr
Trichloroethylene	6,300 lbs/yr
Methyl Chloroform	27,320 lbs/yr
Methylene Chloride	1,475 lbs/yr
Ethylene Dichloride	1,950 lbs/yr

This ACT has been reviewed and approved by the Lake Charles Plant Environmental Affairs Group.

AUTHORITATIVE

ESTIMATE

COST ESTIMATE SUMMARY
PPG INDUSTRIES CHEMICAL DIVISION
EST. TYPE: DEFINITIVE
EST. NO. : RES 2510
DISK FILE: 2510
DISK NO. : SD1

PROJECT: INSTALL FACILITIES FOR
FLAMMABLE LOADING
LOCATION: PLANT B
ESTIMATOR: J. WALSH

DATE: 24-Sep-90

	DIRECT MANHOUR	LABOR \$	SUBCONT \$	MATERIAL \$	TOTAL \$
000 DEMOLITION	0	0	0	0	
100 ARCHITECTURAL	0	0	0	0	
200 CIVIL & CONCRETE	813	13,054	9,270	15,748	38,072
300 STRUCTURAL	272	4,372	0	16,750	21,122
400 MACHINERY & EQUIPMENT	101	1,618	36,000	79,800	117,418
500 PIPING	3,705	59,473	0	63,836	123,309
600 ELECTRICAL	1,807	29,006	0	31,263	60,275
700 PROCESS CONTROL	4,607	73,939	0	431,705	505,643
800 COATINGS	365	5,855	0	3,391	9,601
900 INSULATION	0	0	0	0	

DIRECT FIELD COST	11,671	\$187,317	\$45,270	\$642,493	\$875,080
INDIRECT FIELD COST	0	104,523	0	0	104,523
FIELD STAFF - CONTRACTOR	0	0	0	0	
FIELD OFFICE COSTS	0	0	0	0	
PAYROLL BURDENS	0	0	0	0	
CONTRACTOR FEE	0	0	0	0	
CONST. SERVICES	0	0	0	0	
CONST. FACILITIES	0	0	0	0	
CONST. EQUIPMENT	0	0	0	0	
CONST. TOOLS	0	0	0	0	
INSURANCE	0	0	0	0	
PREMIUM TIME	0	0	0	0	
4100 SUBTOTAL	0	0	0	0	
4200 CONST. MGMT.- CONTRACTOR	0	0	0	0	
4300 CONST. MGMT.- PPG	0	0	26,224	0	26,224

INDIRECT FIELD COSTS	0	146,607	30,751	4,252	181,610

TOTAL FIELD COSTS	11,671	\$333,924	\$76,021	\$646,745	\$1,056,690
5400 ENG. COSTS - CONTRACTOR	0	0	264,172	0	264,172
5500 ENG. COSTS - PPG	0	0	73,968	0	73,968
5600 ENG. COSTS - OTHER	0	0	0	0	
ENG. COSTS - TOTAL	0	0	338,141	0	338,141

OFFICE & FIELD COSTS	11,671	\$333,924	\$414,162	\$646,745	\$1,394,499
6700 OWNER DIR PURCHASES	0	0	0	0	
6750 TAXES AND DUTIES	0	0	0	41,762	41,762
6800 ESCALATION	0	15,027	3,421	25,870	44,318
6850 CONTINGENCIES	0	34,915	41,778	71,458	148,151
7000 COMMISSIONING	0	11,239	0	0	11,239

TOTAL	11,671	\$395,104	\$459,361	\$785,834	\$1,640,369

Date 11-19-90

Reporting Engr. B. G. Zupanic

29,184 4,527 4,252 37,968

Chief Proj. Engr. (PPG) 0

Chief Proj. Engr. (SE/IC) 0

12,900

Chief Proj. Engr. 0

Proj. Manager 0

146,807 Engr. 4,527

The cost estimate for this project is based on budgetary estimates for major equipment and estimates that were prepared by the Lake Charles Complex Engineering Department.