CONOCO

Interoffice Communication

To R. E. Cripps - Ponca City

From J. A. DeBernardi

Date March 5, 1982

Subject 1981 Survey on Pollution Abatement Costs and Expenditures

Enclosed per your request is the completed 1981 Bureau of Census Form MA-200 for the Lake Charles VCM Plant. If there are any questions about the completed form, please contact Scott Sommer at ETN 640-5058.

J. A. DeBernardi

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cc:
RDG-JWW-RB-DLD

CCR 000067360

MA-200-L1(1981)
(7-13-81)

DEC 31 1981

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

FROM THE DIRECTOR
BUREAU OF THE CENSUS

It is widely recognized that private industry is devoting a significant share of its resources for pollution abatement. It is, consequently, important that accurate and timely statistics be available on a broad national basis so that the economic implications of such costs can be better evaluated by business, government, and the general public. This information is provided by the annual "Survey of Pollution Abatement Costs and Expenditures" which the Bureau of the Census has conducted since 1973.

The enclosed 1981 survey form is unchanged from 1980. This report is required only for plant(s) for which you received an addressed form. Before completing the report, please read the instructions carefully, particularly if more than one establishment of your company used the same pollution abatement facilities.

Response to this inquiry is required by law (title 13, United States Code, sections 131, 182, 224, and 225). By section 9 of the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Your cooperation in returning this form within 60 days will help to make possible the timely publication of the survey results. If you have any questions, or if additional time is required to complete the report, please contact Mr. Mendel Gayle or Mrs. Patricia Garner of our Industry Division at (301) 763-1755. Requests for additional forms may be made by calling (812) 288-3331.

Sincerely,

Bruce Chapman

BRUCE CHAPMAN

Enclosures

DUE DATE: 60 DAYS AFTER REC' ‾ OF FORM

O.' No. 0607-0176: Approval Expires December 198

FORM MA-200
-30-81)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

SURVEY ON POLLUTION ABATEMENT COSTS AND EXPENDITURES 1981

NOTICE – Response to this inquiry is required by law (title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

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6 70100 00 00 1910173 2869 9200
CONOCO INC
VCM CHEMICAL PLANT
1 MILE W ON OLD SPANISH TRAIL
WESTLAKE LA 70669

Please read the instructions before completing this report.

RETURN TO — Bureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47132

RETURN THIS COPY

(Please correct any error in name and address including ZIP code)

Change of operating status

Mark (X) one if applicable

This establishment has been:

☐ Idle ☐ Closed
☐ Sold – *To whom?* ☐ Other – *Specify*

Name of person to contact regarding this report	Telephone Area code	Number	Extension
J. A. DeBernardi	318	491	5063

GENERAL INSTRUCTIONS

The purpose of the questionnaire is to collect total expenditures made by industry to abate pollutant emissions. The survey covers current operating costs and capital expenditures made to reduce pollution in its air, water, or solid forms.

If you cannot answer a question from your company records, please estimate the answer carefully. In particular cases, identification of abatement expenditures may require the joint efforts of your establishment's financial and engineering staff.

Report data on a calendar year basis for 1981. However, if your establishment uses a fiscal year that ends between 10/31/81 and 2/28/82, fiscal year data will be acceptable.

Answer all questions. If data based on book records are not available, carefully prepared estimates are acceptable. If your establishment did not operate for a full year, please indicate the disposition by making the appropriate box(es) in the above item pertaining to "Change of operating status." If you have any questions regarding this report, please call (301) 763–1755.

Report all value figures in thousands of dollars.

For example:

If the value figure for the year is –

$5,600,000 – Report as ___ ___ 5 , 6 0 0
$5,600 – Report as ___ ___ ___ , ___ ___ 6
$560 – Report as ___ ___ ___ , ___ ___ 1
$499 – Mark box less than $500 and greater than 0
$0 – Report as ——→ 0 (zero)

This report is required only for the establishment specified in the address block of the report form. DO NOT COMBINE this report with other establishments in your company even though both operations may jointly use the same pollution abatement facilities. When this occurs, apportion the expenditures and costs according to the rate of pollution abatement equipment utilization or the relative amounts of pollutants produced.

Pollution abatement means the reduction or elimination of pollutants emitted from your property or activities. Pollution abatement includes prevention, treatment, and recycling. Treatment refers to the wide variety of techniques used to cool, detoxify, decompose, and separate-to-store or ameliorate.

Efforts to improve environmental aesthetics or employee comfort, such as landscaping or air conditioning, should not be included in the answers to this survey. Do not include purchases of motor vehicles with pollution abatement devices. The cost of such devices will be estimated by other means.

Some establishments manufacture equipment and materials, such as electrostatic precipitators or desulfurized fuels, to be sold to others for pollution abatement purposes. Current and capital expenditures for the production of such equipment and materials should not be reported.

Air pollutants are airborne substances including particulates (dust, fly ash, smoke), sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons, odors, fluorides, lead and other heavy metals, radioactive and toxic substances.

Water pollutants are waterborne substances including phosphate, nitrates (-trites), substances that generate chemical or biochemical oxygen demand, solids, acids, bases, heavy metals, radioactive and toxic substances, synthetic organic molecules, harmful microbes, oil, grease, dyes, and heat.

Solid waste includes garbage, trash, sewage sludge, dredged spoil, incinerator residue, wrecked or discarded equipment, biological and chemical wastes, radioactive and other toxic materials. Include solid waste produced as a result of air and water pollutant abatement.

Item 1 – WHO SHOULD REPORT?

(a) NO POLLUTION ABATEMENT ACTIVITIES – Every concern receiving a report form which had **no** pollution abatement capital expenditures, payments to government, or annual operating costs and expenses during 1981 **should answer only item 1, certify in item 11, and return form for processing. Failure to return the form will require the issuance of followup letters.**

(b) POLLUTION ABATEMENT ACTIVITIES – Every concern receiving a report form which had some pollution abatement capital expenditures or payments to government or annual operating costs and expenses during 1981 is required to submit data for items 2–10 as applicable.

1. ☐ No pollutants generated
2. ☐ Cost included in rent, taxes, lease agreement, or removal without charge or payment (such as scavenger services)
3. ☐ All costs less than $500
4. ☐ Other – *Specify*

CCR 000067362

SPECIFIC INSTRUCTIONS

CAPITAL EXPENDITURES FOR NEW PLANT AND EQUIPMENT FOR POLLUTION ABATEMENT – 1981

▶ **Capital expenditures for new plant and equipment** include new plant and equipment acquisitions (both replacement and expansion) and expenditures for construction in progress. Capital expenditures are those chargeable to your establishment's accounts for plant and equipment that are subject to depreciation or to amortization. Total capital expenditures for abatement include expenditures for both end-of-line techniques and changes-in-production processes.

▶ **Item 2a – End-of-line techniques** treat air pollutants after their generation in your production processes by use of separately identifiable abatement (retrofit) facilities such as dust collectors, scrubbers, precipitators, or other treatment processes. These facilities are installed exclusively for the purpose of abating pollutant emissions from your plant or property.

▶ **Item 2b – Changes-in-production processes** reduce or eliminate the generation of pollutants by employing material substitution, improved catalysts, reuse of waste or water, and equipment alteration. These changes may involve converting equipment to handle the use of substitute fuels that generate less pollutants. Item 2b refers to new plant and equipment necessary for such changes in production processes. If your establishment has made expenditures for **changes-in-production processes**, estimate the expenditures as the difference between expenditures on new plant and equipment that your establishment actually made for changes-in-production processes and what your establishment would have spent for comparable plant and equipment without air pollution abatement features.

▶ **Item 2d** – To estimate the impact of emission standards upon capital investment for pollution abatement in industry, it is necessary to match investment expenditures to major types of air pollutants abated. **Note:** Some techniques abate both sulfur oxides and particulates. If your establishment uses any of these techniques, include the expenditures for these techniques under the category "sulfur oxides."

▶ **Item 3a** – Same as item 2a, except that it refers to waste water treatment techniques such as trickling filters, settling ponds, clarifiers, oil spill dikes, and other separately identifiable treatment techniques.

▶ **Item 3b** – Same as item 2b, except that it refers to abatement of water pollutants. The purpose of pollution abatement may be achieved by converting processes and equipment to enable recycling (closed or partially closed loop systems) or to enable additional uses of water prior to discharge. **Do not** include capital expenditures undertaken exclusively for the purpose of insuring adequate water supply for production.

▶ **Item 4** – Disposal of solid waste refers to the containment, transfer, or other disposal of solid wastes by means acceptable to local, State, or Federal authorities and includes sanitary or other landfill methods, incineration, and dumping in designated authorized areas. **Exclude** capital expenditures made for new plant and equipment designed for the disposal of salable items such as scrap metal, scrap paper, scrap wood, etc.

▶Item 2 – CAPITAL EXPENDITURES FOR ABATEMENT OF AIR POLLUTANTS

	Item code	Expenditures in 1981 (Report in thousands of dollars) Millions ($000)	Thousands (000)	Mark (X) here if less than $500 and greater than 0
a. Report your total expenditures in 1981 for new plant and equipment designed to abate air pollutants through **end-of-line techniques**	1010	$	598	☐
b. In addition or as an alternative to end-of-line techniques, did this establishment make expenditures to acquire or modify plant and equipment for changes-in-production processes to abate air pollutants? XX YES → Report the difference between these expenditures for new plant and equipment and the expenditures that you would have made for comparable plant and equipment without air pollutant abatement features. ☐ NO – *Skip to c*	1040	$ 3	747	☐
	1050	$ 4	345	☐

d. Distribute total expenditures (item 2c) in terms of percent by type of pollutants abated. Please give your best estimates.		Item code	Percentage
	(1) Particulates	1060	0
	(2) Sulfur oxides	1070	0
	(3) Nitrogen oxides, hydrocarbons, carbon monoxide	1080	96
	(4) Other (heavy metals, radioactive and toxic substances) – *Specify* Vinyl Chloride Monomer	1090	4
	TOTAL PERCENTAGE →		100%

For example, if you reported $1,350,000 in item 2c, this equals the 100% in item 2d. Break this total expenditure figure into percents between the listed types of air pollutants abated.

Example

(1) Particulates	50%
(2) Sulfur oxides	00%
(3) Nitrogen oxides, etc.	35%
(4) Other	15%
TOTAL	100%

▶Item 3 – CAPITAL EXPENDITURES FOR ABATEMENT OF WATER POLLUTANTS

	Item code	Expenditures in 1981 (Report in thousands of dollars) Millions ($000)	Thousands (000)	Mark (X) here if less than $500 and greater than 0
a. Report your total expenditures in 1981 for new plant and equipment designed to abate water pollutants through end-of-line techniques	2010	$	0	☐
b. In addition or as an alternative to end-of-line techniques, did this establishment make expenditures to acquire or modify plant and equipment for changes-in-production processes to abate water pollutants? ☐ YES → Report the difference between these expenditures for new plant and equipment and the expenditures that you would have made for comparable plant and equipment without water pollutant abatement features. XX NO – *Skip to c*	2040	$	0	☐
c. TOTAL WATER CAPITAL *(Sum of lines 3a and 3b)* →	2050	$	0	☐

▶Item 4 – CAPITAL EXPENDITURES FOR SOLID WASTE DISPOSAL

SPECIFIC INSTRUCTIONS

COST RECOVERED THROUGH ABATEMENT ACTIVITIES – 1981

▶ **Item 5** – The estimate of costs recovered through abatement activities may have two parts: (1) the value of materials or energy reclaimed through abatement activities that were reused in production, and (2) revenue that was obtained from the sale of materials or energy reclaimed through abatement activities. Heat is an example of reclaimed energy. Value and revenue are net of any additional cost incurred for additional processing of materials or energy to make them reusable or salable.

Do **not** reduce annual costs of abatement (item 7) by the estimate reported here.

Report cost recovered by form of pollution abated (air, water, or solid waste).

▶ **Item 6a** – Report all payments to governmental units for your industrial and/or sanitary sewage use. Include payments made to government for overstrength effluent charges, sewer district tax assessment, etc. Include sewage payments which are included in your local tax bill; estimate if necessary.

▶ **Item 6b** – Report all payments to governmental units for your solid waste collection disposal services. Included are collection costs to municipal agency (haulers) and disposal cost such as dump or burial fees at a landfill or incinerator.

COST OF POLLUTION ABATEMENT – Continued

▶ **Item 7** – Report the **annual operating costs and expenses** for pollution abatement incurred in 1981. Include all costs and expenses to operate and maintain plant(s) and equipment to abate air or water pollutants or collection disposal of solid waste, and/or **services provided by private contractors.**

Note: This item should include the operating cost for all pollution abatement equipment and processes in operation during 1981 regardless of the year the equipment was installed or the process initiated.

Do **not** include expenditures for pollution abatement research and development or health and safety.

Do **not** include interest for financing pollution abatement capital expenditures.

Include the estimated costs of materials, parts, fuel, power, labor, and depreciation (or amortization) due to the use of plant and equipment to abate air or water pollutant discharges or dispose of solid wastes. **Include** increased costs for fuel and power incurred to reduce pollution (for example, low sulfur fuel, increased fuel or power consumption). **Include** leasing costs of equipment used in abatement and cost of abatement services provided by private contractors.

If you abate pollutants (air, water, or solid waste), be sure to complete the corresponding quantity section (items 8–10).

▶Item 5 – COSTS RECOVERED THROUGH ABATEMENT ACTIVITIES

Report your best estimate of the value of materials or energy reclaimed (costs recovered) through pollution abatement activities and either reused in production or sold by form of pollution abated. (Exclude the value of items if they would have been recovered, sold, or reused in production in the absence ~~of any~~ pollution control regulations.)

	Item code	Costs recovered in 1981 (Report in thousands of dollars) Millions ($000)	Thousands (000)	Mark (X) here if less than $500 and greater than 0.
a. Air	4010	$ 1	400	☐
b. Water	4020	$	0	☐
c. Solid waste	4030	$	0	☐
d. **TOTAL** *(Sum of lines 5a through 5c)* →	4050	$ 1	400	☐

▶Item 6 – PAYMENTS TO GOVERNMENT FOR POLLUTION REMOVAL

Total payments to governmental (Federal, State, county, local) units for –

	Item code	Annual costs in 1981 (Report in thousands of dollars) Millions ($000)	Thousands (000)	Mark (X) here if less than $500 and greater than 0.
a. Public sewage use	5010	$	0	☐
b. Municipal solid waste collection/disposal *(If you report on this line, be sure to complete ITEM 10.)*	5020	$	0	☐

▶Item 7 – ANNUAL OPERATING COSTS FOR POLLUTION ABATEMENT

	Item code	Millions	Thousands	
a. Report your best estimate of the annual costs of pollution abatement activities, including services provided by private contractors (trash removal, etc.) NOTE: DO NOT reduce your estimate by costs recovered (item 5). DO NOT include the payments to governmental units (item 6).	6010	$ 3	128	☐

SPECIAL INSTRUCTIONS

Distribute total Operating and Maintenance cost (item code 6010) in terms of percent by Kind of Cost (7b) and Form of Pollution Abated (7c). Please give your best estimates.

For example, if you reported $2,350,000 in item 7a, this equals 100% in 7b and 7c. Break this cost figure into percents between the listed types of costs in each section.

EXAMPLES

▶ **Section b**

(1) Depreciation 10%
(2) Labor 40%
(3) Equipment 00%
(4) Other 50%
TOTAL 100%

▶ **Section c**

(1) Air 10%
(2) Water 30%
(3) Solid 60%
TOTAL 100%

	Item code	Percentage of total annual costs in 1981 (Item 7a)
b. Report your best estimate of percentage incurred by – KIND OF COST		
(1) Depreciation	7010	30 %
(2) Labor	7020	13 %
(3) Materials and supplies	7030	45 %
(4) Services, equipment, leasing, and other costs	7040	12 %
(5) **TOTAL** *(Sum of lines (1) through (4) should equal 100%)* →		100%
c. Report your best estimate of percentage incurred by – FORM OF POLLUTION ABATED		
(1) Air pollutants *(If you report on this line, be sure to complete item 8.)*	8010	72 %
(2) Water pollutants *(If you report on this line, be sure to complete item 9.)*	8020	19 %
(3) Solid wastes (including private contract service) *(If you report on this line, be sure to complete item 10.)*	8030	9 %

CCR 000067364

SPECIFIC INSTRUCTIONS FOR TONNAGES OF POLLUTANTS REMOVED

▶ **Item 8** – Report the annual total tonnages of the listed air pollutants abated during 1981. The tonnages should include all air pollutants abated during 1981 by new as well as previously existing pollution abatement equipment. If this information is not available from records, report engineering estimates where possible.

▶ **Item 9** – Report the annual total tonnages of the listed water pollutants during 1981. The tonnages should include all water pollutants abated during 1981 by new as well as previously existing pollution abatement equipment. If this information is not available from records, report engineering estimates where possible.

▶ **Item 10** – Report the annual tonnages of solid waste disposed of by means acceptable to local, State, and Federal authorities. Solid wastes disposed consists of all solid wastes including those wastes generated by air and water pollution abatement activities.

	Item code	Tonnage abated in 1981	Mark (X) here if less than ½ ton and greater than 0.
Item 8 – AIR POLLUTANTS ABATED BY WEIGHT On the basis of your best judgment, estimate the total tonnages of specific air pollutants abated during 1981 by new as well as previously installed pollution abatement facilities.			
a. Particulates	9010	0 Tons	☐
b. Sulfur oxides	9020	0 Tons	☐
c. Nitrogen oxides, hydrocarbons, carbon monoxide	9030	12598 Tons	☐
d. Other (heavy metals, radioactive and toxic substances) – *Specify* Vinyl Chloride Monomer	9040	2599 Tons	☐
Item 9 – WATER POLLUTANTS ABATED BY WEIGHT On the basis of your best judgment, estimate the total tonnages of specific water pollutants abated during 1981 by new as well as previously installed pollution abatement facilities.			
a. Total suspended solids (dry weight basis)	9110	0 Tons	☐
b. Biochemical oxygen demand (BOD5)	9120	176 Tons	☐
c. Chemical oxygen demand (COD)	9130	1171 Tons	☐
d. Other (oil and grease, toxic substances, etc.) – *Specify*	9150	0 Tons	☐
Item 10 – SOLID WASTE DISPOSAL BY WEIGHT On the basis of your best judgment, estimate the tonnage of solid waste properly disposed during 1981, including those wastes generated by air and water pollution abatement activities (e.g., dust, fly ash, sludge, and contained liquids). Exclude the weight of any materials that are reclaimed and also exclude the weight of dissolved solids in the waste water effluent.	9510	11,267 Tons	☐

Remarks – Suggestions for improvements in this questionnaire are solicited.

Item 11 – CERTIFICATION OF SUBSTANTIAL ACCURACY OF REPORT

Signature of authorized person	Title	
[signature]	Mgr. – VCM Plant	
Address *(Number, street, city, State, ZIP code)*		Date
Conoco VCM Plant, P. O. Box 605, Westlake, LA 70669		3/8/82