



Lake Charles VCM Plant

Conoco Chemicals Company
A Division of Conoco Inc.
P.O. Box 605
Westlake, Louisiana 70669
(318) 491-5211

June 3, 1981

W. P. Doucet, Mayor
Town of Westlake
P O Box 635
Westlake, LA 70669

Dear Mr. Doucet:

The Conoco Chemicals Company VCM Plant located in Westlake has filled the open Safety Director position at the plant. Our new Safety Director is Steven R. Ashby. I am requesting that a Mutual Aid Emergency Pass Card be issued to Mr. Ashby by your office. If you would please send the card to my attention I will issue it to Mr. Ashby.

Sincerely,

J. A. DeBernardi
Plant Manager
Conoco VCM

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CCR 000067144



R7

Lake Charles VCM Plant

CERTIFIED MAIL #8094935
RETURN RECEIPT REQUESTEDConoco Chemicals Company
A Division of Conoco Inc.
P.O. Box 606
Westlake, Louisiana 70669
(318) 491-5211

June 1, 1981

Mr. Gus VonBodungen
Technical Secretary
Department of Natural Resources
Air Compliance Division
P O Box 60630
New Orleans, LA 70160

Dear Mr. VonBodungen:

Conoco Chemicals Co., VCM Plant in Westlake, Louisiana is proposing to modify the Emissions Inventory Questionnaire (EIQ) for the proposed VCM Plant Expansion (Permit No. 1424T, approved October 15, 1980, originally submitted Feb. 5, 1980). This revision will update the New Cracking Furnace (Point Source IIC) and the Vent Gas Incinerator (Point Source V-A) for the latest more definitive design data for the expansion. The previous submittals (2/5/80 and 8/21/80) were based on preliminary design data. The revised submittal reflects an increased heat duty for the New Cracking Furnace, from 51.3 MM BTU/Hr. to 62.5 MM BTU/Hr., and a decrease in the particulate matter and nitrogen dioxide emissions from the Vent Gas Incinerator. The net changes in total emissions for Furnace and Incinerator combined are minimal as shown in Table I.

Also included with this EIQ submittal are updated emissions for existing Cracking Furnaces IIA and IIB. The revisions are merely a correction in the heat duty from 51.3 to 59.4 MM BTU/Hr. to reflect actual maximum firing rates and the use of the corrected AP-42 emission factors (revised 4/77) in the computation of emissions. The emissions to be reported now show a decrease for all pollutants with the exception of SO₂, which increases as shown in Table I. It should be noted that no revisions have been made to these point sources, but the increased duty is only a more accurate reflection of maximum historical operating capabilities.

Please find enclosed a check for \$270.00 permitting fees. Also if there are any questions concerning these revisions please contact Gary Foshee at (318) 491-5062.

Sincerely,

J. A. DeBernardi
Plant Manager

CCR 000067145

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Enc

BCC: CRH-MGH-BIR-GLF-PLF-DLD-JWW-JCL-JGC-VMF

TABLE I
SUMMARY OF EMISSIONS CHANGES
CONOCO CHEMICALS CO.
VCM PLANT EXPANSION
ANNUAL EMISSIONS, TONS/YR.

POLLUTANT	CURRENT TOTAL PERMITTED FOR THE NEW CRACKING FURNACE AND VENT INCINERATOR COMBINED	REVISED TOTAL FOR THE NEW CRACKING FURNACE AND VENT GAS INCINERATOR COMBINED	EXPANSION EMISSIONS NET INCREASE	NET CHANGE FOR EXISTING CRACKING FURNACES	TOTAL NET CHANGE FOR EIQ
PARTICULATE MATTER	79.208	79.208	0	-3.56	-3.56
SULFUR DIOXIDE	59.49	59.49	0	+1.90	+1.90
NITROGEN DIOXIDE	147.567	147.567	0	-24.50	-24.50
HYDROCARBONS	3.609	3.711	+0.102	-0.06	+0.04
CARBON MONOXIDE	10.524	11.13	+0.606	-0.32	+0.29
VINYL CHLORIDE	11.08	11.08	0	0	0

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LOUISIANA AIR CONTROL-COMMISSION
P. O. Box 60630, New Orleans, La. 70160
Telephone: (504) 527-5119

EMISSION INVENTORY QUESTIONNAIRE (Revision of 11/74)

Page 1 of 9

CONOCO CHEMICALS COMPANY
(name of company)
CONOCO INC.
(parent company; if above is a division)
Submitted by company on MAY 28, 1981
(date)

Please file a separate report for each of your plants physically located in Louisiana. This inventory covers the following plant location:

CONOCO VCM PLANT WESTLAKE CALCASIEU
(plant's name, if any) (nearest town) (parish of plant site)

CHECK ONE OF THE BLOCKS BELOW:

- ☐ This inventory includes only presently existing emissions.
☒ This inventory includes both those old emissions (expected to be still existing) and those proposed additional emissions included in our permit request for VCM PLANT EXPANSION

(type of new facility/modification which was submitted to the commission on 2/5/80 (date) and which new emissions are to be existing by 11/1/82 (date).)

INSTRUCTIONS: Keep the original of this form; return a photocopy to this agency. Do not write information in the top or left side margins of this form, as file folder bindings may cover the information. We have tried to ask only for the information we need, please do your best to answer each question. Our authority to ask for this information is contained in R.S. 40:2201 et sec. Copies of this law are available upon request. Air pollutant emission data provided on this form shall be available to the general public, without exception. All other data and information provided on this form and attachments shall also be available to the public, except that upon a showing satisfactory to the Technical Secretary that such other data and information, if made public, would divulge methods or processes entitled to protection as trade secrets, the data will be kept from all persons other than employees, or other agents, of the Louisiana and federal air pollution agencies.

- ☒ Confidentiality of all information, except the air pollutant emission rates, is requested, and our justification for this request is attached to the back of this form. (Check the block if this is the case.)

If certain questions are not applicable, indicate "none" or "not applicable" (N.A.). Terms such as "not significant", "nil", "trace", "negligible", etc. are not acceptable. Please attach additional sheets if more space is needed.

An updated report should be submitted in the future when the annual emission rate of any pollutant from any stack changes more than 10% from reported values.

ITEM 1 . . . ORGANIZATION ACTIVITIES

- A. Circle any days of the week normally not operating: M Tu W Th F Sat Sun
B. This facility, as a whole, typically operates 341 days per year.
C. The peak production season is NA
D. The facility normally operates ☐ 1 ☐ 2 ☒ 3 eight hour shifts per day, or specify the hours normally worked per day.
E. Approximate number of employees at this location is 110.

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F. If the facility, as a whole, operates intermittently, give details on the lines below: _____

G. Ownership of facility. Please check one of the following:

- ☒ corporation, partnership, or sole proprietorship ☐ regulated utility
☐ city government ☐ state government ☐ federal government
☐ other, specify _____

H. Please check off, or write below, the descriptive name which applies to your operation:

- ☒ chemical industry ☐ lumber industry ☐ asphaltic concrete
☐ natural gas industry ☐ pulp & paper ☐ fertilizer
☐ petroleum industry ☐ cement industry ☐ metals industry
☐ sugar cane industry ☐ particleboard ☐ fish meal
☐ other, specify _____ ☐ plywood ☐ brick making

I. Please give a very brief description of your operations, with emphasis on any possible sources of air pollution. Refer to attached process description (Section II and Section III).

ITEM 2 . . . FUEL USE BY FACILITY AS A WHOLE Check one of the blocks below, and supply information as requested:

☐ If this inventory is for "presently existing" conditions (as checked for page 1), please give the information requested below for the latest 12 month period for which you have data. Data for the 12 months ending Month: _____ Year: _____ (fill in) has been given. If future use is expected to be materially different (other than as outlined in a current permit request) give details on a separate sheet.

☒ If this inventory is being submitted in conjunction with a permit request (as checked on page 1), please give the annual consumption rates expected for the total plant for the 12 months following the date the new facility or modification becomes operational. This date is listed on page 1.

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Type of fuel	Annual Consumption (M = thousands)	Sulfur % (by weight)	Heating value
Natural gas	52 million cubic feet	1 grain/MSCF	MM BTU/ MM fr ³
Process gas	810 million cubic feet	100 grain/MSCF	MM BTU/ MM ft ³
No. 1 to 4 fuel oil	3173 M gallons	0.25	MM BTU/ M gal
No. 5 or 6 fuel oil	M gallons		MM BTU/ M gal
Bark/ wood chips	tons		MM BTU/ ton
Coal (specify ash % & anthracite/bituminous)	tons		MM BTU/ ton
Other _____			MM BTU/
Other _____			MM BTU/

ITEM 3 . . . MATERIALS USED, PRODUCED, STORED, OR TRANSPORTED BY TOTAL PLANT

A. Raw materials or materials being transported	Quantity used or transported			How stored (Be specific - floating roof tank, fixed roof, etc.)	How moved (Pipeline, tanktruck, etc.)
	Annual average (give units)	Hourly average lb/hr	Hourly maximum lb/hr		
Name of material					
Ethylene	492 MM Lb	59,767	62,682	Not Stored	Pipeline
Chlorine	750 MM Lb	91,108	95,552	Pressure Tank	Pipeline/Railcar
Oxygen	13.125 MM Lb	1,709	1,792	Not Stored	Pipeline
B. Products or byproducts					
Intermediate Products:					
1. Hydrogen Chloride	528 MM Lb	64,140	67,269	Pressure Tank	Pipeline
2. 1,2 Dichloroethane	1,663 MM Lb	202,038	211,894	Nitrogen Padded Fixed Roof Tanks	Ship and Railcar.
Final Product					
1. Vinyl Chloride	1,000 MM Lb	121,477	127,403	Pressure Spheres	Ship, rail-car, or pipeline

ITEM 4 . . . EMISSION INFORMATION ON THE ENTIRE PLANT AS A WHOLE The rates given should correspond, in most cases, to the sum of the individual average rates of the point sources listed in the Item 5 pages for each type of air pollutant.

A. PARTICULATE SOLIDS OR LIQUIDS	Material name (if must specify)	Emission rate lbs/hr	Emission rate tons/yr
soot from combustion		19.13	83.27
mineral dust			
other, specify:			
other, specify:			
other, specify:			
B. ORGANIC GASES OR VAPORS			
alkanes/ paraffins	Methane and Ethane	1.15	4.93
alkenes/ olefins, specify:			
alkynes/ acetylenes			
aromatics, specify:			
alcohols, specify:			
other, specify: Halogenated	1,2 Dichloroethane	1.61	7.05
other, specify: Halogenated	Vinyl Chloride	2.55	11.18
other, specify: Other Halogenated Materials		0.06	0.28
C. INORGANIC GASES OR VAPORS			
sulfur dioxide	SO ₂	17.15	70.35
hydrogen sulfide			
carbon monoxide	CO	4.35	18.02
nitrogen oxides	NO ₂	51.83	220.47
ammonia			
halogens, specify:	HCl and Cl ₂	99.19	434.69
organic sulfides (except H ₂ S)			
other, specify:			

NOTES TO ITEM 5 Please read all notes before attempting to fill out page(s) 6.

1. Use any number you wish, but please be consistent in identifying this point by the same number on calculations, maps, future correspondence, computer printouts, etc.
2. If the emission point is not a vertically discharging stack, or if there is no clear-cut point of emission (e.g., dust from moving equipment, multiple leaking valves, evaporation from storage tanks, etc.), put a zero in this column.
3. Give the inside diameter at the top. For non-round exits, use the equivalent diameter, equal to 1.128 times the square root of the cross-sectional area at the point of discharge. Diameter, volume flow rate, and exit velocity must be consistent!
4. A "boiler", for purposes of this form, is to be understood to be any combustion device which heats a fluid and is separated from such fluid by a partition. *Therefore oil heaters, Dowtherm heaters, etc. are included.* Internal combustion engines and incinerators are not included. Direct fired kilns are not included.
5. Enter the proper code number, taken from the list below:

000 No control equipment	010 Electrostatic Precip. above 95% efficiency	040 Alkalized alumina
001 Wet scrubber, above 95% efficiency	011 Electrostatic Precip. 80% - 95% efficient	041 Dry limestone injection
002 Wet scrubber, 80% - 95% efficient	012 Electrostatic Precip. below 80% efficient	042 Wet limestone injection
003 Wet scrubber, below 80% efficiency	013 Gas scrubber, general	043 Sulfuric acid plant, contact process
004 Gravity collector, above 95% efficiency	014 Mist eliminator	044 Sulfuric acid plant, double contact process
005 Gravity collector, 80% - 95% efficient	017 Fabric filter	045 Sulfur recovery plant use
006 Gravity collector, below 80% efficiency	019 Catalytic afterburner	046 Reduced emissions by changing process
007 Centrifugal collector above 95% efficiency	020 Catalytic afterburner, with heat exchanger	047 Vapor recovery system
008 Centrifugal collector 80% - 95% efficient	021 Direct flame after-burner	048 Activated carbon adsorption
009 Centrifugal collector below 80% efficiency	022 Direct flame after-burner with exchanger	050 Gas absorption column, packed.
	023 Flaring	052 Spray tower for gases
	039 Catalytic oxidation - flue gas desulfurization	053 Venturi scrubber for gases
		049 Liquid filtration system
		051 Gas absorption column, tray-type
6. Give the percent by weight of uncontrolled emission removed. If unknown, leave blank; if there is no effective removal, enter a zero in the column.
7. Enter the number of the method used, as follows:
 - (1) By actual stack test
 - (2) By material balance, provided that this method is applicable. *(i. e., this method obviously cannot be used where the inaccuracies in measurement are equal to or greater than the absolute magnitude of the losses. An example of proper use would be where solvent emissions are not directly measured, but all solvent purchased is eventually lost to the atmosphere, and therefore material bought divided by operating hours equals loss rate.)*
 - (3) By the use of E.P.A. emission factors. (See the "Compilation of Air Pollution Emission Factors", E.P.A. publication AP-42)
 - (4) By making a conservative estimate.
 - (5) By the use of emission factors other than those supplied by the E.P.A.

NOTES TO ITEM 5, CONTINUED (-continuing with note 7:)

(6) Use this number if and only if you are submitting this form in connection with a permit request, and the emissions referred to have no present existence, but are simply the result of design calculations.

(7) Sources ceasing emissions must be reported on one inventory document after they cease operation (see note 8). Emissions will be zero, and a number 7 should be placed in the "emission estimation method" column.

8. If this particular pollutant, from this particular stack (point source), was not included in the stack or point source information submitted on your last Emissions Inventory Questionnaire, or if this is the first Emissions Inventory Questionnaire you are submitting, write "add" in this column.

If this particular pollutant, from this particular point, was included on the last Emissions Inventory Questionnaire (EIQ) submitted, but the amount has been increased or decreased (to other than zero), write "change" in this column.

If a point source has ceased operation since your last EIQ, the pollutants from that point should be reported as having zero emission rates on next submitted EIQ, and you should write "delete" in this column. AFTER A DELETION HAS BEEN ONCE REPORTED, DO NOT REPORT THE POINT AT ALL ON ANY FUTURE EIQ'S AND DO NOT USE THAT POINT'S IDENTIFICATION (ID) NUMBER IN THE FUTURE FOR ANY OTHER POINT.

9. Report the concentration of particulate matter only for incinerator flue gases, in grains per standard cubic foot of dry flue gas. (See Regulation 20.6.1). If this point is not an incinerator flue, write "N.A." in the column. Report SO₂ concentrations for any stack in which it is found, in PPM by volume at standard conditions. Stack exit concentrations need not be reported for other pollutants.

10. If the hydrocarbons being emitted are of unknown type or have been obtained from emission factors which do not indicate the hydrocarbon type, simply report the data requested on the line marked "hydrocarbons". If, however, you know more about the specific hydrocarbons being emitted (for example - that they are non-methane hydrocarbons, or that they are paraffinic hydrocarbons, or that they are, say, 20 weight % alkenes with remainder paraffins, or if you know the specific name of the hydrocarbon being emitted, say, benzene or methanol or methylethylketone or whatever) please leave the line marked hydrocarbons blank, write in the name or partial identification of your specific hydrocarbons in one of the blank lines below, and give the data requested on that line.

11. Report the fuel charging rate, if any, in units of MM ft³ (million cubic feet) for gases, M gal for fuel oil, and tons for coal, bagasse, sawdust, etc. Report the process materials charging rate, if any, in units such as M Bbl. (thousand barrels), tons (of material processed or produced), tons (air dried unbleached pulp), M gal (storage capacity of tanks; breathing losses), etc. Please telephone us and ask if unsure of what units to use. Do not list air or water as "process materials". In determining rates, do not include any recycle amount unless asked to do so, in general the rates should be determined on a "fresh feed" basis. For storage tanks, list separately under "Name of fuel/ process material" the two categories of breathing losses and working losses. The "rate" of the breathing loss determinant is M gal (storage capacity) and, of the working loss, is also M gal (throughput).

If any one pollutant type (i.e., SO₂, particulate matter, etc.) is emitted from more than one stack (or other emission point) serving the same piece of equipment, please explain briefly on the reverse side of the page 6 subsheet, and write "See reverse side" prominently at the bottom of the form side.

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 59.4 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	days week	wks yr	
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	0.493	0.493	2.03	(3)		NA gr/std ft ³			
sulfur dioxide	000	0	1.32	1.32	5.43	(2)		10.8 PPM (VOL)			
nitrogen dioxide	000	0	8.86	8.86	36.45	(3)		Fill in this column only as required by note 9.			
hydrocarbons ₁₀	000	0	0.147	0.147	0.607	(3)					
carbon monoxide	000	0	0.836	0.836	3.44	(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 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: 0.0 % "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		rate		hourly rate	
						Refinery Fuel Gas		405MMSCF /yr		49.2 MSCF /hr	
								/yr		/hr	
								/yr		/hr	
								/yr		/hr	

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 11B	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 59.4 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	0.493	0.493	2.03	(3)		NA gr/std ft ³		
sulfur dioxide	000	0	1.32	1.32	5.43	(2)		10.8 PPM (VOL)		
nitrogen dioxide	000	0	8.86	8.86	36.45	(3)		Fill in this column only as required by note 9.		
hydrocarbons ₁₀	000	0	0.147	0.147	0.607	(3)				
carbon monoxide	000	0	0.836	0.836	3.44	(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 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: 0.0 % "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		405 MSCF		/yr	
									/hr	
									/hr	
									/hr	
									/hr	
									/hr	

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 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 °F			
Stack gas flow rate at process conditions, <u>not</u> at standard 0 ft ³ /min	Stack gas exit velocity 0 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) N.A. 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	wks yr
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			0		0	(7)	Delete			
carbon monoxide			0		0	(7)	Delete			
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		
					N.A.		/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		

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 IV-C	Descriptive name of the equipment served by this stack Propylene Vent (BL-501)		Height of stack above grade ₂ 148 ft		Stack diameter ₃ 0.666 ft		Stack gas exit temperature °F			
Stack gas flow rate at process conditions, <u>not</u> at standard 0 ft ³ /min	Stack gas exit velocity 0 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) N.A. 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	wks yr
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								pr/std ft ³		
sulfur dioxide								PIM (VOL)		
nitrogen dioxide								Fill in this column only as required by note 9.		
hydrocarbons ₁₀			0		0	(7)	Delete			
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		
					N.A.		/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		
							/yr	/hr		

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) N.A. _____ 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 _____ % Mar-May _____ % June-Aug _____ % Sept-Nov _____ %	Normal operating time of this point <table border="1"><tr><td>hrs</td><td>days</td><td>wks</td></tr><tr><td>day</td><td>week</td><td>yr</td></tr><tr><td>24</td><td>7</td><td>52</td></tr></table>	hrs	days	wks	day	week	yr	24	7	52																
hrs	days	wks																											
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	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								PIM (VOL)																					
nitrogen dioxide																													
hydrocarbons 10 TOL	000	0	1.67	11.9	7.33	(4)		Fill in this column only as required by note 9.																					
carbon monoxide																													
1,2 Dichloroethane	000	0	1.61	11.4	7.05	(4)																							
Other Chlorinated																													
Hydrocarbons	000	0	0.06	0.45	0.28	(4)																							
HCl	000	0	0.04	0.31	0.19	(4)																							
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>Breathing Losses</td><td>6.66 Tons /yr</td><td>/hr</td></tr><tr><td>Working Losses</td><td>0.67 Tons /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	Breathing Losses	6.66 Tons /yr	/hr	Working Losses	0.67 Tons /yr	/hr	_____	/yr	/hr	_____	/yr	/hr	_____	/yr	/hr	_____	/yr	/hr
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Point source ID number ₁ IV-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) N.A. 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 days wks 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																					
particulate matter																										
sulfur dioxide																										
nitrogen dioxide																										
hydrocarbons ₁₀	(below)																									
carbon monoxide																										
Vinyl Chloride	048			<0.01	<0.1 (4)																					
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>N.A.</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	N.A.	/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr		/yr	/hr
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N.A.	/yr	/hr																								
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Point source ID number ₁ 11-C	Descriptive name of the equipment served by this stack Cracking Furnace	Height of stack above grade ₂ 119.97 ft	Stack diameter ₃ 6.0 ft	Stack gas exit temperature 550 °F																										
Stack gas flow rate at process conditions, not at standard 29,270 ft ³ /min	Stack gas exit velocity 17.3 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) No. 2 Fuel Oil _____ type(s) of fuel 62.5 x 10 ⁶ BTU/hr 1st fuel (1) 10 ⁶ BTU/hr 2nd fuel, if any (1) Natural Gas or Refinery off gas may be used as a backup fuel.		% 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 wks 24 7 48.69																										
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	0.886	0.886	3.622	(3)	Add	NA gr/std ft ³																						
sulfur dioxide	000	0	14.05	14.05	57.47	(3)	Add	123 PPM (VOL)																						
nitrogen dioxide	000	0	6.303	6.303	25.778	(5)	Add	Fill in this column only as required by note 9.																						
hydrocarbons ₁₀	000	0	.421	.421	1.721	(3)	Add																							
carbon monoxide	000	0	2.127	2.127	8.700	(3)	Add																							
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>No. 2 Fuel Oil</td> <td>3.173 MM Gal/yr</td> <td>492.95 Gal /hr</td> </tr> <tr> <td>Refinery Fuel Gas</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	No. 2 Fuel Oil	3.173 MM Gal/yr	492.95 Gal /hr	Refinery Fuel Gas	/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 V-A	Descriptive name of the equipment served by this stack VENT 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, <u>not</u> at standard 28,817 ft ³ /min	Stack gas exit velocity 57.9 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 25 %	Mar-May 25 %	June-Aug 25 %	Sept-Nov 25 %	hrs day	days week	wks yr
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	022		17.26	17.26	75.586	(4)	Change	0.079 gr/std ft ³		
sulfur dioxide	022		0.46	0.46	2.02	(4)	Change	1.78 PPM (VOL)		
nitrogen dioxide	022		27.81	27.81	121.789	(4)	Change	Fill in this column only as required by note 9.		
hydrocarbons ₁₀ TOT	022		2.98	2.98	13.07	(4)	Change			
carbon monoxide	022		0.55	0.55	2.43	(4)	Change			
			2.54	2.54	11.08	(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 <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 % "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					
							/yr			
							/hr			
							/yr			
							/hr			
		/yr		/hr						
		/yr		/hr						
		/yr		/hr						
		/yr		/hr						

ITEM 6 . . . PLANT LOCATION FOR AIR POLLUTION DISPERSION MODELING

Give below the Universal Transverse Mercator zone number and Universal Transverse Mercator (UTM) coordinates, to the nearest one-tenth kilometer, of your facility. We must have this information since we are required to report it to the U. S. Environmental Protection Agency for wide area dispersion modeling purposes.

The coordinates can be obtained from most U. S. Geological Survey maps, scale 1:24,000 or 1:62,000 for your particular area. These maps, if not already in your possession, may be found in your local library, or can be purchased from the U. S. Geological Survey (USGS) at the address shown below for 75¢ each (1974 price). An index of all the maps available for Louisiana, together with prices and detailed instructions for ordering, may be obtained free by addressing a request to:

U. S. Geological Survey, Distribution Center, Denver Federal Center, Bldg. 41
Denver, Colorado 80225

If the map has the Universal Transverse Mercator (UTM) coordinates listed, it will have the UTM zone number mentioned among the writing along the bottom of the map. This zone number will be either 15 or 16 for Louisiana.

Please note that latitude and longitude are not what we need, and that the USGS maps do not show UTM grid lines as they do latitude and longitude; however, tick marks along the edges of the maps do indicate the UTM grid locations. A straight edge must be used to connect tick marks at the opposite sides of USGS maps when interpolating between UTM tick marks because the map grid is drawn on the latitude-longitude system and, therefore, the UTM grid may appear quite skewed. For the scales mentioned, tick marks appear for every 1000 meters (1 kilometer), with every fifth tick mark and the tick marks nearest the southeast and northwest corners of the map giving the value in meters. The 1:24,000 scale is preferred to accurately locate the facility, but the 1:62,000 scale may be used if the 1:24,000 scale map is unavailable for your area.

For example: The state capitol building in Baton Rouge would be:

UTM zone No. 15 horizontal coordinate: 674.1 Km. E
vertical coordinate: 3370.6 Km. N

Your facility: UTM zone No. 15 horizontal coordinate: 472.9 Km. E
vertical coordinate: 3346.5 Km. N

ITEM 7 . . . COMPLIANCE STATUS

Check one of the blocks below, regarding your facility's "Compliance Schedule":

- ☒ Such a document has not been requested of us, so far as we know.
☐ Such a document was requested, or submitted, but we haven't yet received notification that it was accepted at a public hearing by the Commission.
☐ We were notified that the document was accepted at a public hearing; no schedule of actions to achieve compliance was necessary.
☐ We were notified that the document was accepted at a public hearing; our schedule of actions to achieve compliance by (month), 197 (year) was approved. The most recent "increment of progress" date in our schedule of actions was achieved on (month) (day) 7 (year). [YOU MUST FILL IN THE DATE BLANKS IF YOU HAVE CHECKED THIS PARAGRAPH.]

ITEM 8 . . . REFUSE COLLECTION AND DISPOSAL

- A. Amount of combustible refuse disposed of per year: 5915 Tons
(give the applicable units)
- B. Description of refuse; check off applicable categories:
☒ Paper scrap ☐ Rubber scrap
☒ Wood scraps & sawdust ☐ Wet garbage or animal wastes
☒ Other, specify: Rubbish
- C. Method of refuse disposal; check off applicable categories:
☐ City pickup ☐ On-site dump ☐ On-site incineration
☒ Contractor pickup ☐ On-site outdoor burning ☐ On-site landfill
☐ Other, specify: _____
- D. If disposal is by contractor pickup, give the name and address of the contractor:
Browning-Ferris Industries of Louisiana Inc. Solid Waste Division-Cities Service
Highway - Maplewood, LA 70663
- E. The on-site incinerator, if any, has the following design features:
☒ No on-site incinerator ☐ Afterburners ☐ Water scrubber installed
☐ Single chamber ☐ Primary & secondary ☐ Waste material disposed of
☐ Multiple chamber ☐ burners installed ☐ by burning in a boiler
- F. Incinerator equipment data (if applicable):
Manufacturer: NA Model: _____
Capacity: _____ Installation date: _____
Auxiliary fuel used: (type, how used, rate of use) _____

ITEM 9 . . . SUPPLEMENTARY INFORMATION

- A. Please supply a unit plot plan or map which shows the locations of stacks (or other sources), together with the source identification numbers from Item 5, the plant boundaries, a distance scale, and the direction North. Please also show, on a separate diagram if necessary, the location of the plant in relation to nearest highways, residential areas, and towns. Attach the maps to the back of this form.
- B. Approximately how much money have you spent on air pollution control equipment and operation in the past 10 years? Equipment \$ 15,500,000 Operation \$ 2,935,000

ITEM 10 . . . TOXIC GASES & HAZARDOUS MATERIALS

- A. Are there any substances used or produced in your facility which could cause immediate injury to life or property, if they were emitted to the atmosphere, which are not already listed in this form as one which is presently being emitted to the atmosphere? (e.g., chlorine for water treatment, toxic gases, gases used as catalysts, etc., which ordinarily do not escape) Please list such substances below. If none, please so state. NO
- B. Does your facility use or produce asbestos, mercury (other than laboratory use), or beryllium in any amount whatsoever? If answer is yes, give details below on separate sheet. If answer is no, please write "no" below: NO

ITEM 11 . . . PERSONNEL & CERTIFICATION

A. The manager of the facility, on location at the plant site, is as follows:

Name: James A. DeBernardi, Plant Manager - VCM Plant
Title: Conoco Chemicals Company, A Division of
Name of Company: Conoco, Inc.
Business street address/ P. O. Box: P. O. Box 605
City or town, parish, Zip code: Westlake, LA 70669
Business area code/ telephone No.: 318/491-5064

B. Person to contact at the site of the facility about air pollution control, if different from the above:

Name: Gary L. Foshee
Title: Chief Process Engineer
Business telephone No./ extension: 318/491-5062

C. If the company's air pollution control correspondence and documents are prepared at a headquarters office, at a different site, give the information on the person to be contacted below:

Name: Mike Hayes
Title: Director of Environmental Control
Name of company; or parent company: Conoco Chemicals Company
Business street address/ P. O. Box: P. O. Box 727
City, state, Zip code: Westlake, LA 70669
Business area code; telephone No.: 318/491-5436

D. Person who prepared this report: (If one of the above, just check appropriate block:)

☒ A. ☐ B. ☐ C.
Name: Virgil M. Fisher
Title: Process Engineer
Firm: (if prepared by a consultant)
Company: (if prepared in-house) Conoco Chemicals Company
Street address/ P. O. Box: P. O. Box 605
City, state, Zip code: Westlake, LA 70669
Area code, telephone #, extension: 318/491-5057

E. CERTIFICATION. I certify, under the provisions in Louisiana and United States law which provide criminal penalties for false statements, that this Emission Inventory Questionnaire, including all attachments thereto, contains information which is true and correct to the best of my knowledge and belief.

J. A. DeBernardi
(signature of manager, or other company agent)

J. A. DeBernardi, Plant Manager - VCM Plant
(printed or typed name & title of person above)

June 2, 1981
(date signed)

CONOCO INC.
CONOCO CHEMICALS VCM PLANT
P. O. BOX 605 PH. 491-5051
WESTLAKE, LA. 70669

WESTLAKE BRANCH
Catastrophe Marine CM National Bank
WESTLAKE, LOUISIANA 70669

1550

JUNE 3 1981

84-18V
652 A

PAY
TO THE
ORDER OF

DEPT OF NATURAL RESOURCES \$ 270.00
Two hundred seventy dollars & ^{no}/₁₀₀ ——— DOLLARS

FOR

Lynne R. Cobb

WORKING FUND

CONOCO INC.

CONOCO CHEMICALS VCM PLANT

⑈001550⑈ ⑆1065200188⑆ 23011416⑈01

CCR 000067163