



FRANK A. ASHBY, JR.
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF ENVIRONMENTAL AFFAIRS
AIR QUALITY DIVISION

B. JIM PORTER
ASSISTANT SECRETARY

October 15, 1980

Mr. J. A. DeBernardi
Conoco Chemicals Company
P. O. Box 605
Westlake, Louisiana 70669

Attn: Mr. Gary Foshee

Re: Conoco Chemicals Company
Westlake (Calcasieu Parish)
To reduce the emissions allowable
to Permit No. 1424 Conoco VCM Plant
to the following maximums in Tons
per Year: Part. 86.83, HC 18.51,
SO₂ 68.45, CO 17.73, NO₂ 244.97,
HCl & Cl 434.69. Appropriate records
will be maintained and an annual
report made.

Dear Mr. DeBernardi:

This is to confirm that the permit request for the above referenced project at your VCM Plant in Westlake has been approved by the Assistant Secretary of the Louisiana Environmental Control Commission under Regulation 6.1.1. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operation begins.

The permit number cited below should be referenced in future correspondence regarding this subject.

Date: October 15, 1980
Permit No. 1451 T

Approved by:


B. Jim Porter
Assistant Secretary

BJP:JHS:ne

cc: Mr. Joseph Withers, Southwest Regional Office

CCR 000009814

This page is to be used to record the data from one stack (or other emission point) only. Photocopy this page as many times as there are individual emission points, and use one page for each point. Note that the subscripted numbers indicate explanatory notes on pages 4 and 5.

Point source ID number ₁ 11A	Descriptive name of the equipment served by this stack CRACKING FURNACE STACK		Height of stack above grade ₂ 119.97 ft		Stack diameter ₃ 4.50 ft		Stack gas exit temperature 550 °F		
Stack gas flow rate at process conditions, <u>not</u> at standard 17,607 ft ³ /min	Stack gas exit velocity 18.5 ft/sec	If this stack serves a "boiler" ₄ , give the type(s) of fuel used and the heat input (i.e., fuel rate x heating value) Refinery Fuel Gas type(s) of fuel 51.7 x 10 ⁶ BTU/hr 1st fuel (2) 10 ⁶ BTU/hr 2nd fuel, if any (2) Natural Gas to be used as back-up fuel	% of annual throughput of pollutants through this emission point (totals 100%)				Normal operating time of this point		
			Dec-Feb 25 %	Mar-May 25 %	June-Aug 25 %	Sept-Nov 25 %	hrs day 24	days week 7	wks yr 49
Name of pollutant	Pollution control equipment code ₅	Control equipment efficiency ₆	Average emission rate lbs/hr	Maximum emission rate lbs/hr	Annual emission rate tons/yr	Emission estimation method ₇	Add, change or delete code ₈	Concentration in gases exiting the stack ₉	
particulate matter	000	0	.93	1.01	3.81	(3)		N.A. gr/std ft ³	
sulfur dioxide	000	0	1.09	1.13	4.48	(2)		10.8 PPM (VOL)	
nitrogen dioxide	000	0	11.9	12.9	48.7	(3)		Fill in this column only as required by note 9.	
hydrocarbons ₁₀	000	0	.155	.168	.634	(3)			
carbon monoxide	000	0	.88	.95	3.6	(3)			
If this stack is from equipment which burns fuel, give the % of the total fuel used by the equipment which is used, either directly or indirectly, for <u>space heating</u> (or cooling) at the plant. (i.e., to heat or cool the air in a room) If this stack is not from a fuel burning equipment, or if fuel is burned but none of the heat is intended to heat or cool air in a room, enter a zero below: 0.0 % "space heat"					Give below the fuel or process materials charging rate to the unit served by this stack. ₁₁				
					Annual rate		Maximum hourly rate		
					Name of fuel/ process material				
					Refinery Fuel Gas		334 MMSCF /yr		
							/yr		
							/yr		
							/yr		
		/yr		/hr		/hr			
		/yr		/hr		/hr			
		/yr		/hr		/hr			
		/yr		/hr		/hr			

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Point source ID number ₁ IV-A	Descriptive name of the equipment served by this stack C-500 (MAIN PLANT VENT STACK)		Height of stack above grade ₂ 148 ft		Stack diameter ₃ 3.0 ft		Stack gas exit temperature 100 °F			
Stack gas flow rate at process conditions, <u>not</u> at standard 10,565 ft ³ /min	Stack gas exit velocity 25 ft/sec	If this stack serves a "boiler" ₄ , give the type(s) of fuel used and the heat input (i.e., fuel rate x heating value) NA type(s) of fuel 10 ⁶ BTU/hr 1st fuel 10 ⁶ BTU/hr 2nd fuel, if any		% of annual throughput of pollutants through this emission point (totals 100%)				Normal operating time of this point		
				Dec-Feb	Mar-May	June-Aug	Sept-Nov	hrs/day	days/week	weeks/yr
				25 %	25 %	25 %	25 %	24	7	49
Name of pollutant	Pollution control equipment code ₅	Control equipment efficiency ₆	Average emission rate lbs/hr	Maximum emission rate lbs/hr	Annual emission rate tons/yr	Emission estimation method ₇	Add, change or delete code ₈	Concentration in gases exiting the stack ₉		
particulate matter								gr/std ft ³		
sulfur dioxide								PPM (VOL)		
nitrogen dioxide								Fill in this column only as required by note 9.		
hydrocarbons ₁₀	SEE ATTACHMENT A									
carbon monoxide										
If this stack is from equipment which burns fuel, give the % of the total fuel used by the equipment which is used, either directly or indirectly, for space heating (or cooling) at the plant. (i.e., to heat or cool the air in a room). If this stack is not from a fuel burning equipment, or if fuel is burned but none of the heat is intended to heat or cool air in a room, enter a zero below: 0 % "space heat"					Give below the fuel or process materials charging rate to the unit served by this stack. ₁₁					
					Name of fuel/ process material	Annual rate	Maximum hourly rate			
					NA	/yr	/hr			
						/yr	/hr			
						/yr	/hr			
						/yr	/hr			
						/yr	/hr			

C-500 VENT STACK (IV-A)

Name of pollutant	Pollution Control Equipment Code 5	Control Equipment Efficiency 6	Average Emission Rate lbs/Hr	Maximum Emission Rate lb/Hr	Annual Emission Rate Tons/Yr	Emission Estimation Method 7	Add, Change Or Delete Code 8
PARTICULATE MATTER							
SULFUR DIOXIDE							
NITROGEN DIOXIDE							
CARBON MONOXIDE	003		434	464	1,776	(4)	CHANGE
HCl	003	<80%	59.8	63.8	245	(4)	
Cl ₂	003		7.3	7.79	29.9	(4)	
HYDROCARBONS TOTAL	003		1,127	1,205	4,610	(4)	CHANGE
VCH	003		13.63	14.57	55.8	(4)	CHANGE
C ₂ H ₄	003		117	125	479	(4)	CHANGE
METHANE	003		42	45	172	(4)	CHANGE
OTHERS	003		949	1,015	3,883	(4)	CHANGE
ETHANE	003		5	5.4	20	(4)	CHANGE

153 ppm vol

CCR 000009818

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Point source ID number ₁ IV-J	Descriptive name of the equipment served by this stack DOCK EDC TANK (T-415)		Height of stack above grade ₂ 35 ft	Stack diameter ₃ 0.83 ft	Stack gas exit temperature 84 °F																					
Stack gas flow rate at process conditions, <u>not</u> at standard 5.28 ft ³ /min	Stack gas exit velocity 16 ft/sec	If this stack serves a "boiler" ₄ , give the type(s) of fuel used and the heat input (i.e., fuel rate x heating value) NA type(s) of fuel 10 ⁶ BTU/hr 1st fuel 10 ⁶ BTU/hr 2nd fuel, if any		% of annual throughput of pollutants through this emission point (totals 100%) Dec-Feb 25% Mar-May 25% June-Aug 25% Sept-Nov 25%																						
				Normal operating time of this point hrs day week yr 24 7 52																						
Name of pollutant	Pollution control equipment code ₅	Control equipment efficiency ₆	Average emission rate lbs/hr	Maximum emission rate lbs/hr	Annual emission rate tons/yr																					
Particulate matter																										
Sulfur dioxide																										
Nitrogen dioxide																										
Hydrocarbons 10 TOT	000	0	3.35	11.9	7.33																					
Carbon monoxide																										
1,2 Dichloroethane	000	0	3.22	11.4	7.05																					
Other chlorinated																										
Hydrocarbons	000	0	0.13	.45	0.28																					
TOT	000	0	0.09	.31	0.19																					
			Concentration in gases exiting the stack ₉ or/and ppm ppm (VOL)																							
			Fill in this column only as required by note 9.																							
If this stack is from equipment which burns fuel, give the % of the total fuel used by the equipment which is used, either directly or indirectly, for space heating (or cooling) at the plant. (i.e., to heat or cool the air in a room) If this stack is not from a fuel burning equipment, or if fuel is burned but none of the heat is intended to heat or cool air in a room, enter a zero below: 0 % "space heat"			Give below the fuel or process materials charging rate to the unit served by this stack. ₁₁ <table border="1"> <thead> <tr> <th>Name of fuel/ process material</th> <th>Annual rate</th> <th>Maximum hourly rate</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>/yr</td> <td>/hr</td> </tr> <tr> <td></td> <td>/yr</td> <td>/hr</td> </tr> <tr> <td></td> <td>/yr</td> <td>/hr</td> </tr> <tr> <td></td> <td>/yr</td> <td>/hr</td> </tr> <tr> <td></td> <td>/yr</td> <td>/hr</td> </tr> <tr> <td></td> <td>/yr</td> <td>/hr</td> </tr> </tbody> </table>			Name of fuel/ process material	Annual rate	Maximum hourly rate	NA	/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr
Name of fuel/ process material	Annual rate	Maximum hourly rate																								
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Point source ID number ₁ 17-K	Descriptive name of the equipment served by this stack DOCK VCM VENT RECOVERY		Height of stack above grade ₂ 148 ft		Stack diameter ₃ 1.0 ft		Stack gas exit temperature 75 °F				
Stack gas flow rate at process conditions, <u>not</u> at standard 316 ft ³ /min	Stack gas exit velocity 6.7 ft/sec	If this stack serves a "boiler" ₄ , give the type(s) of fuel used and the heat input (i.e., fuel rate x heating value) NA type(s) of fuel 10 ⁶ BTU/hr 1st fuel 10 ⁶ BTU/hr 2nd fuel, if any			% of annual throughput of pollutants through this emission point (totals 100%)				Normal operating time of this point		
					Dec-Feb	Mar-May	June-Aug	Sept-Nov	hrs/day	days/week	hrs/yr
					25 %	25 %	25 %	25 %	3	1	52
Name of pollutant	Pollution control equipment code ₅	Control equipment efficiency ₆	Average emission rate lbs/hr	Maximum emission rate lbs/hr	Annual emission rate tons/yr	Emission estimation method ₇	Add, change or delete code ₈	Concentration in gases exiting the stack ₉			
particulate matter								ppm (VOL)			
sulfur dioxide								ppm (VOL)			
nitrogen dioxide								ppm (VOL)			
carbon monoxide	(BELOW)							Fill in this column only as required by note 9.			
vinyl chloride	048			< 0.01	< 0.1	(4)	CHANGE				
If this stack is from equipment which burns fuel, give the % of the total fuel used by the equipment which is used, either directly or indirectly, for space heating (or cooling) at the plant. (i.e., to heat or cool the air in a room) If this stack is not from a fuel burning equipment, or if fuel is burned but none of the heat is intended to heat or cool air in a room, enter a zero below:					Give below the fuel or process materials charging rate to the unit served by this stack. ₁₁						
0 % "space heat"					Name of fuel/ process material		Annual rate	Maximum hourly rate			
					NA		/yr	/hr			
							/yr	/hr			
							/yr	/hr			
							/yr	/hr			
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Point source ID number V-A	Descriptive name of the equipment served by this stack VFMT INCINERATOR		Height of stack above grade ₂ 75 ft	Stack diameter ₃ 3.0 ft	Stack gas exit temperature 125 °F			
Stack gas flow rate at process conditions, not at standard 11,200 ft ³ /min	Stack gas exit velocity 26 ft/sec	If this stack serves a "boiler" ₄ , give the type(s) of fuel used and the heat input (i.e., fuel rate x heating value) NA 105 BTU/hr 1st fuel 106 BTU/hr 2nd fuel, if any	% of annual throughput of pollutants through this emission point (totals 100%) Dec- 25 % Jan- 25 % Feb- 25 % Mar- 25 % Apr- 25 % May- 25 % June- 25 % July- 25 % Aug- 25 % Sept- 25 % Oct- 25 % Nov- 25 % Dec- 25 %		Normal operating time of this point hrs day week yr 24 7 52			
Name of pollutant	Pollution control equipment code 5	Control equipment efficiency %	Average emission rate lbs/hr	Maximum emission rate lbs/hr	Annual emission rate tons/yr	Emission estimation method 7	Add, change or delete code 8	Concentration in gases exiting the stack 9
particulate matter	022	13.7	28.3	60.0	ADD	(4)	ADD	0.17 gr/ft ³ Fe3
sulfur dioxide	022	0.038	0.040	0.166	ADD	(4)	ADD	0.50 ppm (VSE)
nitrogen dioxide	022	28.96	72.4	126.5	ADD	(4)	ADD	Fill in this column only as required by note 9.
carbon monoxide	022	2.1	0.24	9.1	ADD	(4)	ADD	
carbon dioxide	022	0.22	0.96	4.3	ADD	(4)	ADD	
hydrogen chloride	022	0.98	4.3	9.8	ADD	(4)	ADD	
hydrogen fluoride	022	2.2	2.5	2.5	ADD	(4)	ADD	
hydrogen cyanide	022	0.57						
hydrogen sulfide	022							
hydrogen chloride	022							
hydrogen fluoride	022							
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