



Lake Charles VCM Plant

CERTIFIED MAIL #316134
RETURN RECEIPT REQUESTED

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

March 25, 1981

Mr. Oscar Cabra
Permit Contact
U.S. Environmental Protection Agency
Permit and Support Branch
1201 Elm Street
Dallas, TX 75270

Dear Mr. Cabra:

By submittal of the attached Environmental Protection Agency application forms 1 and 2C, the Conoco Chemicals Company VCM Plant is applying for permit authorization to continue discharging wastewater under the National Pollutant Discharge Elimination System (NPDES) as required by the Clean Water Act. The VCM Plant's existing NPDES permit (LA 0003476) expires March 31, 1981.

As discussed with Ed McHam, Part V of form 2C is not being submitted at this time since all the data required to complete Part V is not yet available. Work is continuing on procurement of the required data and Part V of form 2C will be submitted under separate cover by June 30, 1981.

The attached permit application includes three wastewater outfalls. The outfalls are the same as the three permitted outfalls included in the VCM Plant's existing NPDES permit. The three outfalls are Outfall No. 201 (waste treatment system), Outfall No. 101 (acid neutralization pit effluent), and Outfall No. 001 (combined waste streams). Analytical information will be provided specifically for Outfalls No. 101 and 201. Analysis for Outfall No. 001 has not been undertaken as the combined effluents will contain all constituents.

Presently, Conoco is planning an expansion of the VCM Plant. Though construction of the expanded plant is not scheduled to begin until August, 1981 with start up of the expanded plant scheduled for the 1st quarter of 1983, this permit application is being submitted for the expanded VCM Plant as well as for existing plant operation.

The reasons the attached permit application is being submitted for the VCM Plant Expansion in addition to present operations are as follows:

- 1) The VCM Plant Expansion will not introduce any new products or intermediates. The expansion will involve process technology and equipment changes which will allow the capacity of the plant to be expanded by

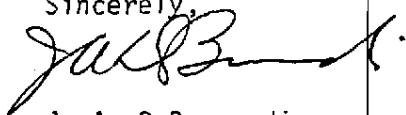
VVC 000013445

approximately 50%. No new raw materials (with the exception of pure oxygen which will replace air in the oxychlorination reaction) or intermediate chemicals will be required for the new technology.

- 2) Preliminary material balances indicate that the effluent pollutant levels from the expanded plant will not exceed the current permitted levels. The expansion effluent contaminant levels were estimated from a computer simulation of the Activated Sludge Unit. Actual contaminant levels cannot be quantified without biological studies which use the actual expansion wastewater. However, the contaminant levels will be similar to existing levels.
- 3) The Secondary Wastewater Treatment System will be modified to improve its overall operability. The major modifications include new pumping systems and new aerators in the equalization basins. The new aerators should provide a more consistent feed to the Activated Sludge Unit and increase bioactivity in the equalization basins thereby reducing COD/BOD.

Should any additional information be required, please contact Gary L. Foshee, Chief Process Engineer, at (318) 491-5062.

Sincerely,



J. A. DeBernardi
Plant Manager

br

CC:

J. Dale Givens - DONR

VVC 000013446

Form Approved OMB No. 158-80175

EPA Form 3510-1 (6-80)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	2869	(specify)	VINYL CHLORIDE MONOMER	7		(specify)	
13	14	15	16	13	14	15	16
C. THIRD				D. FOURTH			
7		(specify)		7		(specify)	
13	14	15	16	13	14	15	16

VIII. OPERATOR INFORMATION

A. NAME		B. Is the name listed in Item VIII-A also the owner?
8	CONOCO CHEMICALS COMPANY	☒ YES ☐ NO
13	14	66

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)				D. PHONE (area code & no.)			
F = FEDERAL	M = PUBLIC (other than federal or state)		(specify)	A	318	491	5063
S = STATE	O = OTHER (specify)			13	14	15	16
P = PRIVATE				17	18	19	20

E. STREET OR P.O. BOX	
P. O. BOX 605	
21	22

F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND
WESTLAKE		LA	70669	Is the facility located on Indian lands? ☐ YES ☒ NO
13	14	40	41 42	43 44

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)			
9	N	LA	0003476	9	P	PSD- LA-29	
13	14	15	16	13	14	15	16
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)			
9	U			9		GD- 514- I1	(specify) State of Louisiana Dept. of Natural Resources Hazardous Waste Permit
13	14	15	16	13	14	15	16
C. RCRA (Hazardous Wastes)				E. OTHER (specify)			
9	R			9		1447 I	(specify) State of Louisiana Dept. of Natural Resources Air Quality Permit
13	14	15	16	13	14	15	16

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

The Conoco VCM Plant manufactures Vinyl Chloride Monomer (VCM) by thermally cracking 1,2-dichloroethane (EDC). EDC is manufactured as an intermediate by direct chlorination and oxychlorination of ethylene.

VVC 000013448

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
R. E. Lehmkuhl, Vice President Operations, Conoco Chemicals Company		2/25/11

COMMENTS FOR OFFICIAL USE ONLY

C

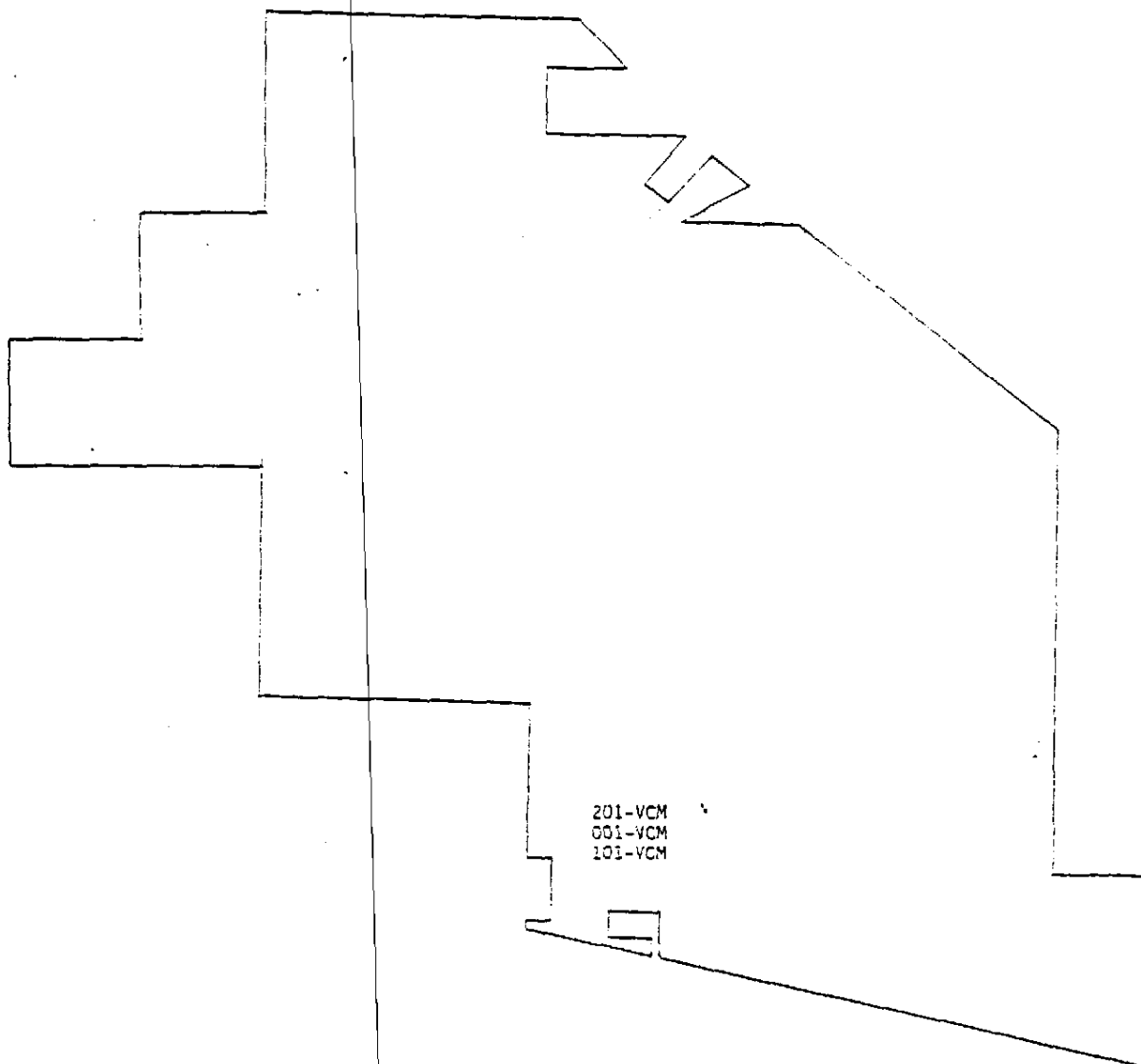


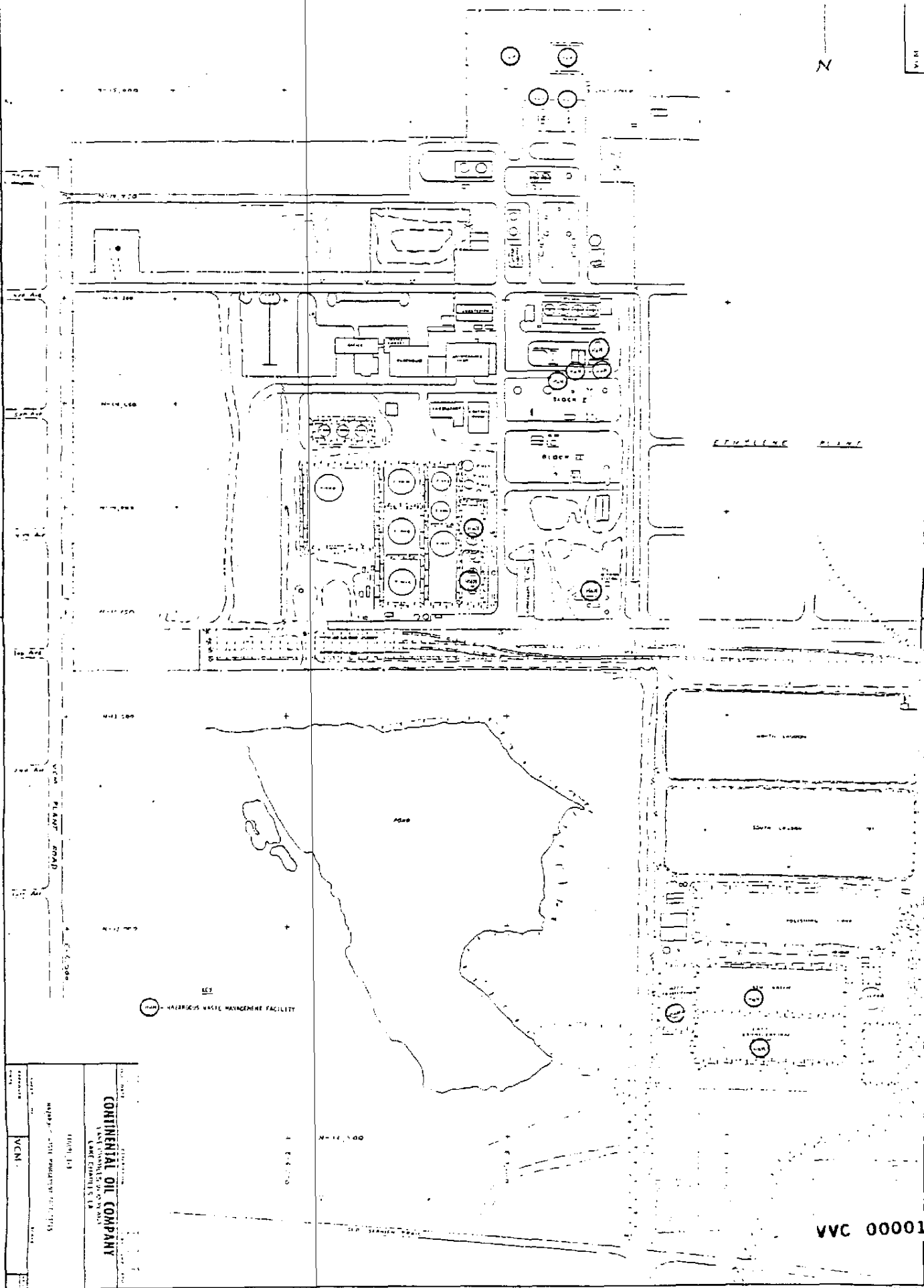
Figure 1-2. Lake Charles Chemical Complex
NPDES Discharge Points

(VCM PLANT)

VVC 000013450

N

VCM



CONTINENTAL OIL COMPANY

10001-100

WASTE MANAGEMENT FACILITY

VCM

VVC 000013451

LA 0003476

Please print or type in the unshaded areas only.

FORM 20 NPDES		EPA		U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS Consolidated Permits Program			
I. OUTFALL LOCATION							
For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.							
A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
201	30	14	52	93	16	54	Unnamed Drainage Ditch to Bayou Verdine
II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES							
A. Attach a line drawing showing the water flow and treatment units labeled to correspond to the flows between intakes, operations, treatment units, and storm water runoff; include a pictorial description of the nature and amount of							
B. For each outfall, provide a description of: (1) cooling water, and storm water runoff; (2) The on additional sheets if necessary.							
1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		4. LIST CODES FROM TABLE 2C-1		
	A. OPERATION (list)	B. AVERAGE FLOW (include units)	C. DESCRIPTION				
201	1) Oxychlorination Acid Water	41,000 GPD	The wastewater is initially	2-K	3-E		
	2) Spent Caustic From VCM Purification	13,000 GPD	treated in a 43.5' x 13' x 9.5' deep limestone neutralization pit. The approximate wastewater retention	3-G	3-A		
	3) Spent Caustic from EDC	25,000 GPD	time in the pit is .8 hrs. at 450 gpm flow. Caustic is then added to the wastewater to further adjust the pH.	1-U	3-B		
201	4) Washing						
	4) Azeo Drying Water from EDC Purification	15,000 GPD	The wastewater is then aerated in two equalization basins which are in series. The basins are 156' x 87½' x 12' deep and 336' x 111' x 12' deep. Wastewater retention				
	5) Steam Stripper for Recovery	22,000 GPD	time in the two basins is 26.5 hrs. and 79.4 hrs. respectively at a flow of 450 GPM.				
201	6) Steam Blowdown	9,000 GPD	The wastewater is pumped from the equalization basins on level control to an Activated Sludge Unit (ASU). The ASU is 336' x 111' x 12' deep and has a				
	7) Miscellaneous Washwater	32,000 GPD					
	8) Incinerator Cooling Tower Blowdown	144,000 GPD					
201	9) Main Plant Cooling Tower Blowdown	346,000 GPD					
	10) Stormwater Runoff	1241,000 GPD (Maximum)					
201							
201							

OFFICIAL USE ONLY (effluent guidelines sub-c)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (complete the following table)

☐ NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW						5. DUR- ATION (in days)
		a. DAYS PER WEEK (daily average)	b. MONTHS PER YEAR (specify storage)	3. FLOW RATE (in mgd)		d. TOTAL VOLUME (specify with units)				
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY			

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (complete Item III-B)

☐ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C)

☐ NO (go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS (list outfall numbers)
3. QUANTITY PER DAY	4. UNITS OF MEASURE	5. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of waste-water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table)

☐ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

VVC 000013453

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

Please print or type in the unshaded areas only.

FORM 20		EPA		U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS Consolidated Permits Program			
I. OUTFALL LOCATION							
For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.							
A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
201	30	14	52	93	16	54	Unnamed Drainage Ditch to Bayou Verdine
101	30	14	52	93	16	59	Unnamed Drainage Ditch to Bayou Verdine
II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES							
A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing water flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.							
B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.							
1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT				
	a. OPERATION (list)		b. AVERAGE FLOW (include units)		c. DESCRIPTION		d. LIST CODES FROM TABLE 20-1
201					retention time of 53 hrs. for		
					a wastewater flow of 450 GPM.		
					Upon exiting the ASU the		
					wastewater enters a clarifier		
201					where the solids are removed.		
					The clarifier measures 50' in		
					diameter and is 9' deep.		
					Average retention time in the		
201					clarifier for a flow of 450		
					GPM is 3.3 hrs. Finally,		
					the wastewater is re-aerated		
					in an aeration basin. The		
201					basin is 44' x 44' x 8'-deep		
					and the retention time in		
					the basin is 1.4 hrs. at		
					the normal 450 GPM flow.		
201					Sludge produced in the ASU		
					is stored in a waste sludge		
					pit which measures 137' x 81'		
					x 7 3/4' deep prior to dis-		
101					posal by a contractor.		
101	1) Incinerator Acid Water		29,000 GPD		The wastewater is treated in one of two 16½' x 70' x 11'		
OFFICIAL USE ONLY (effluent guidelines sub-categories)							

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C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal? ☐ YES (complete the following table) ☐ NO (go to Section III)									
1. OUTFALL NUMBER (list)	2. OPERATION/S/ CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				5. DURATION (in days)	
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	6. FLOW RATE (in mgd)		7. TOTAL VOLUME (specify with units)			
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY		

III. MAXIMUM PRODUCTION			
A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility? ☐ YES (complete Item III-B) ☐ NO (go to Section IV)			
B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)? ☐ YES (complete Item III-C) ☐ NO (go to Section IV)			
C. If you answered "Yes" to Item III-B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.			
1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

IV. IMPROVEMENTS				
A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of waste-water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions. ☐ YES (complete the following table) ☐ NO (go to Item IV-B)				
1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED

VVC 000013455

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

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C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?
☐ YES (complete the following table) ☒ NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW						
		3. DAYS PER WEEK (specify average)	4. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (specify with units)		c. DUR- ATION (in days)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY			

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?
☐ YES (complete Item III-B) ☒ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?
☐ YES (complete Item III-C) ☐ NO (go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of waste-water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.
☐ YES (complete the following table) ☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

VVC 000013457

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☒ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONOCO CHEMICALS

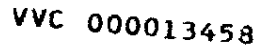


TABLE I
ADDITIONAL POLLUTION CONTROL PROGRAMS

I. Secondary Flood Prevention Revisions

This project will provide a new levee and effluent pumpout system to alleviate flooding problems at the Secondary Wastewater Treatment System. The new levee will prevent bayou flood waters from entering the Wastewater Treatment System and the pumpout system will allow wastewater to be discharged when bayou flood waters hinder normal gravity wastewater runoff.

A request for funds to complete this project will be made in the second quarter of 1981. Final project completion is expected to be six months after funds are approved.

VVC 000013459

LA 0003476

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None Applicable			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you do or expect that you will over the next 5 years use or manufacture as an intermediate or final product or byproduct?

☒ YES (list all such pollutants below)

☐ NO (go to Item VI-B)

- | | | |
|-------------------------------|-------------------------------|---------------------------|
| 1) 1,2-Dichloroethane | 8) Trichloroethylene | 15) 1,4 Dichlorobenzene |
| 2) Chloroethane | 9) 1,1,2-Trichloroethane | 16) 1,1,1 Trichloroethane |
| 3) Chloroform | 10) Tetrachloroethylene | 17) Methylene Chloride |
| 4) Carbon Tetrachloride | 11) 1,1,2,2-Tetrachloroethane | 18) Chlorobenzene |
| 5) 1,1-Dichloroethylene | 12) BIS (Chloro Ethyl) Ether | 19) Benzene |
| 6) 1,2-Trans-Dichloroethylene | 13) 1,2 Dichlorobenzene | |
| 7) Vinyl Chloride | 14) 1,3 Dichlorobenzene | |

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharges of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐ YES (complete Item VI-C below)

☒ NO (go to Section VIII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years, to the best of your ability at this time. Continue on additional sheets if you need more space.

VVC 000013460

A. Name	B. Address	C. Telephone	D. Pollutants Analyzed
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Core Laboratories	Highway 90E. Sulphur, LA 70663		Part B-f,l,m
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VVC 000013462

File VCM Plant
1981

VVC 000013463