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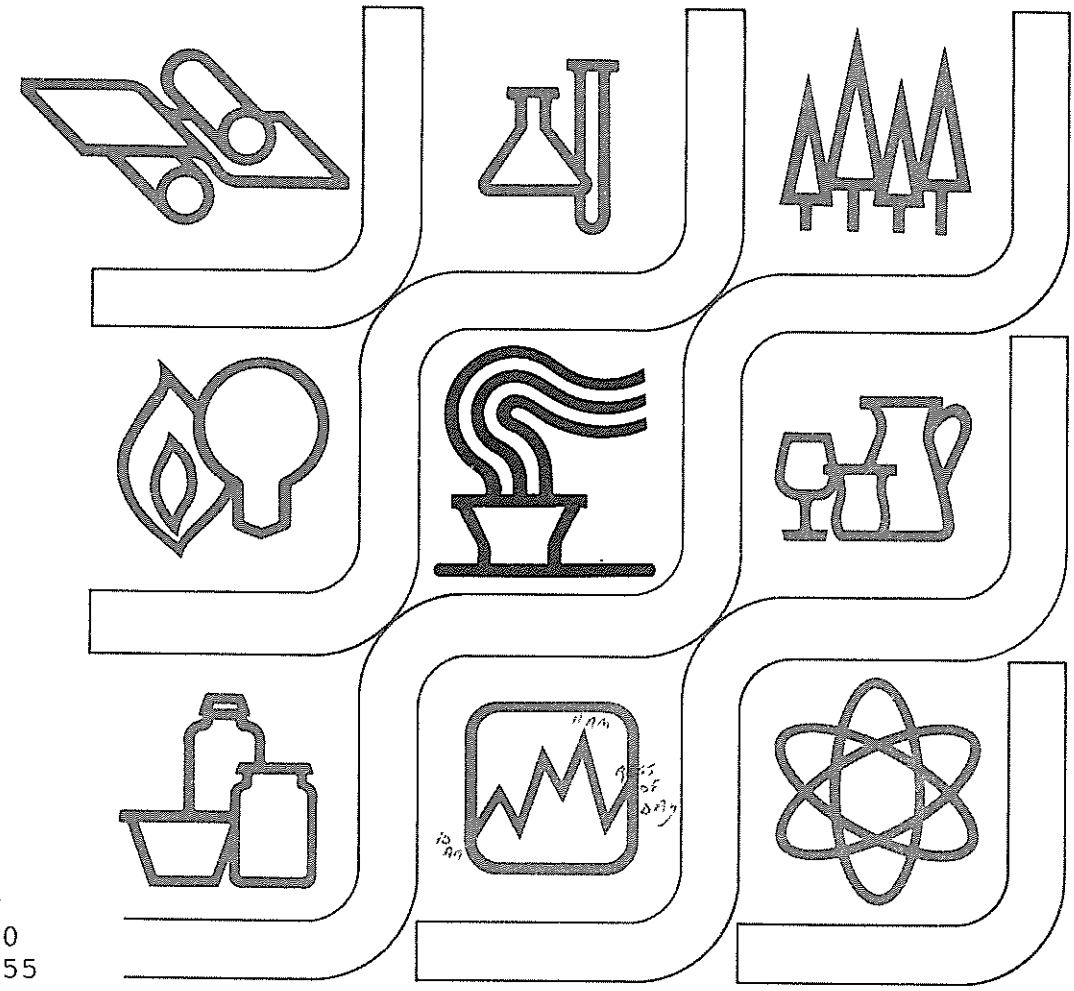
Pollution Abatement Costs and Expenditures, 1979

MA-200(79)-2



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U.S. Department of Commerce
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ACKNOWLEDGMENTS—This report was prepared in the Industry Division by **Wayne M. McCaughey**, Chief of the Special Projects Branch, reviewed and analyzed by **Mendel D. Gayle** and **Patricia M. Garner** assisted by **Ronald Scarlett** and **Michael Sprague**, under the direction of **John R. Wikoff**, Assistant Division Chief for Current Industrial Reports, and **Jacob Silver**, Assistant Division Chief for Minerals and Special Projects. The electronic computer programs were developed by **Charles Woods**, assisted by **John Wasil**.

Library of Congress Card No. 74-614399

SUGGESTED CITATION

U.S. Bureau of the Census,
Pollution Abatement Costs and Expenditures, 1979, MA-200(79)-2
U.S. Government Printing Office, Washington, D.C. 1981.

For sale by Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, D.C. 20233, or any U.S. Department of Commerce district office. Postage stamps not acceptable; currency submitted at sender's risk. Remittances from foreign countries must be by international money order or by a draft on a U.S. bank. Price, $1.15.

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Introduction

SUMMARY OF SURVEY RESULTS

Pollution abatement capital expenditures by manufacturing establishments amounted to $3,602 million in 1979. Of this total, $2,089 million was for air pollution abatement, $1,262 million was for water pollution, and $251 million was for solid waste pollution abatement. In addition, operating cost related to pollution abatement activities (including payments to governmental units) totaled $7,462 million in 1979 of which $3,086 million was spent for air pollution, $3,040 million for water pollution, and $1,336 million for solid waste pollution. These totals for 1979 compare to $3,316 million in capital expenditures and $6,328 million in operating costs for 1978. Overall capital expenditures for pollution abatement increased 9 percent, air and solid waste capital expenditures increased 12 and 39 percent, respectively, while water capital expenditures decreased slightly. All components of operating costs (air, water, and solid waste) registered substantial increases as in previous years. Total operating cost increased $1,134 million or 18 percent.

Data in this publication are collected in the annual census report, Survey of Pollution Abatement Costs and Expenditures, 1979 (Form MA-200). See appendix A for a reproduction of the report form and instructions.

REVISIONS TO THE 1979 POLLUTION ABATEMENT SURVEY FORM

For 1979, two new questions were added to the MA-200 survey form. The first, an one-time inquiry only on the 1979 questionnaire, collected data on the gross value of depreciable assets for pollution abatement. Respondents were asked to report the book value (actual cost) for all fixed depreciable assets for pollution abatement, at the end of the year. This cost should include any expenses incurred in making the asset useable (such as transportation and installation) at the time they were acquired. These data are shown for total, air, water, and solid waste. The second question, and a permanent addition to the form, collects data concerning tonnages and types of water pollutants being abated.

Two questions were expanded for the 1979 MA-200 survey form. The question on cost recovered through abatement activities was expanded to show recovery activity in air, water, and solid waste pollution categories.

The section on annual operating costs for pollution abatement was expanded to show the form of pollution abated (air, water, and solid waste) by the kind of cost (depreciation, labor, materials and supplies, services, equipment leasing, and other costs). The tables on operating costs have been expanded in this report to show these new categories. The collection of the data in this format will be for 1979 survey year only.

POLLUTION ABATEMENT CAPITAL EXPENDITURES

Approximately 71 percent of the $3,602 million new capital expenditures for pollution abatement was made by establishments classified in four major industry groups. In order of value, they include Primary Metal Industries (major group 33), Chemicals and Allied Products (major group 28), Petroleum and Coal Products (major group 29) and Paper and Allied Products (major group 26). These same industries also accounted for the largest amount of pollution abatement capital expenditures in previous years. Chart A illustrates this concentration, on a historical basis, for air, water, and solid waste capital expenditures by major industry group.

In 1979, new capital expenditures for pollution abatement are concentrated in the States of Texas, Pennsylvania, Indiana, and Louisiana, accounting for about 31 percent of the total pollution abatement capital expenditures. Chart B illustrates the pollution capital expenditures by State. Chart C shows the total capital expenditures for pollution abatement for the top 10 standard metropolitan statistical areas (SMSA) ranked by the number of manufacturing employees. (Appendix B contains the definitions for each SMSA.)

Within tables 3 and 4, both air and water pollution abatement capital expenditures are separated on the basis of abatement technique, distinguishing between plant and equipment designed to abate pollutants through end-of-line (EOL) techniques, and those designed to reduce or eliminate the generation of pollutants through changes-in-production process (CIPP). These data show that the major portion of pollution abatement capital expenditures is spent on EOL techniques.

Separate expenditure data are also shown in table 3 for major types of air pollutants to be abated such as particulates; sulfur oxides; nitrogen oxides, hydrocarbons, and carbon monoxides; and heavy metals, radioactive and toxic substances, and other. These data show that the largest share of capital expenditures for air pollution abatement in 1979, as in earlier years, relate to particulates. (Where expenditures occur for techniques that abate both sulfur oxides and particulates, the respondent was instructed to include all such expenditures with sulfur oxides.)

Pollution abatement capital expenditures reported in this survey exclude expenditures for the reduction of noise pollution and the improvement of aesthetics or employee comfort or safety. Also excluded are purchases of motor vehicles with

CHART A.
Manufacturers' Pollution Abatement Capital Expenditures, by Form of Abatement and Major Industry Group: 1973 to 1979

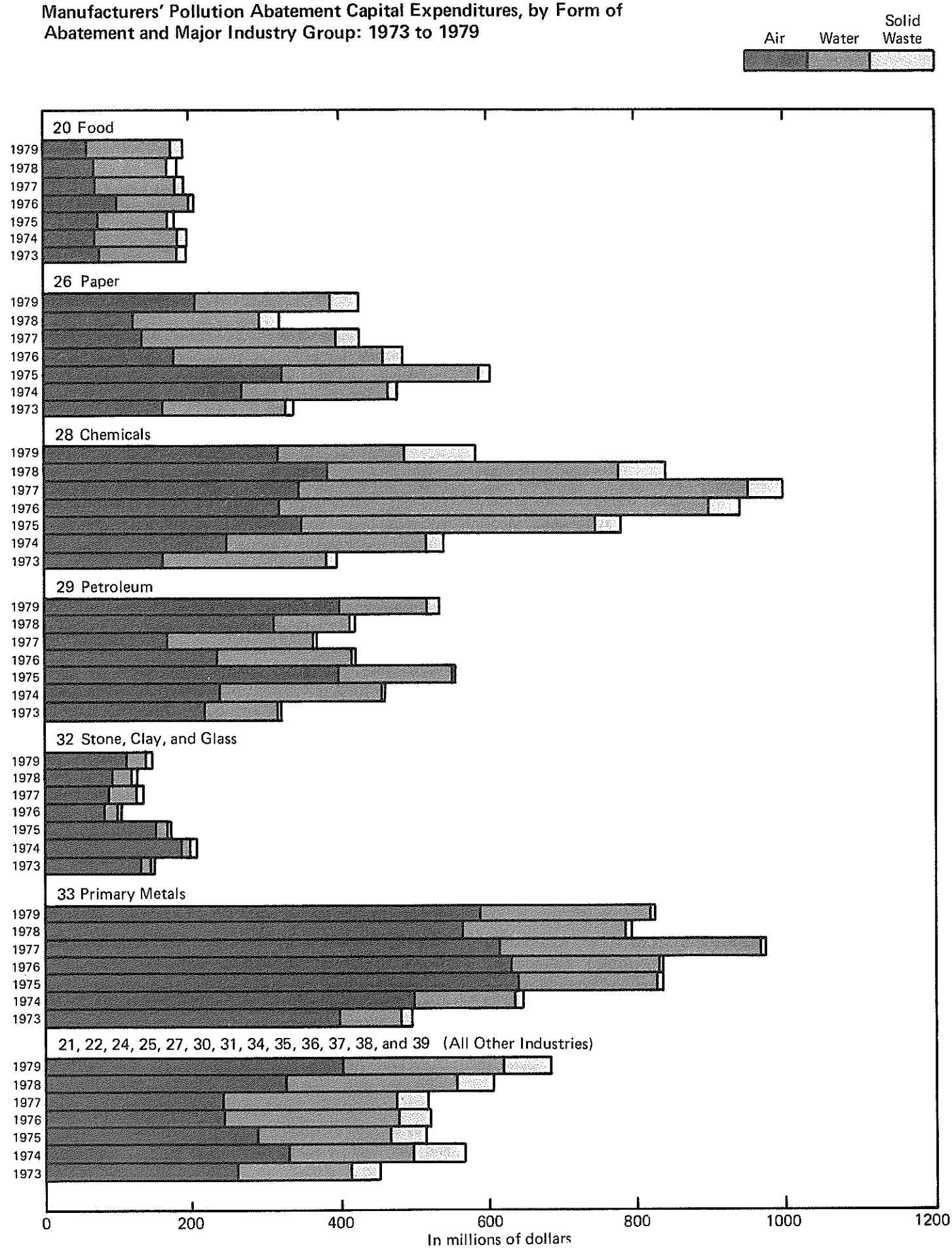


CHART B.
Manufacturers' Pollution Abatement Capital Expenditures, by State: 1979

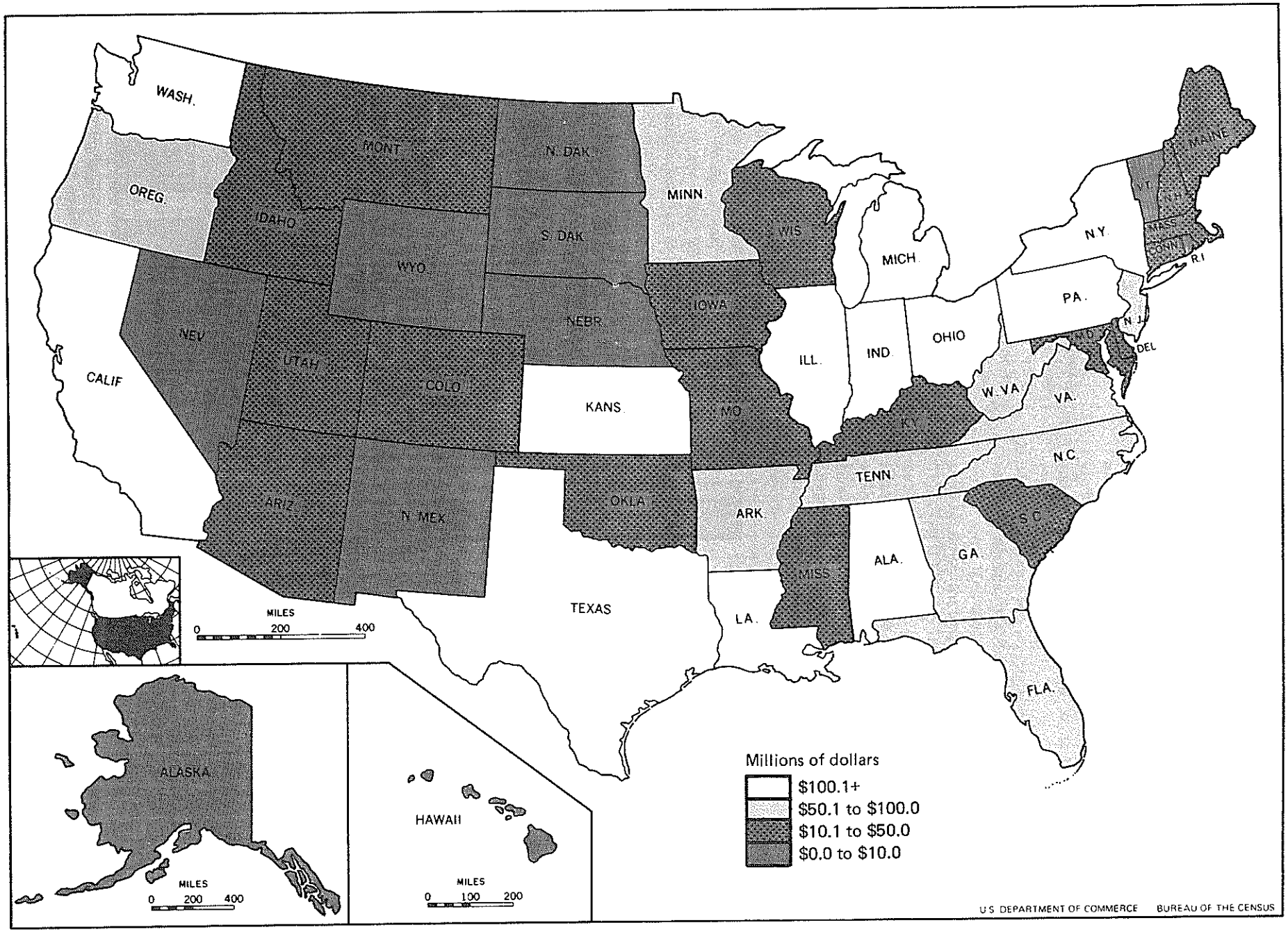
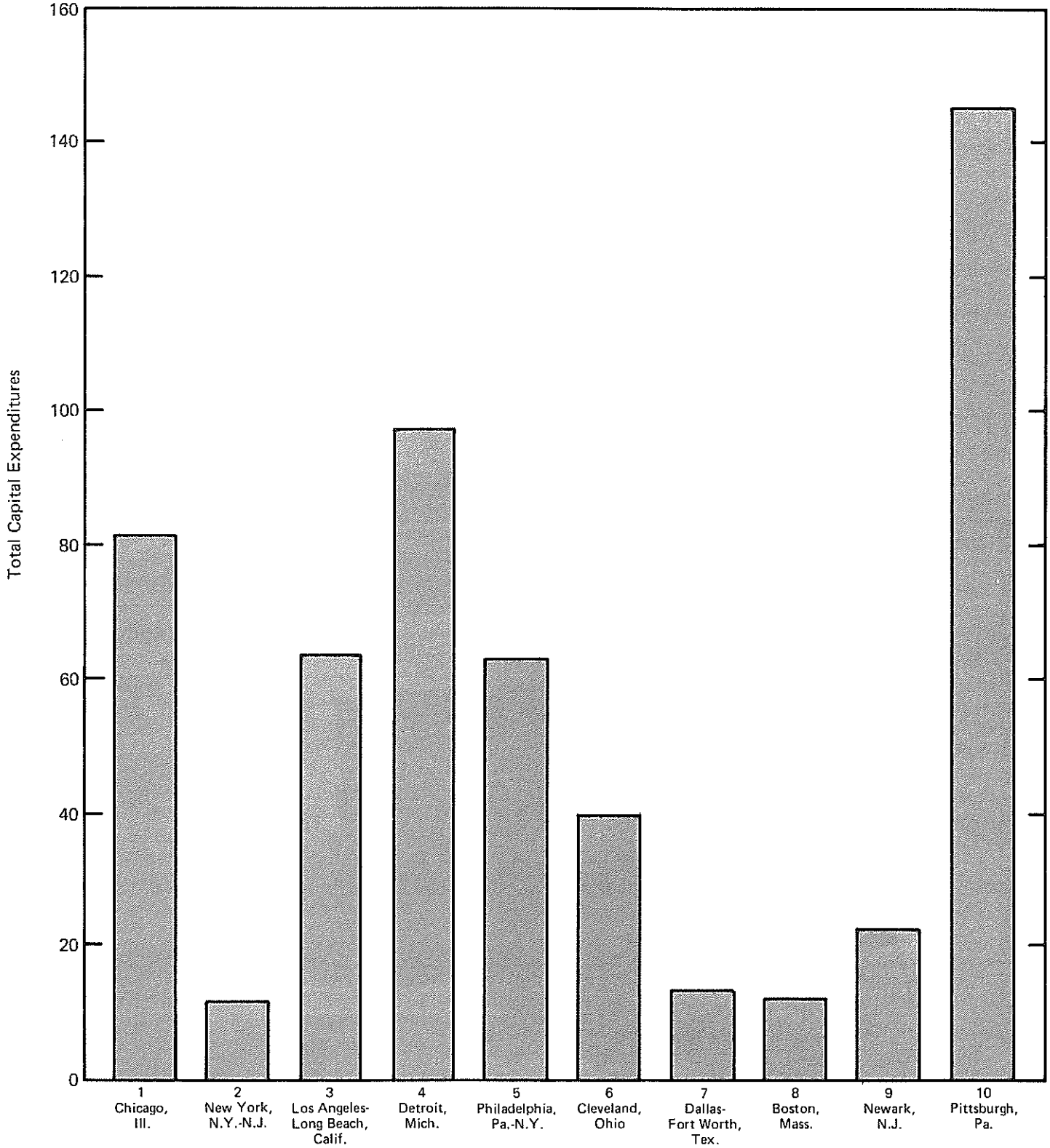


CHART C.
Manufacturers' Pollution Abatement Capital Expenditures for the Ten Standard Metropolitan Statistical Areas with the Largest Number of Manufacturing Employees, Ranked by Number of Employees: 1979

(In millions of dollars)



pollution abatement devices and expenditures to assure an adequate water supply for production. Manufacturers of pollution abatement equipment or materials, such as electrostatic precipitators or desulfurized fuels, to be sold to others for pollution abatement purposes were instructed to exclude expenses associated with the development and production of these products.

POLLUTION ABATEMENT OPERATING COSTS

Operating costs related to pollution abatement totaled $7,462 million in 1979. The operating costs (excluding payments to governmental units) totaled $6,820 million for plants with 20 or more employees and consisted of $1,393 million for depreciation, $1,420 million for labor, $2,089 million for materials and supplies, and $1,919 million for services, equipment leasing, and other costs. For survey year 1979, the categories for the kinds of operating costs have been regrouped to show materials and supplies separately; equipment leasing is now being included in the "other" category. Chart D illustrates the relationship between capital expenditures and operating costs by form of pollutant being abated for 1979. Chart E shows pollution abatement operating cost by type of expense for 1979.

The largest users of governmental units for pollution abatement activities are Food and Kindred Products (major group 20), Chemicals and Allied Products (major group 28), and Paper and Allied Products (major group 26). These industries utilize the governmental units in addition to capital investments and operations at their own plant. (For another Census Bureau report on the pollution abatement activities in the public sector, see *Environmental Quality Control, Government Finances: Fiscal Year 1977-78.)*

OTHER INFORMATION

Tables 2A, 2B, and 2C contain information on two-digit SIC levels for assets, capital expenditures, and annual operating costs. Tables 3(A-C), 4 (A-C), and 5(A-C) contain information for air, water, and solid waste respectively. These tables display information on capital expenditures, operating costs, and cost recovered by manufacturers either by reuse in production or by sale. Tables 6A, 6B, and 6C present data on quantities of air and water pollutants abated and solid waste disposed in 1979.

DESCRIPTION OF THE SURVEY SAMPLE

The statistics presented in this report are estimates compiled from a survey or a probability sample of about 20,000 manufacturing establishments selected as a subsample of the 1977 Annual Survey of Manufactures (ASM). The 1977 ASM is, in turn, a probability sample of about 70,000 establishments selected from a total of about 312,000 establishments. The ASM sample was selected from the 1972 Census of Manufactures list supplemented by Social Security Administration lists of new manufacturers that opened after 1972. The ASM sample is defined on a company rather than an establishment basis; that is, selected companies are required to report for all of their plants in the ASM so that new establishments of existing companies are included in the ASM sample.

The following specific differences between the ASM sample and the pollution abatement expenditures (PAE) sample are worthy of note:

1. Establishments in major group 23, Apparel and Other Textile Products, are excluded from the PAE survey. These establishments operate primarily in rented quarters where the abatement of pollution (probably most of which is solid waste) is generally arranged by the landlord. Capital expenditures for pollution abatement in such establishments are probably minimal.
2. The PAE sample was an establishment sample rather than a company sample; that is, a company included in the ASM sample with 10 manufacturing plants might be included in the PAE survey for only 4 of the plants.
3. The 1979, 1978, and 1977 PAE sample does not include any establishments with less than 20 employees. This is a departure from previous PAE (and the present ASM) panels which included establishments of all sizes. Previous PAE surveys had indicated that establishments with less than 20 employees contributed only about 2 percent to the pollution estimates while constituting more than 10 percent of the sample size. To reduce the reporting burden for small establishments, plants with less than 20 employees were eliminated from the 1977 sampling frame. Data are estimated for these smaller plants in tables 1A and 1B.

The probabilities of selection assigned to establishments in the sampling frame (all in-scope ASM establishments) were determined so that the final probabilities of selection for the PAE sample were proportional to the establishments' value of shipments in the 1976 ASM. Establishments of $30.1 million or more were included in the PAE survey. Establishments in the 1977 ASM sample with less than $30.1 million value of shipments in 1976 were assigned probabilities of selection ranging from 0.99 to 0.005.

The smaller establishments were arrayed by industry and selected systematically to assure a proportionate representation from each major industry group. Establishments chosen for the PAE survey were assigned weights equal to the reciprocal of the establishments' probability of selection. Individual establishment data were inflated by their sampling weights to develop industry, State, or SMSA estimates.

LIMITATIONS OF DATA

Reporting Problems

In the 1973 survey, two significant factors resulted in an understatement of the published data. They were (1) a misunderstanding of the intent of the questionnaire and (2) a number of respondents' failure to return the form at all. For more detailed information regarding these reporting problems, refer to *Pollution Abatement Costs and Expenditures 1974,* MA-200(74)-1.

CHART D.

Manufacturers' Pollution Abatement Capital Expenditures and Annual Operating Costs, by Form of Abatement and Major Industry Group: 1979

In millions of dollars

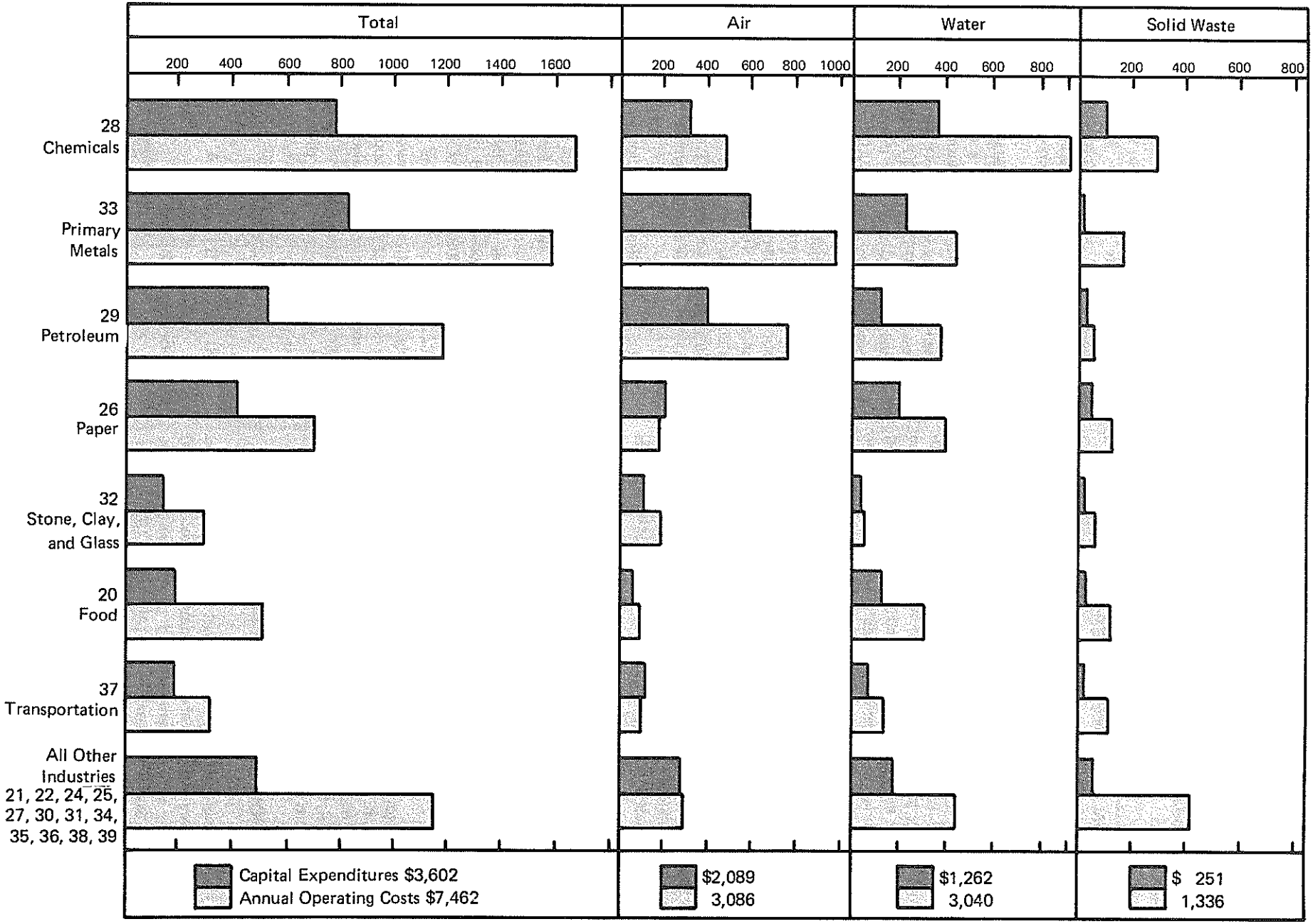
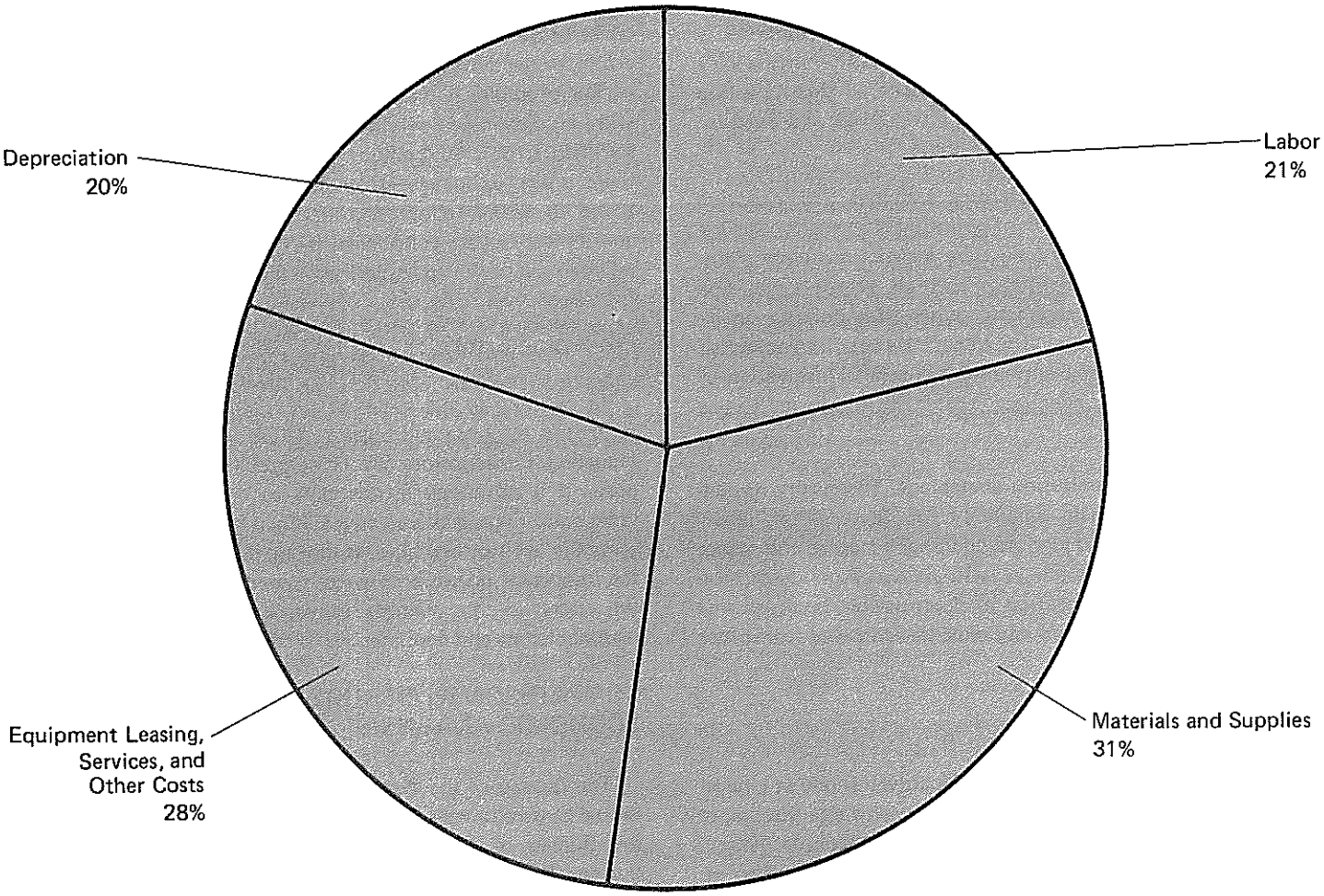


CHART E.
Manufacturers' Pollution Abatement Operating Costs, by Type of Expense for All Industries: 1979



Conceptual Problems

Changes in production process (CIPP) capital expenditures. The survey respondent is instructed to report "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 pollution abatement features." Telephone conversations and interviews with survey respondents indicate that estimating such incremental cost difference is very difficult in many instances. The net effect of this reporting problem is not known and hence, care should be exercised by the data user in interpreting the CIPP data.

Cost recovered through abatement activities. This question attempts to measure how much of pollution abatement costs are recovered through reuse or sale. The instructions state: "Exclude the value of salable items such as scrap if the sale represents essentially an economic rather than pollution decision." This qualification makes it imperative that the individual preparing the survey form be aware of the original motivation of the decision in order to adequately complete the form. This is not always true.

Operating costs for pollution abatement. The survey respondent is asked to estimate separately for depreciation; labor; materials and supplies; and services, equipment leasing, and other costs. In many cases, interviews with survey respondents have revealed that with the exception of depreciation, book records are not kept for each category and must be estimated from other information.

Sampling Variation

The particular sample selected for this survey is one of a large number of similar probability samples of the same size that could have been selected, by chance, using the same sample design. Each of the possible samples would yield somewhat different sets of results. The sampling errors, the differences between the estimates obtained and the results theoretically obtainable from a comparable complete canvass of the same target universe, are unknown. Guides to the potential size of the sampling errors, however, are provided by the estimated relative standard errors of the estimates. These are shown for a few key data items in the report. On the average, relative standard errors tend to be somewhat higher for detailed figures than for larger aggregates.

In conjunction with its associated estimates, the relative standard error (computed as the estimated standard error of estimate divided by the value of the estimate itself) may be used to define confidence intervals, ranges which could be expected to include comparable complete coverage values of specified percentages of all possible samples. The complete coverage value would be included in the range:

1. From one standard error below to one standard error above the derived estimate for about two-thirds of all samples.
2. From 2 standard errors below to 2 standard errors above the derived estimate for about 19 out of 20 of all possible samples.
3. From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable complete coverage results would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates shown would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, if an estimated total is shown as $20.0 million with an associated relative standard error of 2 percent, the standard error is $0.4 million (2 percent of $20.0 million). Then there is approximately 67 percent confidence that the interval $19.6 to $20.4 million includes the complete coverage total, and almost certain confidence that the interval $18.8 to $21.2 million includes the complete coverage total.

Processing Errors

In addition to the sampling errors, the estimates are subject to various response and operational errors: errors of collection, reporting, transcription, etc. These operational errors would also occur if a complete canvass were to be conducted under the same conditions as this survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected in the course of the Census Bureau's review of the data for reasonableness and consistency.

COMPARISON WITH BUREAU OF ECONOMIC ANALYSIS

The Bureau of the Census' estimates of pollution abatement capital expenditures are generally lower than those published by the Bureau of Economic Analysis (BEA) in the Survey of Current Business. In addition to normal sampling variations, another source of difference relates to the methodology employed for the two series.

The Census data are based on a probability sample of 20,000 manufacturing establishments. All establishments which reported shipments in the 1976 ASM of $30.1 million or more are included, while establishments with less than $30.1 million are selected on a random sample basis. Each establishment is classified into a manufacturing industry based upon its primary activity and receives one report form.

The BEA estimates are based on questions incorporated in the BEA annual new plant and equipment survey which is mailed to approximately 10,000 companies. Each company receives one report form to supply data for its entire operation. The companies are designated either as manufacturing or nonmanufacturing based upon their primary activity as classified by 1967 Census of Enterprise Statistics. Currently, the BEA survey has about 4,000 companies classified in the manufacturing sector of which about 60 percent respond with data. Nonrespondents are estimated.

Companies classified as manufacturing include all establishments of the company, both manufacturing and nonmanu-

facturing. Likewise, companies classified as nonmanufacturing have their manufacturing establishments included in the nonmanufacturing totals. The net effect of the different definitions has been to include more capital expenditures in the BEA series for manufacturing than those estimated by the Bureau of the Census. Table A shows a comparison of BEA and Census total capital expenditures and pollution abatement expenditures for 1977 to 1979. The capital expenditures data are in the process of being revised. The BEA numbers shown on table A are preliminary figures.

SELECTED INDUSTRIAL AIR POLLUTION CONTROL EQUIPMENT

Table B highlights annual manufacturing data for air pollution control equipment from 1973 to 1979. This information is collected and published in the series MA-35J, *Selected Industrial Air Pollution Control Equipment,* by the Bureau of the Census. Data in this survey are collected for two types of manufactured air pollution equipment: particulate emissions collectors (e.g., electrostatic precipitators, wet scrubbers) and gaseous emission control devices (e.g., catalytic oxidation systems, gas absorbers). The published report is divided into two parts. The first presents data on quantity and value of new orders, shipments, and backlog of orders at the year-end. The second provides value of the equipment shipped by end use. As shown in the table, steam electric power plants are the largest end user of industrial air pollution control equipment (approximately 48 percent in 1979). In 1979, shipments increased for several manufacturers' end users.

RESEARCH AND DEVELOPMENT FOR POLLUTION ABATEMENT PURPOSES

Tables C and D show the amount of money spent from 1973 to 1979 on research and development (R & D) for the purpose of pollution control. These data are collected by the Bureau of the Census and published by the National Science Foundation. As shown in the tables, approximately 93 percent of the R & D pollution control expenditures are company sponsored, and the remaining 7 percent are federally sponsored. Over a 7-year period, the motor vehicle and equipment industry accounted for more than half of all R & D expenditures for pollution abatement. In 1979, total R & D expenditures for pollution control increased to $1,188 million compared to $1,067 million in 1978.

Table A. Total New Capital Expenditures (TNCE) and Pollution Abatement for New Plant and Equipment—BEA and Census, by Industry Group: 1977 to 1979

(Millions of dollars)

Industry group	Data source	1977					1978					1979				
		TNCE	Pollution abatement				TNCE	Pollution abatement				TNCE	Pollution abatement			
			Total	Air	Water	Solid waste		Total	Air	Water	Solid waste		Total	Air	Water	Solid waste
All manufacturing	BEA[1]	61,026	4,282	2,032	1,993	258	67,646	3,953	1,992	1,652	306	78,301	3,976	2,103	1,493	381
	Census[2]	47,459	3,523	1,668	1,695	160	55,244	3,316	1,872	1,263	181	(NA)	3,602	2,089	1,262	251
Durable goods	BEA	28,258	1,668	941	636	91	31,749	1,561	901	566	94	37,890	1,585	936	540	109
	Census	24,288	1,434	903	483	48	29,739	1,402	906	440	56	(NA)	1,563	1,047	445	71
Primary metals	BEA	5,893	927	607	295	26	5,971	752	530	205	17	6,541	811	558	227	26
	Census	4,497	876	617	251	8	4,692	793	564	220	9	(NA)	825	590	228	7
Electrical machinery	BEA	3,298	111	30	65	15	3,937	130	26	88	16	5,055	114	27	82	6
	Census	2,867	66	24	38	5	3,700	75	34	38	3	(NA)	95	43	44	7
Machinery, except electrical	BEA	5,859	104	51	49	5	6,416	111	57	46	9	8,147	88	36	39	13
	Census	4,402	90	42	42	6	5,740	82	41	28	13	(NA)	84	38	38	8
Transportation equipment	BEA	5,274	163	58	74	31	6,271	224	93	98	33	7,796	261	122	97	42
	Census	4,671	83	37	39	6	5,834	140	71	58	11	(NA)	190	120	60	10
Stone, clay, and glass	BEA	2,039	149	107	39	4	2,484	164	109	47	7	2,876	145	116	22	7
		1,881	137	88	40	9	2,531	127	95	29	4	(NA)	149	113	26	10
Other durables	BEA	5,895	213	88	116	10	6,670	181	87	82	12	7,475	166	78	72	16
	Census	5,971	182	95	73	14	7,242	186	100	69	17	(NA)	220	142	49	29
Nondurable goods	BEA	32,768	2,615	1,091	1,357	167	35,897	2,389	1,092	1,086	211	40,411	2,391	1,167	953	272
	Census	23,171	2,089	765	1,212	112	25,505	1,914	966	823	125	(NA)	2,040	1,043	818	179
Food, including beverages	BEA	4,154	176	71	96	8	4,820	172	75	75	22	5,085	148	51	84	13
	Census	4,215	194	72	109	13	4,805	185	71	100	14	(NA)	193	60	118	15
Textiles	BEA	933	35	11	23	1	1,022	29	13	8	8	1,031	31	21	10	1
	Census	1,224	37	21	15	1	1,356	60	43	15	2	(NA)	39	22	15	2
Paper	BEA	3,397	468	188	256	23	3,371	239	105	103	31	4,835	297	133	124	40
	Census	3,295	428	134	262	32	3,736	342	124	189	29	(NA)	427	207	181	39
Chemicals	BEA	6,902	701	249	414	38	7,205	563	236	286	42	8,407	440	203	184	53
	Census	8,199	1,000	346	604	51	7,956	842	383	393	66	(NA)	785	320	367	97
Petroleum	BEA	14,185	1,167	531	546	90	15,560	1,294	611	586	98	16,473	1,385	708	530	147
	Census	2,261	369	168	196	5	2,286	420	312	101	8	(NA)	535	399	120	17
Rubber	BEA	1,442	47	31	12	4	1,751	58	40	12	7	1,858	62	38	12	12
	Census	1,645	37	17	14	5	2,255	28	19	6	3	(NA)	25	13	9	3
Other nondurables	BEA	1,755	21	9	9	2	2,168	32	11	17	4	2,722	29	13	9	6
	Census	2,332	24	7	13	4	3,111	37	14	20	4	(NA)	36	22	8	6

Note: Totals may not agree with detail because of independent rounding. Census data for each year on pollution abatement has been adjusted to estimate pollution expenditures for establishments with less than 20 employees. See text.

(NA) Not available.

[1]BEA estimates are preliminary and are in the process of revision.
[2]Major industry group 23, Apparel and Other Textile Products, is excluded from all census figures.

Source: U.S. Bureau of the Census, Survey of Pollution Abatement Costs and Expenditures, 1977, 1978, and 1979 and the U.S. Bureau of Economic Analysis, Capital Expenditures by Business for Pollution Abatement, 1978, 1979, and Planned 1980, Survey of Current Business, June 1980.

Yr dollars? current?

Table B. Selected Industrial Air Pollution Control Equipment: 1973 to 1979

(Millions of dollars)

Air pollution control equipment	Value			Shipments by end use											
	New orders	Total shipments	Back log of orders	Pulp and paper mill operations	Chemicals and fertilizer production	Petroleum refining	Cement manufacturing	Foundries[1]	Iron and steel mills[1]	Primary metals smelting plant	Grain milling and handling	Coal mining and cleaning	Steam electric utility power plants[1]	Steam industrial power plants[1]	Other end uses
Total air pollution control equipment.1979..	678.8	718.6	876.1	31.5	58.5	15.3	16.4	14.5	28.6	8.3	7.0	9.2	347.3	41.1	140.9
1978..	741.5	612.0	916.2	r27.5	41.9	r12.4	r15.9	r13.4	39.4	r5.2	r9.2	6.8	287.0	r38.0	115.3
1977..	605.9	617.3	788.1	28.8	35.3	r12.2	18.3	6.7	r35.7	13.8	r3.8	r6.0	307.2	r26.4	110.1
1976..	571.6	571.4	735.0	23.0	30.5	(D)	18.4	(2)	58.8	(D)	(D)	8.2	(D)	(3)	105.6
1975..	606.8	545.9	779.4	(D)	37.5	11.4	22.1	(2)	55.7	37.2	(D)	4.6	214.9	(3)	125.8
1974..	669.5	370.9	617.1	26.2	23.1	9.0	29.1	(2)	40.9	16.1	7.1	2.6	145.8	(3)	70.5
1973..	382.9	250.9	286.5	17.4	16.2	5.7	22.8	(2)	21.6	6.3	5.6	(D)	89.3	(3)	65.3
Particulates emission collectors.....1979..	472.4	568.1	603.9	(D)	41.5	(D)	(D)	(D)	27.8	7.9	(D)	8.1	(D)	36.1	113.4
1978..	544.6	497.0	684.9	r25.8	r29.7	(D)	(D)	(D)	35.4	(D)	(D)	(D)	(D)	(D)	r92.7
1977..	460.0	484.1	650.7	27.6	r20.5	3.4	(D)	(D)	31.4	13.0	(D)	(D)	246.2	13.3	r96.7
1976..	485.1	493.3	642.7	22.4	23.4	9.5	18.4	(2)	58.1	24.7	6.4	8.2	240.4	(3)	81.7
1975..	529.2	470.2	694.0	22.8	22.1	9.0	22.1	(2)	54.7	36.7	5.1	4.6	182.3	(3)	104.8
1974..	635.1	341.5	585.0	(D)	(D)	(D)	(D)	(2)	(D)	(D)	7.1	2.6	(D)	(3)	62.0
1973..	368.2	242.0	274.7	(D)	14.3	5.7	22.8	(2)	(D)	(D)	(D)	(D)	(D)	(3)	59.0
Gaseous emission control devices...1979..	172.7	110.8	251.7	1.4	15.3	1.8	-	(D)	(D)	(D)	-	-	(D)	4.3	(D)
1978..	158.3	83.1	199.8	(D)	(D)	r2.3	-	(D)	.6	(D)	-	-	(D)	2.7	12.1
1977..	113.0	99.3	116.4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	(D)	r53.5	r9.1	r13.1
1976..	72.5	65.4	86.7	1.6	7.1	(D)	-	(2)	.7	(D)	(D)	-	(D)	(3)	11.4
1975..	68.5	64.1	82.2	(D)	15.4	2.4	-	(2)	1.0	.5	(D)	-	32.7	(3)	9.3
1974..	34.4	29.4	32.1	(D)	(D)	(D)	(D)	(2)	(D)	(D)	-	-	(D)	(3)	8.5
1973..	11.3	8.8	9.3	(D)	1.9	-	-	(2)	(D)	(D)	(D)	-	(D)	(3)	6.3

- Represent zero. (D) Withheld to avoid disclosing figures for individual companies. rRevised by 5 percent or more from previously published figures for the years 1977 and 1978.

[1]Appeared separately for first time in 1977.
[2]Combined with iron and steel mills in 1976 and earlier years.
[3]Combined with steam electric utility powers in 1976 and earlier years.

Source: Current Industrial Reports, Selected Industrial Air Pollution Control Equipment, (MA-35J), 1973 to 1979.

Table C. Industrial Research and Development Expenditures for Pollution Abatement, by Type: 1975 to 1979

(Millions of dollars)

Type of pollution abatement	1975			1976			1977			1978			1979		
	Total	Federal	Company	Total	Federal	Company	Total	Federal	Company	Total	Federal	Company	Total	Federal	Company
Total.....	651	44	607	754	51	703	901	56	845	1,067	75	992	1,188	93	1,095
Air.....	482	16	466	569	26	543	676	22	654	(1)	(1)	(1)	916	29	887
Water.....	71	(2)	(2)	84	7	77	97	7	90	(1)	(1)	(1)	115	12	103
Solid waste.....	22	(2)	(2)	21	1	20	28	7	21	(1)	(1)	(1)	42	31	11
All other.....	76	23	53	80	17	63	100	20	80	(1)	(1)	(1)	115	21	91

[1]Category not available for reporting purposes.
[2]Not separately available but included in total.

Source: National Science Foundation/Bureau of the Census Survey of Industrial Research and Development, 1975 to 1979.

Table D. Total Industrial Research and Development Expenditures for Pollution Abatement, by Source of Funds and Industry: 1973 to 1979

(Millions of dollars)

Source of funds and industry	1973	1974	1975	1976	1977	1978	1979
Total.....	603	657	651	759	901	1,067	1,188
Source of funds:							
Federal funds.....	35	51	44	51	56	75	88
Company funds.....	568	606	607	708	845	992	1,100
Industry:							
Electrical equipment.....	13	16	17	18	20	19	32
Petroleum refining.....	51	61	66	63	61	72	75
Aircraft and missiles.....	25	34	37	48	57	64	71
Chemical and allied products.....	55	65	71	72	83	81	99
Motor vehicles and equipment.....	380	384	347	413	487	605	691
Other manufacturing.....	44	70	79	93	100	107	118
Nonmanufacturing.....	35	27	34	52	93	119	108

Source: National Science Foundation/Bureau of the Census, Survey of Industrial Research and Development, 1973 to 1979.

Table 1A. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and Major Industry Group: 1973 to 1979

(In millions of dollars, except percents)

SIC code	Industry		Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
			Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
	All industries.....[2]	[3]1979..	(NA)	(NA)	3,602.2	2,088.7	1,262.2	251.0	7,461.5	3,085.5	3,040.1	1,335.8	9	18	1	1
		[3]1979..	(NA)	(NA)	3,564.5	2,071.9	1,245.7	246.9	7,399.9	3,061.8	3,015.6	1,322.5	9	18	1	1
		[3]1978..	1,523,429.9	55,243.9	3,315.9	1,871.5	1,262.9	181.2	6,327.5	2,546.6	2,550.4	1,230.3	-6	16	1	2
		[3]1978..	[e]1,450,305.3	[e]52,260.7	3,279.3	1,853.6	1,246.5	178.9	6,275.7	2,527.4	2,529.9	1,218.2	-6	16	1	2
		[3]1977..	1,358,526.4	47,459.0	3,522.6	1,667.9	1,695.1	159.9	5,470.2	2,259.3	2,221.6	989.7	-	21	1	1
		[3]1977..	1,293,265.6	44,919.0	3,483.5	1,652.0	1,674.1	157.7	5,425.0	2,240.4	2,203.4	981.5	-1	20	1	1
		1976..	1,185,695.3	40,669.9	3,531.7	1,797.8	1,599.2	134.8	[r]4,539.2	[r]1,888.2	1,824.0	827.1	-3	24	2	1
		1975..	1,039,377.4	37,262.1	3,637.6	2,235.7	1,280.1	121.8	[r]3,673.1	[r]1,508.1	1,496.6	[r]669.7	17	18	1	1
		1974..	1,017,846.9	35,698.7	3,101.1	1,947.5	1,008.8	144.7	3,102.8	1,210.7	1,261.4	630.7	32	27	1	1
		1973..	875,443.2	26,972.9	2,353.7	1,417.5	827.8	108.2	2,445.2	960.5	993.3	491.7	(X)	(X)	2	1
20	Food and kindred products.....	[3]1979..	(NA)	(NA)	192.8	59.7	117.6	15.2	515.8	93.1	304.8	118.0	5	22	5	6
		[3]1979..	(NA)	(NA)	182.7	57.9	111.1	13.6	504.2	91.0	297.9	115.3	5	22	5	6
		[3]1978..	216,071.2	4,804.8	184.6	71.4	99.6	13.6	421.5	71.0	248.8	101.7	-5	15	5	4
		[3]1978..	[e]204,619.4	[e]4,425.2	175.0	67.7	94.4	12.9	412.0	69.4	243.2	99.4	-5	15	5	4
		[3]1977..	192,911.6	4,214.9	194.0	71.6	109.3	13.2	365.3	58.8	216.5	90.2	-7	6	4	3
		[3]1977..	182,714.4	3,881.1	183.9	67.9	103.6	12.5	357.1	56.2	211.6	89.5	-11	3	4	3
		1976..	180,929.7	3,816.8	207.5	102.5	97.6	7.4	345.9	57.7	187.5	100.5	15	18	13	3
		1975..	172,157.6	3,433.5	180.9	75.6	93.9	11.4	294.2	53.2	153.7	87.7	-9	9	4	3
		1974..	161,961.4	3,017.7	199.2	73.4	111.7	14.3	268.9	48.8	143.5	76.8	1	32	5	2
		1973..	135,582.5	2,412.0	196.7	77.6	104.8	14.3	203.1	39.1	110.4	53.6	(X)	(X)	9	3
21	Tobacco products.....	[3]1979..	(NA)	(NA)	(D)	(D)	(D)	(D)	15.4	7.5	4.6	3.2	(X)	9	(X)	4
		[3]1979..	(NA)	(NA)	(D)	(D)	(D)	(D)	14.3	7.0	4.3	3.0	(X)	9	(X)	4
		[3]1978..	9,950.7	253.9	(D)	(D)	(D)	(D)	14.2	6.5	4.9	2.9	(X)	17	(X)	2
		[3]1978..	[e]9,920.8	[e]252.6	(D)	(D)	(D)	(D)	13.2	6.0	4.6	2.7	(X)	18	(X)	2
		[3]1977..	9,050.6	181.5	4.9	2.3	.7	1.8	12.1	5.2	4.0	2.8	-40	6	1	3
		[3]1977..	9,019.5	180.6	4.8	2.3	.7	1.8	11.2	4.8	3.7	2.6	-41	-2	1	3
		1976..	8,786.1	129.7	8.1	7.8	.2	.1	11.4	5.4	3.0	3.1	-34	23	3	7
		1975..	8,059.9	144.9	12.2	(D)	.1	(D)	9.3	4.7	2.3	2.2	13	15	2	9
		1974..	7,139.9	185.4	10.8	(D)	(Z)	(D)	8.1	4.1	2.1	2.0	100	37	1	3
		1973..	6,340.7	180.4	5.4	4.7	(Z)	.6	5.9	2.6	1.7	1.6	(X)	(X)	3	5
22	Textile mill products.....	[3]1979..	(NA)	(NA)	39.2	21.9	15.2	2.1	102.5	19.1	60.7	22.7	-34	10	10	4
		[3]1979..	(NA)	(NA)	39.2	21.9	15.2	2.1	101.7	19.0	60.2	22.5	-34	10	10	4
		[3]1978..	42,280.8	1,356.1	59.7	42.7	15.4	1.6	93.2	19.1	52.0	22.1	63	23	10	4
		[3]1978..	[e]41,350.6	[e]1,330.3	59.7	42.7	15.4	1.6	92.5	19.0	51.6	21.9	63	23	10	4
		[3]1977..	40,550.5	1,223.5	36.7	20.7	14.7	1.4	75.6	11.0	46.8	17.9	-31	16	7	4
		[3]1977..	39,654.0	1,200.6	36.7	20.7	14.7	1.4	75.0	10.9	46.4	17.8	-31	15	7	4
		1976..	36,389.2	1,087.4	53.3	9.2	42.6	1.6	65.3	9.2	41.8	14.3	24	29	38	6
		1975..	31,063.6	996.7	43.0	19.7	22.2	1.1	50.7	9.4	29.4	12.0	34	-6	10	5
		1974..	32,812.3	1,171.7	32.0	12.7	17.7	1.7	54.0	9.4	31.3	13.3	10	39	7	7
		1973..	31,072.7	1,120.9	29.2	10.3	17.7	1.2	38.8	6.3	23.5	9.0	(X)	(X)	8	6
24	Lumber and wood products.....	[3]1979..	(NA)	(NA)	95.5	68.9	12.5	14.1	119.1	41.5	26.3	51.3	11	27	1	5
		[3]1979..	(NA)	(NA)	93.6	67.5	12.3	13.8	115.4	40.2	25.5	49.7	11	27	1	5
		[3]1978..	46,522.6	1,899.4	86.2	47.8	26.1	12.2	93.6	28.6	20.1	45.1	41	24	11	5
		[3]1978..	[e]39,916.4	[e]1,527.1	84.5	46.9	25.6	12.0	90.7	27.7	19.4	43.7	41	24	11	5
		[3]1977..	39,919.4	1,562.6	61.1	34.6	19.5	7.0	75.7	21.0	19.8	35.0	20	-7	10	5
		[3]1977..	34,259.1	1,255.6	59.9	33.9	19.1	6.9	73.4	20.4	19.2	33.9	17	-10	10	5
		1976..	31,239.4	1,232.1	51.1	29.5	9.2	12.5	81.3	26.6	21.1	33.6	-32	15	17	10
		1975..	25,094.5	1,264.0	75.1	46.4	7.7	21.0	70.5	22.7	19.6	28.3	-7	10	11	8
		1974..	26,817.6	1,357.2	81.1	58.4	7.6	15.0	64.2	19.5	14.0	30.8	29	4	13	8
		1973..	27,980.6	953.3	62.7	41.5	11.7	9.6	61.6	14.9	18.5	28.2	(X)	(X)	10	12
25	Furniture and fixtures.....	[3]1979..	(NA)	(NA)	22.4	16.8	2.1	3.5	29.9	12.1	4.6	13.1	100	11	13	7
		[3]1979..	(NA)	(NA)	22.4	16.8	2.1	3.5	29.3	11.9	4.5	12.9	100	11	13	7
		[3]1978..	19,565.9	520.8	11.2	9.4	1.1	.6	26.9	9.3	4.1	13.7	-3	10	13	7
		[3]1978..	[e]18,059.3	[e]482.8	11.2	9.4	1.1	.6	26.4	9.1	4.0	13.4	-3	10	13	7
		[3]1977..	16,978.0	388.7	11.5	9.7	1.3	.5	24.4	10.5	3.8	10.2	-59	13	12	7
		[3]1977..	15,673.4	360.2	11.5	9.7	1.3	.5	23.9	10.3	3.7	10.0	-59	11	12	7
		1976..	14,232.0	295.3	27.9	24.5	2.2	1.1	21.6	8.2	3.2	10.1	15	11	44	9
		1975..	12,372.8	251.6	24.2	22.6	.4	1.2	19.5	6.9	3.1	9.5	-15	2	19	9
		1974..	13,197.3	350.9	28.5	23.7	1.8	2.9	19.1	6.5	3.1	9.6	45	45	16	9
		1973..	12,609.5	343.8	19.6	16.9	1.2	1.5	13.2	5.0	2.5	5.7	(X)	(X)	14	8
26	Paper and allied products.....	[3]1979..	(NA)	(NA)	426.8	207.2	180.8	38.8	698.9	176.8	400.9	121.2	25	12	1	2
		[3]1979..	(NA)	(NA)	426.4	207.0	180.6	38.8	698.2	176.6	400.5	121.1	25	12	1	2
		[3]1978..	57,000.0	3,736.3	341.9	124.0	189.2	28.7	622.6	158.6	357.9	105.7	-20	18	1	2
		[3]1978..	[e]55,803.0	[e]3,598.1	341.6	123.9	189.0	28.7	622.0	158.4	357.6	105.6	-20	18	1	2
		[3]1977..	52,085.7	3,295.0	427.8	134.2	261.9	31.6	529.5	133.6	309.3	86.5	-12	23	2	2
		[3]1977..	50,999.4	3,173.0	427.4	134.1	261.7	31.6	529.0	133.5	309.0	86.4	-12	23	2	2
		1976..	48,218.1	3,010.4	486.6	180.6	278.6	27.3	430.3	123.9	239.1	67.3	-20	25	2	4
		1975..	41,711.5	2,718.0	605.3	323.0	266.0	16.3	344.0	100.9	185.5	57.5	27	19	4	5
		1974..	41,759.5	2,214.4	476.9	270.8	193.2	12.9	289.0	81.2	152.0	55.7	40	31	2	4
		1973..	32,752.4	1,529.6	339.6	166.4	161.0	12.1	220.5	59.2	118.1	43.2	(X)	(X)	3	5
27	Printing and publishing.....	[3]1979..	(NA)	(NA)	23.8	19.4	1.9	2.5	50.4	9.7	9.6	31.2	95	33	7	9
		[3]1979..	(NA)	(NA)	23.8	19.4	1.9	2.5	49.5	9.5	9.4	30.6	95	33	7	9
		[3]1978..	56,064.1	2,208.4	12.2	7.4	3.6	1.1	37.9	8.0	7.0	22.9	63	24	11	6
		[3]1978..	[e]48,719.7	[e]1,921.3	12.2	7.4	3.6	1.1	37.3	7.9	6.9	22.5	63	24	11	6
		[3]1977..	49,716.2	1,597.8	7.5	3.1	2.5	1.9	30.6	7.1	6.4	17.1	70	9	11	6
		[3]1977..	43,196.6	1,389.7	7.5	3.1	2.5	1.9	30.1	7.0	6.3	16.8	70	9	10	7
		1976..	42,837.8	1,261.2	4.4	2.6	1.1	.7	27.5	7.5	6.6	13.3	-69	17	25	6
		1975..	38,125.1	1,174.6	14.3	12.8	.9	.6	23.5	7.0	5.0	11.5	-48	-11	35	5
		1974..	35,822.4	1,140.9	27.4	10.3	3.7	13.4	26.3	5.9	7.4	13.0	281	44	37	8
		1973..	32,854.7	1,083.5	7.2	5.0	1.1	1.1	18.3	5.2	4.1	9.1	(X)	(X)	8	7

See footnotes at end of table.

Table 1A. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and Major Industry Group: 1973 to 1979—Continued

(In millions of dollars, except percents)

SIC code	Industry		Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
			Total value of shipment	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
28	Chemicals and allied products	[3]1979	(NA)	(NA)	784.8	320.3	367.2	97.3	1,679.2	488.7	901.5	289.0	-7	13	1	9
		1979	(NA)	(NA)	770.9	314.6	360.7	95.6	1,667.5	485.3	895.2	287.0	-7	13	1	9
		[3]1978	129,849.9	7,955.5	842.4	383.3	392.9	66.3	1,483.3	400.8	799.6	282.1	-16	19	3	2
		1978	[e]124,136.5	[e]7,716.8	827.5	376.3	385.9	65.1	1,473.0	398.8	794.1	280.1	-16	19	3	2
		[3]1977	118,153.6	8,198.9	1,000.2	346.0	603.8	50.5	1,247.0	337.8	690.0	219.1	6	27	1	1
		[3]1977	112,899.3	7,843.1	982.5	339.9	593.1	49.6	1,238.3	335.5	685.2	217.6	4	26	1	1
		1976	104,138.6	7,122.4	942.0	319.8	577.4	44.7	983.5	295.6	514.7	173.2	21	22	3	2
		1975	89,721.2	6,353.1	780.2	359.5	385.7	35.0	[r]807.4	[r]249.9	430.9	[r]126.7	45	26	2	2
		1974	83,744.9	5,071.9	539.2	250.6	264.4	24.1	643.3	203.8	335.6	104.0	36	28	2	1
		1973	65,008.0	3,186.2	395.9	164.4	214.6	16.8	502.3	174.1	247.6	80.2	(X)	(X)	4	2
29	Petroleum and coal products	[3]1979	(NA)	(NA)	535.4	398.6	119.6	17.1	1,189.1	760.5	375.6	53.0	27	18	8	7
		1979	(NA)	(NA)	534.3	397.8	119.4	17.1	1,173.8	750.7	370.8	52.3	27	18	8	7
		[3]1978	103,871.1	2,286.1	420.1	311.8	100.7	7.6	1,010.4	644.7	308.1	57.7	14	5	2	1
		[3]1978	[e]102,001.4	[e]2,238.1	419.3	311.2	100.5	7.6	997.4	636.4	304.1	57.0	14	5	2	1
		[3]1977	97,452.7	2,261.3	369.2	168.0	196.0	5.3	960.3	609.1	293.1	58.1	-16	24	1	1
		[3]1977	95,712.3	2,213.3	368.5	167.7	195.6	5.3	948.0	601.3	289.3	57.4	-17	22	1	1
		1976	82,347.0	2,836.8	441.4	236.5	199.8	5.2	774.8	466.1	263.3	45.3	-21	38	1	1
		1975	69,484.6	2,417.8	555.7	398.2	155.7	1.7	563.1	339.4	192.1	31.7	20	34	1	1
		1974	58,875.8	1,845.1	462.3	341.3	119.7	1.3	420.1	238.3	153.3	28.5	44	24	1	5
		1973	34,899.0	1,107.0	321.8	222.5	96.1	3.2	337.8	192.5	125.4	19.9	(X)	(X)	3	5
30	Rubber, miscellaneous plastics products	[3]1979	(NA)	(NA)	25.2	13.0	9.3	2.9	113.4	32.7	30.0	50.7	-9	32	9	4
		1979	(NA)	(NA)	25.1	12.9	9.3	2.9	111.7	32.2	29.6	49.9	-9	32	9	4
		[3]1978	43,195.8	2,254.8	27.8	18.8	5.5	3.4	86.2	18.0	24.3	44.0	-24	15	6	3
		[3]1978	[e]40,949.6	[e]2,126.3	27.7	18.7	5.5	3.4	84.9	17.7	23.9	43.3	-24	15	6	3
		[3]1977	39,552.8	1,645.3	36.7	17.4	13.8	5.4	74.9	20.1	19.2	35.6	-2	-7	6	3
		[3]1977	37,497.7	1,551.4	36.6	17.4	13.8	5.4	73.8	19.8	18.9	35.1	-2	-8	6	3
		1976	31,765.2	1 316.9	37.4	24.2	10.0	3.1	80.3	22.3	24.0	34.0	17	24	15	5
		1975	27,191.2	1,139.9	31.9	22.2	6.6	3.1	64.8	20.7	18.4	25.7	-16	10	17	5
		1974	27,902.2	1,457.0	37.9	22.2	13.5	2.2	58.8	15.7	15.1	28.2	57	38	7	4
		1973	24,383.6	1,305.0	24.2	13.5	7.3	3.3	42.6	12.2	10.1	20.4	(X)	(X)	6	4
31	Leather and leather products	[3]1979	(NA)	(NA)	(D)	(D)	(D)	(D)	22.9	1.3	14.9	6.7	(X)	16	(X)	16
		1979	(NA)	(NA)	(D)	(D)	(D)	(D)	22.5	1.3	14.6	6.6	(X)	16	(X)	16
		[3]1978	8,224.7	135.1	(S)	(S)	(S)	(S)	19.7	1.4	11.5	6.7	(X)	25	(X)	16
		1978	[e]7,854.6	[e]130.6	(S)	(S)	(S)	(S)	19.3	1.4	11.3	6.6	(X)	25	(X)	16
		[3]1977	7,607.4	96.2	11.5	1.8	9.4	.4	15.7	1.1	9.3	5.3	-34	43	48	16
		[3]1977	7,262.3	93.0	11.4	1.8	9.3	.4	15.4	1.1	9.1	5.2	-34	40	48	16
		1976	7,176.0	89.4	17.4	7.3	9.6	.5	11.0	1.1	6.7	3.3	149	18	34	17
		1975	6,323.0	77.5	7.0	(D)	5.1	(D)	9.3	1.2	4.9	3.2	119	15	23	17
		1974	6,176.5	76.1	3.2	(D)	1.8	(D)	8.1	1.0	4.2	2.9	-26	33	23	10
		1973	6,022.5	80.9	4.3	1.8	1.9	.6	6.1	.9	3.0	2.3	(X)	(X)	28	11
32	Stone, clay, glass products	[3]1979	(NA)	(NA)	149.4	113.1	26.1	10.3	298.9	191.4	45.9	61.6	18	17	9	10
		1979	(NA)	(NA)	145.6	110.2	25.4	10.0	293.6	188.0	45.1	60.5	18	17	9	10
		[3]1978	41,719.3	2,531.2	127.0	94.5	28.7	3.8	255.6	166.6	33.8	55.2	-7	17	7	4
		[3]1978	[e]36,504.4	[e]2,214.8	123.8	92.1	28.0	3.7	251.1	163.7	33.2	54.2	-7	17	7	4
		[3]1977	35,476.6	1,881.4	136.9	88.0	40.1	8.8	218.4	144.3	28.5	45.3	31	14	17	4
		[3]1977	31,053.7	1,646.7	133.4	85.8	39.1	8.6	214.5	141.7	28.0	44.5	27	12	17	4
		1976	30,635.2	1,504.0	104.7	82.2	18.9	3.6	192.1	122.8	30.3	39.0	-40	12	13	5
		1975	27,073.9	1,581.2	173.5	152.7	16.7	4.1	171.8	109.7	28.3	33.8	-17	12	11	6
		1974	26,338.1	1,587.5	208.8	185.8	13.1	10.0	152.9	98.7	24.7	29.4	39	31	11	6
		1973	23,861.7	1,391.4	150.7	131.6	14.4	4.7	117.0	73.7	16.4	27.0	(X)	(X)	15	5
33	Primary metal industries	[3]1979	(NA)	(NA)	824.7	590.0	227.7	6.9	1,587.7	982.0	442.1	163.6	4	20	1	1
		1979	(NA)	(NA)	823.1	588.8	227.3	6.9	1,587.2	981.7	442.0	163.5	4	20	1	1
		[3]1978	118,082.0	4,691.9	793.4	564.4	219.5	9.4	1,321.8	809.9	333.1	179.0	-9	18	1	3
		[3]1978	[e]116,546.9	[e]4,626.2	791.8	563.3	219.1	9.4	1,321.4	809.6	333.0	178.9	-9	18	1	3
		[3]1977	103,179.4	4,496.8	876.4	617.2	250.7	8.4	1,122.6	721.8	268.4	132.4	5	25	2	1
		[3]1977	101,804.0	4,434.0	874.6	616.0	250.2	8.4	1,122.3	721.6	268.3	132.3	5	25	2	1
		1976	93,001.8	4,178.6	833.7	632.5	197.8	3.3	895.8	575.7	229.5	90.7	-	25	3	1
		1975	80,817.0	4,164.5	833.5	640.6	187.5	5.4	715.2	429.9	209.4	75.9	29	21	3	1
		1974	95,618.0	3,751.8	646.8	501.5	132.7	12.5	590.2	339.6	181.2	69.5	30	26	2	1
		1973	72,727.2	2,334.2	498.6	397.2	84.7	16.8	466.8	264.7	148.3	53.8	(X)	(X)	2	1
34	Fabricated metal products	[3]1979	(NA)	(NA)	66.3	36.8	24.6	4.9	223.3	57.6	100.8	64.9	7	31	7	1
		1979	(NA)	(NA)	66.1	36.7	24.5	4.9	220.9	57.0	99.7	64.2	7	31	7	1
		[3]1978	101,336.0	3,189.1	61.8	33.2	26.3	2.3	170.6	42.6	74.6	53.4	-20	13	8	15
		1978	[e]94,546.5	[e]2,956.3	61.6	33.1	26.2	2.3	168.7	42.1	73.8	52.8	-20	13	8	15
		[3]1977	90,023.5	2,606.1	76.9	32.6	39.3	5.0	150.8	40.7	66.8	43.3	5	21	7	3
		[3]1977	83,975.8	2,416.2	76.7	32.5	39.2	5.0	149.2	40.3	66.1	42.8	5	20	7	3
		1976	77,507.1	2,223.2	72.9	35.5	34.1	3.4	124.3	35.4	52.7	36.1	-6	14	9	4
		1975	68,738.7	2,074.2	77.5	46.9	29.0	1.7	109.5	32.6	45.7	31.3	-14	-1	9	4
		1974	67,569.9	1,981.2	90.5	56.4	28.2	5.9	110.1	34.5	44.9	30.7	42	30	12	4
		1973	58,556.3	1,734.7	63.7	39.6	21.5	2.7	84.8	27.0	35.7	22.2	(X)	(X)	7	4
35	Machinery, except electrical	[3]1979	(NA)	(NA)	84.5	38.5	38.2	7.8	204.8	51.2	70.6	83.0	4	26	2	1
		1979	(NA)	(NA)	84.5	38.5	38.2	7.8	200.2	50.1	69.0	81.1	4	26	2	1
		[3]1978	143,169.3	5,739.7	81.5	41.4	27.8	12.6	162.5	42.0	55.7	64.6	-10	17	6	12
		[3]1978	[e]134,292.8	[e]5,315.0	81.5	41.4	27.8	12.6	158.8	41.0	54.4	63.1	-10	17	6	12
		[3]1977	122,187.7	4,402.4	90.2	42.3	42.4	5.5	138.5	33.9	50.9	53.8	30	17	3	2
		[3]1977	114,598.9	4,078.7	90.2	42.3	42.4	5.5	135.4	33.1	49.8	52.6	30	15	3	2
		1976	105,525.2	3,428.3	69.4	44.8	21.8	2.9	117.9	30.8	37.7	49.6	15	20	12	4
		1975	95,752.5	3,354.7	60.5	37.5	20.8	2.3	98.0	28.4	33.7	36.0	-11	7	5	2
		1974	92,487.2	3,312.2	67.7	41.9	17.6	8.1	91.7	24.3	29.1	38.2	20	26	2	1
		1973	78,092.7	2,320.7	56.3	36.6	15.6	4.1	72.5	19.7	23.0	29.9	(X)	(X)	4	1

See footnotes at end of table.

Table 1A. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and Major Industry Group: 1973 to 1979—Continued

(In millions of dollars, except percents)

SIC code	Industry		Selected from from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimate (percent)	
			Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
36	Electric, electronic equipment	[3]1979	(NA)	(NA)	94.6	43.5	43.7	7.2	182.4	46.7	82.8	52.8	26	23	5	1
		[3]1979	(NA)	(NA)	90.9	41.8	42.0	7.1	182.3	46.7	82.8	52.8	26	23	5	1
		[3]1978	100,530.1	3,699.7	75.2	34.3	37.5	3.4	148.7	30.7	71.7	46.1	13	16	5	2
		[3]1978	[e]98,217.9	[e]3,618.3	72.2	32.9	36.0	3.3	148.6	30.7	71.7	46.1	13	16	5	2
		[3]1977	88,433.1	2,866.5	66.4	23.9	37.5	5.1	128.2	28.0	63.3	37.1	14	17	4	2
		[3]1977	86,427.8	2,804.7	63.8	23.0	36.0	4.9	128.1	28.0	63.2	37.1	9	17	4	2
		1976	73,867.1	2,240.1	58.4	23.0	31.3	4.1	109.9	26.8	50.8	32.3	12	13	5	2
		1975	64,213.9	1,876.8	52.3	22.7	26.2	3.3	97.3	27.6	43.1	26.7	-6	10	4	2
		1974	65,804.1	2,426.3	55.6	24.6	28.0	3.1	88.6	22.7	39.8	26.2	6	2	2	4
		1973	60,864.8	1,996.1	52.7	27.0	22.2	3.5	87.2	20.2	38.9	28.1	(X)	(X)	4	6
37	Transportation equipment	[3]1979	(NA)	(NA)	189.5	120.1	59.5	9.9	331.8	96.4	126.3	109.1	36	18	1	1
		[3]1979	(NA)	(NA)	189.5	120.1	59.5	9.9	331.8	96.4	126.3	109.1	36	18	1	1
		[3]1978	188,773.3	5,834.3	139.5	71.0	57.9	10.7	280.5	77.3	110.2	93.0	69	20	1	1
		[3]1978	[e]187,074.3	[e]5,776.0	139.5	71.0	57.9	10.7	280.5	77.3	110.2	93.0	69	20	1	1
		[3]1977	166,954.0	4,670.9	82.6	36.9	39.4	6.3	233.9	60.6	97.3	76.1	5	18	1	1
		[3]1977	165,388.1	4,623.9	82.6	36.9	39.4	6.3	233.9	60.6	97.3	76.1	5	18	1	1
		1976	141,025.5	3,130.6	78.5	21.1	53.6	3.8	197.9	56.9	83.5	57.6	4	18	3	1
		1975	113,500.6	2,762.1	75.4	32.1	36.4	6.8	168.3	52.2	66.4	49.7	-27	9	9	1
		1974	108,244.9	3,176.1	103.4	52.7	41.5	9.2	154.8	44.8	59.5	50.5	2	19	3	1
		1973	110,710.7	2,528.9	101.2	52.6	41.7	6.9	129.8	35.2	51.1	43.4	(X)	(X)	1	1
38	Instruments, related products	[3]1979	(NA)	(NA)	24.2	13.6	8.0	2.6	69.7	10.7	30.9	28.1	37	23	12	1
		[3]1979	(NA)	(NA)	23.2	13.0	7.7	2.5	69.2	10.6	30.7	27.9	37	23	12	1
		[3]1978	33,701.2	1,099.5	17.7	7.1	9.9	.6	56.2	7.4	27.1	21.8	-31	18	2	2
		[3]1978	[e]32,386.9	1,058.8	16.9	6.8	9.5	.6	55.8	7.3	26.9	21.6	-31	18	2	2
		[3]1977	28,897.8	938.9	25.5	15.1	8.9	1.5	47.6	9.1	23.1	15.5	-21	4	4	2
		[3]1977	27,776.3	904.6	24.4	14.5	8.5	1.4	47.3	9.0	23.0	15.4	-24	4	4	2
		1976	25,030.1	782.7	32.3	10.9	12.2	9.3	45.7	8.7	22.3	14.8	9	19	4	3
		1975	22,058.7	794.3	29.6	11.2	17.3	1.1	38.5	5.9	19.5	13.2	89	13	3	3
		1974	20,953.0	821.6	15.7	3.6	6.7	5.5	34.1	4.9	15.0	14.3	33	56	3	4
		1973	17,793.7	635.6	11.8	3.0	5.6	3.2	21.9	2.0	11.3	8.6	(X)	(X)	5	3
39	Miscellaneous manufacturing industries	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	26.3	6.5	7.2	12.6	(X)	19	(X)	16
		[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	26.3	6.5	7.2	12.6	(X)	19	(X)	16
		[3]1978	20,779.6	533.3	(S)	(S)	(S)	(S)	22.1	4.0	5.8	12.3	(X)	16	(X)	4
		[3]1978	[e]17,953.6	[e]477.3	(S)	(S)	(S)	(S)	22.1	4.0	5.8	12.3	(X)	16	(X)	4
		[3]1977	19,150.7	473.6	6.6	2.5	3.9	.3	19.0	5.3	5.2	8.4	35	15	28	5
		[3]1977	16,542.5	423.8	6.6	2.5	3.9	.3	19.0	5.3	5.2	8.4	35	15	28	5
		1976	16,285.9	560.6	4.6	3.3	1.4	.2	22.4	7.8	6.3	8.3	-13	23	14	10
		1975	14,486.9	301.9	5.6	2.3	1.7	1.5	[r]18.2	5.7	5.5	[r]7.0	-60	-12	11	5
		1974	13,990.1	362.3	14.1	7.3	5.8	1.0	20.7	7.3	5.6	7.8	17	36	10	9
		1973	13,046.1	341.2	12.1	5.3	4.8	2.0	15.2	6.0	3.9	5.4	(X)	(X)	13	13

Note: Totals may not agree precisely with detail because of independent rounding. See "Limitations of Data" in the text for specific limitations of the 1973 statistics.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. [e]1978 data are estimated. (NA) Not available. [r]Revised.
(S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. See text.
(X) Not applicable. (2) Represents less than $50,000.

[1]The calculation of the percent change is based on the change from the previous year to the subsequent year (e.g. 1978 to 1979).
[2]Major industry group 23, Apparel and Other Textile Products, is excluded from all but the U.S. totals of the first two columns.
[3]Two lines of data are presented for 1977 to 1979. The top line for each year represents the estimate for all establishments and is comparable to the estimates for 1973 to 1976. The bottom line is the estimate for establishments with 20 or more employees. See text.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979

(In millions of dollars, except percents)

Division and State		Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs, (GAC) including payments to government units				Percent change[1]		Standard error of estimates (percent)	
		Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
United States[2]	[3]1979	(NA)	(NA)	3,602.2	2,088.7	1,262.2	251.0	7,461.5	3,085.5	3,040.1	1,335.8	9	18	1	1
	[3]1979	(NA)	(NA)	3,564.5	2,071.9	1,245.7	246.9	7,399.9	3,061.8	3,015.6	1,322.5	9	18	1	1
	[3]1978	1,523,429.9	55,243.9	3,315.9	1,871.5	1,262.9	181.2	6,327.5	2,546.6	2,550.4	1,230.3	-6	16	1	2
	[3]1978	1,450,305.3	52,260.7	3,279.3	1,853.6	1,246.5	178.9	6,275.7	2,527.4	2,529.9	1,218.2	-6	16	1	2
	[3]1977	1,358,526.4	47,459.0	3,522.6	1,667.9	1,695.1	159.9	5,470.2	2,259.3	2,221.6	989.7	-	21	1	1
	[3]1977	1,293,265.6	44,919.0	3,483.5	1,652.0	1,674.1	157.7	5,425.0	2,240.4	2,203.4	981.4	-1	20	1	1
	1976	1,185,695.3	40,669.9	3,531.7	1,797.8	1,599.2	134.8	4,539.2	1,888.2	1,824.0	827.1	-3	24	2	1
	1975	1,039,377.4	37,262.1	3,637.6	2,235.7	1,280.1	121.8	r3,673.1	r1,508.1	1,496.6	r669.7	17	18	1	1
	1974	1,017,846.9	35,698.7	3,101.1	1,947.5	1,008.8	144.7	3,102.8	1,210.7	1,261.4	630.7	32	27	1	1
	1973	875,443.2	26,972.9	2,353.7	1,417.5	827.8	108.2	2,445.2	960.5	993.3	491.7	(X)	(X)	2	1
New England Division	[3]1979	(NA)	(NA)	105.7	50.7	42.6	12.5	222.2	56.6	112.8	52.8	44	20	(NA)	(NA)
	[3]1979	(NA)	(NA)	104.6	50.3	42.0	12.3	220.4	56.2	111.9	52.3	44	20	(NA)	(NA)
	[3]1978	75,880.8	2,820.5	73.5	29.8	40.5	3.4	184.8	38.9	98.0	47.7	-27	29	(NA)	(NA)
	[3]1978	(NA)	(NA)	72.7	29.5	40.0	3.4	183.1	38.5	97.1	47.3	-27	29	(NA)	(NA)
	[3]1977	66,717.2	2,142.3	100.9	32.7	65.5	2.8	142.8	31.0	77.4	34.2	-17	1	(NA)	(NA)
	[3]1977	(NA)	(NA)	99.8	32.4	64.7	2.8	141.7	30.8	76.8	33.9	-18	-	(NA)	(NA)
	1976	59,822.9	2,145.5	121.0	33.2	78.4	9.5	141.8	36.0	65.3	40.7	7	17	(NA)	(NA)
	1975	52,437.9	1,810.7	113.6	33.9	74.9	4.8	120.9	37.5	56.2	27.3	17	7	5	(NA)
	1974	52,259.9	1,706.6	97.5	24.7	67.5	5.2	113.2	35.1	50.1	28.0	39	27	(NA)	(NA)
	1973	46,052.4	1,368.8	70.2	23.4	42.8	4.1	89.4	32.3	38.0	19.4	(X)	(X)	(NA)	(NA)
Maine	[3]1979	(NA)	(NA)	37.3	19.1	(D)	(D)	44.2	7.2	29.1	7.9	384	13	2	4
	[3]1979	(NA)	(NA)	36.9	18.9	(D)	(D)	43.8	7.1	28.9	7.8	384	13	2	4
	[3]1978	5,866.7	424.3	7.7	1.9	5.0	.7	39.1	5.0	23.8	10.2	-67	38	8	4
	[3]1978	(NA)	(NA)	7.6	1.9	4.9	.7	38.7	4.9	23.6	10.1	-67	38	8	4
	[3]1977	5,144.6	222.9	23.4	9.1	14.1	.2	28.3	3.8	20.4	4.0	-58	94	3	4
	[3]1977	(NA)	(NA)	23.1	9.0	13.9	.2	28.1	3.8	20.2	4.0	-58	92	3	4
	1976	4,422.8	507.4	55.3	12.5	35.3	7.5	14.6	2.2	9.7	2.8	16	-6	13	7
	1975	3,816.3	314.4	47.8	5.6	38.7	3.4	15.6	2.0	10.1	3.5	80	-4	5	5
	1974	3,839.0	173.2	26.6	1.4	22.8	2.4	16.3	2.0	10.4	4.0	45	151	5	9
	1973	3,257.2	111.9	18.3	6.6	10.5	1.2	6.5	.9	3.9	1.8	(X)	(X)	13	5
New Hampshire	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978	5,055.4	196.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1977	4,032.3	162.0	19.0	1.5	17.2	.3	13.5	1.8	9.5	2.1	31	61	28	16
	[3]1977	(NA)	(NA)	18.8	1.5	17.0	.3	13.4	1.8	9.4	2.1	30	60	28	16
	1976	3,495.4	137.6	14.5	.6	13.8	.2	8.4	.9	4.6	2.9	11	83	26	13
	1975	3,046.3	97.2	13.1	2.3	10.5	.4	4.6	.4	2.6	1.7	-19	35	8	11
	1974	3,053.4	104.0	16.1	3.3	12.5	.3	3.4	.3	1.7	1.4	193	21	44	9
	1973	2,642.6	102.0	5.5	1.0	4.4	.1	2.8	.4	1.3	1.0	(X)	(X)	7	9
Vermont	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978	2,562.5	133.4	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1977	2,189.3	93.0	2.5	.6	1.6	.3	3.5	.4	1.9	1.2	-26	25	34	16
	[3]1977	(NA)	(NA)	2.5	.6	1.6	.3	3.5	.4	1.9	1.2	-26	24	34	16
	1976	2,056.2	95.6	3.4	1.2	2.1	.1	2.8	.2	1.8	.8	48	56	39	15
	1975	1,680.3	76.6	2.3	.3	1.8	.2	1.8	.2	.8	.7	-72	-25	31	19
	1974	1,581.3	69.3	8.3	.2	7.5	.5	2.4	.3	1.2	.8	453	-67	67	20
	1973	1,359.6	42.5	1.5	.5	0.8	.2	7.3	.3	6.2	.8	(X)	(X)	23	71
Massachusetts	[3]1979	(NA)	(NA)	32.0	18.6	(S)	(S)	79.1	23.7	32.5	23.0	5	25	19	6
	[3]1979	(NA)	(NA)	31.7	18.5	(S)	(S)	78.5	23.5	32.2	22.8	5	25	19	6
	[3]1978	34,450.4	1,170.3	30.4	16.9	12.4	1.3	63.1	15.5	28.6	18.9	-16	18	11	6
	[3]1978	(NA)	(NA)	30.1	16.7	12.2	1.3	62.5	15.4	28.3	18.7	-15	17	11	6
	[3]1977	30,144.2	952.8	36.0	15.0	19.7	1.2	53.6	13.5	25.0	15.0	43	1	10	6
	[3]1977	(NA)	(NA)	35.6	14.9	19.5	1.2	53.2	13.4	24.9	14.9	41	-	10	6
	1976	26,918.4	781.6	25.2	11.3	12.9	1.1	53.2	12.0	19.3	21.9	-4	29	8	17
	1975	23,923.5	620.4	26.3	15.4	10.4	.4	41.3	13.6	15.7	11.9	24	6	19	5
	1974	23,807.2	764.5	21.2	10.0	10.5	.7	38.8	13.5	13.4	12.1	-3	35	8	7
	1973	21,337.1	669.0	21.9	7.3	12.8	1.8	28.7	12.9	8.3	7.5	(X)	(X)	10	7
Rhode Island	[3]1979	(NA)	(NA)	2.7	(S)	(S)	-	9.0	1.7	4.5	2.7	(X)	-1	18	9
	[3]1979	(NA)	(NA)	2.7	(S)	(S)	-	8.9	1.7	4.5	2.7	(X)	-1	18	9
	[3]1978	5,987.9	217.3	(S)	(S)	(S)	(S)	9.2	1.7	4.5	2.9	(X)	16	(X)	9
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	9.1	1.7	4.5	2.9	(X)	17	(X)	9
	[3]1977	5,364.6	145.6	6.6	1.8	4.5	.3	7.9	1.3	3.8	2.8	57	-25	17	7
	[3]1977	(NA)	(NA)	6.5	1.8	4.4	.3	7.8	1.3	3.7	2.8	55	-26	17	7
	1976	4,532.7	143.4	4.2	.9	3.1	.1	10.5	3.1	5.0	2.5	17	9	32	20
	1975	3,924.0	119.5	3.6	2.2	1.3	.1	9.6	3.3	4.2	2.1	-20	12	36	20
	1974	4,081.1	116.5	4.5	2.3	2.2	(Z)	8.6	3.4	3.3	1.8	22	46	34	19
	1973	3,629.4	88.7	3.7	1.0	2.7	.1	5.9	2.5	2.2	1.5	(X)	(X)	24	3
Connecticut	[3]1979	(NA)	(NA)	19.7	8.5	(S)	(S)	64.6	20.7	31.0	12.9	22	33	10	9
	[3]1979	(NA)	(NA)	19.5	8.4	(S)	(S)	64.1	20.6	30.8	12.7	23	34	10	9
	[3]1978	21,957.9	679.0	16.1	8.3	7.2	.6	48.5	14.1	22.6	11.8	20	35	17	5
	[3]1978	(NA)	(NA)	15.9	8.2	7.1	.6	48.0	14.0	22.4	11.7	20	34	17	5
	[3]1977	19,842.2	566.0	13.4	4.6	8.4	.5	36.0	10.2	16.8	8.8	-27	-31	12	5
	[3]1977	(NA)	(NA)	13.3	4.6	8.3	.5	35.7	10.1	16.7	8.9	-28	-32	12	5
	1976	18,397.4	479.9	18.4	6.7	11.2	.5	52.3	17.6	24.9	9.8	-10	9	9	25
	1975	16,047.5	582.6	20.5	8.1	12.2	.3	48.0	18.0	22.7	7.4	-1	10	10	27
	1974	15,897.9	479.1	20.8	7.5	12.0	1.3	43.7	15.6	20.1	8.0	8	14	7	24
	1973	13,826.5	354.7	19.3	7.0	11.6	.7	38.3	15.3	16.1	6.9	(X)	(X)	19	28
Middle Atlantic Division	[3]1979	(NA)	(NA)	536.3	264.7	211.1	60.7	1,161.0	483.8	453.4	223.8	32	18	(NA)	(NA)
	[3]1979	(NA)	(NA)	530.7	262.6	208.4	59.7	1,151.4	480.1	449.7	221.6	32	18	(NA)	(NA)
	[3]1978	237,969.3	7,114.8	405.8	197.3	190.9	17.6	980.8	413.4	373.9	193.4	-28	12	(NA)	(NA)
	[3]1978	(NA)	(NA)	401.3	195.4	188.4	17.4	972.9	410.1	370.9	191.9	-28	12	(NA)	(NA)
	[3]1977	217,340.6	6,203.9	563.5	274.5	265.5	23.4	879.1	391.0	327.9	160.3	19	15	(NA)	(NA)
	[3]1977	(NA)	(NA)	557.2	271.9	262.2	23.1	871.6	387.7	325.1	158.9	18	14	(NA)	(NA)
	1976	193,716.9	5,520.5	473.1	203.1	247.2	23.0	765.6	342.7	287.4	135.7	5	19	(NA)	(NA)
	1975	176,115.1	5,327.9	450.8	267.6	173.5	9.5	644.9	278.6	245.3	120.9	2	16	2	(NA)
	1974	177,170.0	5,446.4	442.2	275.0	148.4	19.0	556.8	233.1	203.8	119.8	39	29	(NA)	(NA)
	1973	156,159.4	4,168.2	318.1	183.3	112.9	22.0	432.3	178.4	165.0	88.8	(X)	(X)	(NA)	(NA)

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State	Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs, (GAC) including payments to government units				Percent change[1]		Standard error of estimates (percent)	
	Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
Middle Atlantic Division--Con.														
New York.....[3]1979..	(NA)	(NA)	162.8	54.8	61.4	46.9	316.5	90.4	141.2	84.9	51	24	1	5
[3]1979..	(NA)	(NA)	161.1	54.4	60.6	46.1	313.9	89.7	140.1	84.1	51	24	1	5
[3]1978..	94,296.5	2,917.9	108.1	46.1	55.6	6.4	255.0	66.1	113.6	75.3	-27	15	2	9
[3]1978..	(NA)	(NA)	106.9	45.7	54.9	6.3	253.0	65.5	112.7	74.7	-27	15	2	9
[3]1977..	86,216.4	2,530.2	147.2	54.4	79.7	13.2	222.6	62.5	103.7	56.5	-9	15	4	2
[3]1977..	(NA)	(NA)	145.6	53.9	78.7	13.0	220.7	62.0	102.8	56.0	-10	14	4	2
1976..	76,087.1	2,303.7	162.5	50.6	98.7	13.2	192.8	55.0	86.0	51.9	38	17	13	2
1975..	69,551.3	2,172.1	117.7	55.7	58.5	3.5	164.9	46.8	71.9	46.2	15	12	5	3
1974..	69,271.2	2,198.2	102.4	51.3	40.5	10.6	147.1	36.8	60.6	49.5	30	29	4	3
1973..	64,648.9	1,643.7	79.0	29.6	38.1	11.3	114.0	26.6	52.3	35.2	(X)	(X)	10	3
New Jersey.....[3]1979..	(NA)	(NA)	87.1	43.8	38.6	4.8	324.8	136.2	138.2	50.3	15	35	6	1
[3]1979..	(NA)	(NA)	86.2	43.5	38.1	4.7	322.0	135.2	137.1	49.8	15	35	6	1
[3]1978..	54,748.0	1,639.7	75.9	38.4	34.2	3.2	241.3	89.4	109.5	42.4	-44	-	1	4
[3]1978..	(NA)	(NA)	75.1	38.0	33.8	3.2	239.3	88.7	108.6	42.1	-44	-	1	4
[3]1977..	51,279.4	1,376.3	136.4	64.8	69.9	1.7	240.5	102.2	103.3	35.0	25	16	3	1
[3]1977..	(NA)	(NA)	134.9	64.2	69.0	1.7	238.5	101.5	102.4	34.7	24	15	3	1
1976..	45,711.3	1,216.3	108.8	30.4	77.3	1.2	206.7	92.9	81.6	32.2	-23	21	4	3
1975..	40,716.8	1,200.2	142.2	78.3	61.7	2.1	171.0	73.3	69.4	28.3	7	12	4	3
1974..	40,346.0	1,203.2	133.1	82.8	46.5	3.9	152.4	68.4	56.6	27.5	64	22	8	3
1973..	35,924.9	955.3	81.0	49.0	28.5	3.6	125.0	61.5	43.5	19.8	(X)	(X)	11	4
Pennsylvania.....[3]1979..	(NA)	(NA)	286.3	166.0	111.1	9.0	519.7	257.2	173.9	88.6	29	7	4	1
[3]1979..	(NA)	(NA)	283.3	164.7	109.7	8.9	515.4	255.2	172.5	87.7	29	7	4	1
[3]1978..	88,924.8	2,557.2	221.8	112.8	101.0	8.0	484.5	256.6	150.8	77.1	-21	16	2	1
[3]1978..	(NA)	(NA)	219.3	111.7	99.7	7.9	480.6	255.9	149.6	75.1	-21	17	2	1
[3]1977..	79,844.8	2,297.4	279.8	155.3	115.9	8.5	416.0	226.1	120.9	68.8	39	14	7	2
[3]1977..	(NA)	(NA)	276.7	153.8	114.5	8.4	412.4	224.2	119.9	68.2	37	13	7	2
1976..	71,918.5	2,000.5	201.8	122.1	71.2	8.6	366.1	194.8	119.8	51.6	6	18	4	2
1975..	65,847.0	1,955.6	190.9	133.6	53.3	3.9	309.0	158.5	104.0	46.5	-8	20	3	2
1974..	67,552.8	2,045.0	206.7	140.9	61.4	4.5	257.3	127.9	86.6	42.8	31	25	5	3
1973..	55,585.6	1,569.2	158.1	104.7	46.3	7.1	193.3	90.3	69.2	34.1	(X)	(X)	3	3
East North Central Division.....[3]1979..	(NA)	(NA)	876.3	559.4	277.3	39.3	1,827.4	718.2	748.2	361.0	9	21	(NA)	(NA)
[3]1979..	(NA)	(NA)	867.3	554.9	273.7	38.7	1,812.3	712.7	742.2	357.4	9	21	(NA)	(NA)
[3]1978..	417,913.4	14,586.0	801.2	465.2	293.8	42.3	1,507.2	567.0	622.8	317.3	3	15	(NA)	(NA)
[3]1978..	(NA)	(NA)	792.4	460.8	290.0	41.8	1,495.1	562.5	617.8	314.7	3	15	(NA)	(NA)
[3]1977..	372,970.6	12,453.8	776.5	381.0	362.7	32.8	1,305.7	499.7	542.6	263.0	8	17	(NA)	(NA)
[3]1977..	(NA)	(NA)	767.9	377.4	358.2	32.3	1,294.7	495.5	538.1	260.8	7	16	(NA)	(NA)
1976..	327,002.1	9,625.0	719.5	421.2	280.1	18.3	1,112.3	442.0	454.4	215.7	-4	23	(NA)	(NA)
1975..	282,330.4	9,038.5	752.4	454.9	273.5	24.2	r905.7	r353.8	375.7	176.1	38	19	3	(NA)
1974..	281,771.1	9,824.1	544.4	313.2	196.0	35.3	762.0	274.8	324.5	162.7	15	21	(NA)	(NA)
1973..	249,351.1	7,449.6	473.8	263.4	177.4	33.0	632.0	225.8	268.5	138.1	(X)	(X)	(NA)	(NA)
Ohio.....[3]1979..	(NA)	(NA)	211.3	146.4	55.6	9.1	494.4	199.5	198.5	96.4	3	19	1	3
[3]1979..	(NA)	(NA)	209.1	145.2	54.9	9.0	490.3	198.0	196.9	95.4	4	19	1	3
[3]1978..	106,487.8	3,292.6	204.2	125.2	71.1	8.0	416.7	166.0	175.0	75.8	-9	18	2	1
[3]1978..	(NA)	(NA)	202.0	124.0	70.2	7.9	413.4	164.7	173.6	75.2	-9	18	2	2
[3]1977..	95,234.7	2,790.7	224.3	123.7	87.9	12.5	352.0	149.5	142.2	60.3	-1	18	4	2
[3]1977..	(NA)	(NA)	221.8	122.5	86.8	12.3	349.0	148.2	141.0	59.8	-2	17	4	2
1976..	83,715.9	2,265.5	226.1	152.7	68.6	4.9	298.2	121.7	119.8	56.7	-14	21	5	4
1975..	73,488.3	2,160.5	262.9	174.9	82.6	5.5	245.9	100.3	101.4	44.3	67	22	5	3
1974..	74,484.5	2,523.6	157.3	101.5	42.6	13.3	201.0	80.3	79.9	40.8	24	18	4	2
1973..	64,021.5	1,939.3	126.6	77.5	32.0	17.0	170.5	60.3	74.6	35.8	(X)	(X)	6	3
Indiana.....[3]1979..	(NA)	(NA)	228.3	146.9	75.5	5.8	(S)	(S)	(S)	(S)	34	(X)	1	(X)
[3]1979..	(NA)	(NA)	225.9	145.7	74.5	5.7	(S)	(S)	(S)	(S)	34	(X)	1	(X)
[3]1978..	58,934.7	2,166.8	171.0	101.5	64.7	4.8	305.8	140.7	115.5	49.8	4	22	4	1
[3]1978..	(NA)	(NA)	169.1	100.5	63.9	4.7	303.4	139.6	114.6	49.4	4	22	4	1
[3]1977..	52,172.2	2,078.0	163.7	89.2	70.1	4.4	251.5	115.2	97.0	39.4	19	13	4	1
[3]1977..	(NA)	(NA)	161.9	88.4	69.2	4.3	249.3	114.2	96.1	39.1	17	12	4	1
1976..	45,180.9	1,475.1	138.1	74.5	57.4	6.3	223.1	108.6	82.2	32.3	-11	30	3	2
1975..	38,250.2	1,505.8	154.8	96.7	53.4	4.7	171.4	72.1	77.5	21.9	59	28	4	2
1974..	39,423.9	1,402.4	97.5	55.9	38.6	3.0	134.1	50.1	61.3	22.8	28	33	4	2
1973..	34,175.5	1,107.2	76.4	44.9	29.3	2.3	101.0	36.7	44.5	19.8	(X)	(X)	3	2
Illinois.....[3]1979..	(NA)	(NA)	181.4	119.8	49.9	11.6	424.0	167.0	167.4	89.6	8	29	5	1
[3]1979..	(NA)	(NA)	179.5	118.8	49.3	11.4	420.5	165.7	166.1	88.7	8	29	5	1
[3]1978..	103,858.1	2,975.8	168.0	99.2	58.8	10.0	328.3	127.2	126.9	73.8	7	8	3	2
[3]1978..	(NA)	(NA)	166.2	98.3	58.0	9.9	325.6	126.1	125.8	73.2	7	8	3	2
[3]1977..	93,081.3	2,661.5	157.3	87.0	63.6	6.8	303.7	119.1	120.2	64.1	-13	19	1	1
[3]1977..	(NA)	(NA)	155.6	86.2	62.8	6.7	301.1	118.1	119.2	63.5	-14	18	1	1
1976..	82,351.3	2,335.2	180.3	128.2	49.9	2.1	255.9	100.7	102.5	52.7	24	22	2	2
1975..	75,011.1	2,228.5	145.6	92.0	50.5	3.1	209.6	78.1	84.4	47.1	18	14	3	2
1974..	74,702.9	2,154.5	123.2	72.5	45.5	5.2	184.4	62.6	74.9	46.9	9	22	3	2
1973..	62,581.6	1,698.8	113.2	59.0	47.1	7.1	151.4	52.8	62.7	35.8	(X)	(X)	3	3
Michigan.....[3]1979..	(NA)	(NA)	220.8	132.0	78.8	10.0	391.4	142.5	159.1	89.8	28	18	1	7
[3]1979..	(NA)	(NA)	218.5	130.9	77.8	9.8	388.1	141.4	157.8	88.9	28	18	1	7
[3]1978..	104,920.7	4,742.7	172.7	88.7	74.2	9.8	330.8	109.8	135.1	86.0	15	14	3	3
[3]1978..	(NA)	(NA)	170.8	87.9	73.2	9.7	328.1	108.9	134.0	85.3	15	14	3	3
[3]1977..	93,757.1	3,739.2	150.2	61.5	82.6	6.2	290.1	95.4	121.2	73.4	41	22	3	2
[3]1977..	(NA)	(NA)	148.5	60.9	81.6	6.1	287.7	94.6	120.2	72.8	39	21	3	2
1976..	80,326.7	2,636.1	106.7	45.7	57.2	3.8	236.9	91.7	93.1	52.0	-4	19	2	2
1975..	64,535.1	2,263.3	110.7	49.9	52.5	8.4	r199.8	r83.0	75.5	41.3	5	11	3	2
1974..	63,560.5	2,850.7	105.9	52.8	42.9	10.2	179.9	65.1	78.4	36.4	-2	11	4	2
1973..	63,410.9	1,997.9	108.6	62.7	41.9	4.0	162.8	62.3	64.0	36.6	(X)	(X)	5	2
Wisconsin.....[3]1979..	(NA)	(NA)	34.7	14.4	17.4	2.8	(S)	(S)	(S)	(S)	-41	(X)	7	(X)
[3]1979..	(NA)	(NA)	34.3	14.3	17.2	2.8	(S)	(S)	(S)	(S)	-41	(X)	7	(X)
[3]1978..	43,712.1	1,408.1	85.2	50.6	25.0	9.7	125.5	23.4	70.3	31.8	5	16	6	4
[3]1978..	(NA)	(NA)	84.3	50.1	24.7	9.6	124.6	23.2	69.8	31.6	5	16	6	4
[3]1977..	38,725.3	1,184.4	81.0	19.6	58.5	2.9	108.5	20.6	62.1	25.8	19	10	6	5
[3]1977..	(NA)	(NA)	80.1	19.4	57.8	2.9	107.6	20.4	61.6	25.6	17	10	6	5
1976..	35,427.3	913.1	68.3	20.1	47.0	1.2	98.2	19.3	56.8	22.0	-13	24	9	8
1975..	31,045.7	880.4	78.4	41.4	34.5	2.5	79.0	20.3	36.8	21.9	30	26	17	10
1974..	29,599.3	892.9	60.5	30.5	26.4	3.6	62.6	16.7	30.0	15.8	23	30	11	9
1973..	25,161.6	706.4	49.0	19.3	27.1	2.6	48.0	14.2	22.6	11.2	(X)	(X)	5	6

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State	Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs, (GAC) including payments to government units				Percent change[1]		Standard error of estimates (percent)	
	Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
West North Central Division.....[3]1979..	(NA)	(NA)	249.6	150.4	90.1	9.0	370.6	149.9	147.1	73.6	61	32	(NA)	(NA)
[3]1979..	(NA)	(NA)	247.0	149.2	88.9	8.9	367.5	148.7	145.9	72.9	61	32	(NA)	(NA)
[3]1978..	122,649.6	3,325.9	155.0	71.0	75.9	8.3	280.9	99.8	115.3	65.9	7	24	(NA)	(NA)
[3]1978..	(NA)	(NA)	153.3	70.3	74.9	8.2	278.6	99.0	114.4	65.4	7	24	(NA)	(NA)
[3]1977..	107,370.9	2,644.6	145.2	64.2	75.5	5.4	226.5	79.4	94.8	52.5	-24	11	(NA)	(NA)
[3]1977..	(NA)	(NA)	143.6	63.6	74.6	5.3	224.6	78.7	94.0	52.1	-25	10	(NA)	(NA)
1976..	94,956.1	2,401.4	191.8	97.9	86.6	7.2	203.9	72.8	76.1	54.6	12	25	(NA)	(NA)
1975..	85,135.6	2,327.5	171.3	95.7	65.2	10.7	162.8	61.4	62.7	38.5	-3	10	5	(NA)
1974..	81,653.1	2,055.8	177.1	120.5	48.0	8.7	148.2	56.7	55.4	36.4	58	40	(NA)	(NA)
1973..	71,529.7	1,524.6	112.4	74.2	34.5	3.6	106.1	41.5	37.3	27.4	(X)	(X)	(NA)	(NA)
Minnesota.....[3]1979..	(NA)	(NA)	62.1	30.6	30.0	1.6	79.6	22.7	40.3	16.6	43	29	6	3
[3]1979..	(NA)	(NA)	61.5	30.4	29.6	1.6	78.9	22.5	40.0	16.4	43	29	6	3
[3]1978..	25,838.6	788.2	43.5	13.0	30.1	.4	61.7	20.8	25.6	15.4	67	21	9	9
[3]1978..	(NA)	(NA)	43.0	12.9	29.7	.4	61.2	20.6	25.4	15.3	67	21	9	9
[3]1977..	23,021.2	576.4	26.1	10.3	14.4	1.4	51.1	12.3	23.1	15.8	-20	28	11	9
[3]1977..	(NA)	(NA)	25.8	10.2	14.2	1.4	50.7	12.2	22.9	15.7	-21	27	11	9
1976..	20,439.5	494.9	32.5	20.7	11.3	.5	39.8	9.2	18.3	11.9	-34	20	10	4
1975..	18,646.4	487.6	49.0	34.3	14.5	.3	33.2	8.7	17.1	7.5	-12	9	5	6
1974..	18,221.7	488.7	55.6	37.9	15.4	2.3	30.5	7.9	14.6	8.0	146	37	5	3
1973..	15,279.0	330.5	22.6	12.8	8.7	1.1	22.2	6.0	9.8	6.4	(X)	(X)	6	4
Iowa.....[3]1979..	(NA)	(NA)	25.1	9.6	12.2	3.3	79.7	24.4	40.0	15.3	-58	17	8	2
[3]1979..	(NA)	(NA)	24.8	9.5	12.0	3.3	79.0	24.2	39.7	15.1	-58	17	8	2
[3]1978..	26,547.5	840.3	43.0	17.2	23.9	1.9	68.1	20.3	34.6	13.5	-2	23	8	2
[3]1978..	(NA)	(NA)	42.5	17.0	23.6	1.9	67.5	20.1	34.3	13.4	-2	23	8	2
[3]1977..	23,514.9	677.8	43.7	17.4	24.4	1.9	55.5	16.7	27.6	11.1	-29	15	10	2
[3]1977..	(NA)	(NA)	43.2	17.2	24.1	1.9	55.0	16.5	27.5	11.0	-30	14	10	2
1976..	20,772.3	709.5	61.5	19.4	40.7	1.4	48.4	16.8	21.3	10.4	52	14	6	9
1975..	19,011.6	689.2	40.4	20.1	18.5	1.8	42.5	15.9	17.6	9.0	10	49	12	10
1974..	18,260.1	512.7	36.9	22.3	13.1	1.6	28.5	11.5	10.2	6.8	-5	52	15	3
1973..	16,156.9	326.7	38.7	27.7	10.3	.7	18.7	7.0	6.9	4.8	(X)	(X)	21	5
Missouri.....[3]1979..	(NA)	(NA)	36.6	19.9	14.9	1.8	97.0	45.8	29.3	21.9	8	2	3	3
[3]1979..	(NA)	(NA)	36.2	19.7	14.7	1.8	96.2	45.4	29.1	21.7	8	2	3	3
[3]1978..	37,489.7	965.5	33.9	18.1	11.2	4.6	95.0	40.8	32.3	21.9	-6	34	6	4
[3]1978..	(NA)	(NA)	33.5	17.9	11.1	4.5	94.2	40.5	32.0	21.7	-6	34	6	4
[3]1977..	33,027.5	780.2	36.1	(D)	(D)	(D)	71.0	32.9	24.2	14.0	-27	19	10	3
[3]1977..	(NA)	(NA)	35.7	(D)	(D)	(D)	70.4	32.6	24.0	13.9	-28	18	10	3
1976..	27,468.8	597.5	49.6	27.2	19.0	3.3	59.9	28.8	17.6	13.4	16	26	8	5
1975..	23,454.9	608.9	42.6	15.7	20.2	6.8	47.5	22.1	14.0	11.5	23	-3	9	6
1974..	23,390.5	547.2	34.6	23.6	9.0	2.0	49.1	23.4	13.4	12.4	44	22	11	5
1973..	21,481.1	435.6	24.1	18.6	4.3	1.2	40.4	20.7	10.6	9.1	(X)	(X)	9	6
North Dakota.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	1,376.0	58.6	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1977..	1,312.9	53.0	10.0	(D)	(D)	(Z)	2.6	.4	1.5	.7	270	-32	45	29
[3]1977..	(NA)	(NA)	9.9	(D)	(D)	(Z)	2.6	.4	1.5	.7	266	-32	45	29
1976..	1,236.2	54.9	2.7	2.0	.6	(Z)	3.8	1.7	1.1	1.0	(X)	46	42	34
1975..	1,128.3	23.2	(D)	2.8	(D)	(D)	2.6	1.4	.6	.5	-27	-30	(X)	37
1974..	982.1	27.8	4.1	(D)	(D)	.2	3.7	2.3	1.0	.4	356	95	58	26
1973..	773.2	23.8	.9	(D)	(D)	(D)	1.9	.7	1.0	.3	(X)	(X)	36	33
South Dakota.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	2,154.2	40.1	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1977..	1,793.7	36.7	.1	(Z)	(D)	(D)	1.2	.1	.7	.4	-50	33	32	8
[3]1977..	(NA)	(NA)	.1	(Z)	(D)	(D)	1.2	.1	.7	.4	-50	33	32	8
1976..	1,608.5	48.8	.2	(Z)	.2	-	.9	.1	.5	.3	(X)	29	19	16
1975..	1,494.4	36.5	(D)	-	(D)	(D)	.7	(Z)	.3	.3	-82	-	(X)	16
1974..	1,389.0	30.7	1.1	(D)	(D)	(Z)	.7	.1	.4	.3	-63	40	21	20
1973..	1,274.9	32.3	3.0	(D)	(D)	(D)	.5	.1	.3	.1	(X)	(X)	1	19
Nebraska.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	17.0	4.7	7.3	5.0	(X)	18	(X)	6
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	16.9	4.7	7.2	5.0	(X)	18	(X)	6
[3]1978..	10,572.1	219.5	7.2	5.5	1.6	.1	14.4	3.4	6.1	4.7	22	26	19	6
[3]1978..	(NA)	(NA)	7.1	5.4	1.6	.1	14.3	3.4	6.1	4.7	22	27	19	6
[3]1977..	8,713.4	175.1	5.9	3.7	1.8	.2	11.4	2.5	5.3	3.6	-52	-6	15	6
[3]1977..	(NA)	(NA)	5.8	3.7	1.8	.2	11.3	2.5	5.2	3.6	-53	-7	15	6
1976..	8,773.3	167.5	12.3	8.7	3.3	.4	12.1	4.1	5.2	2.8	-12	23	49	13
1975..	8,393.4	160.8	14.0	10.6	2.1	1.3	9.8	3.3	4.0	2.5	30	-6	28	11
1974..	7,949.3	143.3	10.8	7.8	2.7	.2	10.4	2.4	5.8	2.2	21	37	23	14
1973..	6,954.9	108.5	8.9	4.2	4.7	.1	7.6	1.8	3.8	1.9	(X)	(X)	16	8
Kansas.....[3]1979..	(NA)	(NA)	112.7	80.4	(S)	(S)	93.2	51.2	(S)	(S)	370	143	2	5
[3]1979..	(NA)	(NA)	111.5	79.8	(S)	(S)	92.4	50.8	(S)	(S)	370	143	2	5
[3]1978..	18,671.5	413.7	24.0	14.2	8.5	1.2	38.3	14.1	14.8	9.4	3	14	6	7
[3]1978..	(NA)	(NA)	23.7	14.1	8.4	1.2	38.0	14.0	14.7	9.3	3	14	6	7
[3]1977..	15,987.3	345.4	23.4	7.3	15.1	.9	33.7	14.5	12.2	6.8	-29	-14	7	5
[3]1977..	(NA)	(NA)	23.1	7.2	14.9	.9	33.4	14.4	12.2	6.8	-30	-14	7	5
1976..	14,657.5	328.3	33.0	19.9	11.5	1.6	39.0	12.1	12.1	14.8	49	47	25	14
1975..	13,006.6	321.3	22.1	12.2	9.5	.4	26.5	10.0	9.3	7.3	-35	5	7	10
1974..	11,460.4	305.4	34.0	24.8	6.9	2.4	25.3	9.1	10.0	6.2	139	71	45	10
1973..	9,609.7	267.2	14.2	10.0	3.6	.5	14.8	5.2	4.8	4.8	(X)	(X)	8	9
South Atlantic Division.....[3]1979..	(NA)	(NA)	400.8	215.3	158.9	26.9	953.8	322.8	471.1	159.9	-8	12	(NA)	(NA)
[3]1979..	(NA)	(NA)	396.6	213.6	156.9	26.1	945.9	320.3	467.3	158.3	-8	12	(NA)	(NA)
[3]1978..	189,255.5	7,297.0	434.6	227.1	189.9	17.7	851.7	276.5	398.0	176.7	-1	20	(NA)	(NA)
[3]1978..	(NA)	(NA)	429.8	224.9	187.4	17.5	844.4	274.1	394.5	175.1	-1	20	(NA)	(NA)
[3]1977..	168,427.7	6,050.0	441.0	(D)	239.9	(D)	707.8	238.2	338.3	131.4	-3	18	(NA)	(NA)
[3]1977..	(NA)	(NA)	436.1	(D)	236.9	(D)	701.9	236.2	335.5	130.3	-5	16	(NA)	(NA)
1976..	148,056.7	5,679.4	456.9	201.6	(D)	(D)	601.0	218.9	(D)	(D)	-19	26	(NA)	(NA)
1975..	127,223.8	5,230.9	565.1	350.7	197.2	17.5	r476.8	r168.3	214.4	r94.0	22	17	5	(NA)
1974..	126,628.8	5,383.6	463.2	292.5	152.9	17.5	408.7	139.7	180.1	89.2	33	38	(NA)	(NA)
1973..	111,002.0	4,139.0	349.5	194.4	142.3	12.9	295.3	100.5	134.3	60.6	(X)	(X)	(NA)	(NA)

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State	Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
	Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
South Atlantic Division--Continued														
Delaware.....[3]1979..	(NA)	(NA)	33.7	28.7	4.4	.6	(S)	(S)	(S)	(S)	-34	(X)	1	(X)
[3]1979..	(NA)	(NA)	33.3	28.4	4.3	.6	(S)	(S)	(S)	(S)	-34	(X)	1	(X)
[3]1978..	6,427.3	186.1	51.0	40.1	10.2	.6	73.3	35.1	23.3	14.9	167	49	1	3
[3]1978..	(NA)	(NA)	50.4	39.7	10.1	.6	72.6	34.8	23.1	14.8	167	49	1	3
[3]1977..	5,208.7	148.2	19.1	(D)	10.5	(D)	49.1	21.6	21.7	5.9	25	15	11	3
[3]1977..	(NA)	(NA)	18.9	(D)	10.4	(D)	48.7	21.4	21.5	5.9	24	14	11	3
1976..	5,042.7	159.7	15.3	6.7	(D)	(D)	42.7	17.9	18.3	6.5	61	14	12	4
1975..	3,967.3	169.7	9.5	2.8	6.7	.1	37.5	15.4	18.1	3.9	-22	20	14	4
1974..	4,128.9	146.9	12.2	2.4	(D)	(D)	31.2	15.0	11.0	5.3	-47	62	9	4
1973..	3,766.7	114.1	23.2	11.0	11.3	.9	19.3	10.3	6.8	2.2	(X)	(X)	18	4
Maryland.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	124.4	56.5	51.0	16.9	(X)	23	(X)	2
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	123.4	56.1	50.6	16.7	(X)	23	(X)	2
[3]1978..	17,780.3	508.6	35.2	17.9	15.2	2.1	100.9	25.2	37.8	37.9	-22	33	3	3
[3]1978..	(NA)	(NA)	34.8	17.7	15.0	2.1	100.0	25.0	37.5	37.6	-22	33	3	3
[3]1977..	15,930.4	513.8	44.9	14.6	29.8	.6	76.0	39.0	25.0	12.0	31	16	1	3
[3]1977..	(NA)	(NA)	44.4	14.5	29.4	.6	75.4	38.6	24.8	11.9	30	15	1	3
1976..	14,762.2	421.0	34.2	13.4	19.4	1.4	65.5	35.5	20.1	9.9	-3	30	7	4
1975..	13,189.6	460.5	35.1	16.8	18.0	.3	50.5	25.5	18.2	6.8	-23	14	6	5
1974..	13,446.1	438.6	45.7	23.3	22.0	.3	44.3	22.0	16.4	6.0	76	28	3	4
1973..	11,498.8	317.1	26.0	15.3	10.3	.3	34.5	17.2	12.3	5.1	(X)	(X)	4	4
District of Columbia.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	1,047.3	17.5	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
[3]1977..	984.4	18.1	.2	.1	(Z)	-	.4	(Z)	.1	.3	-50	-50	32	27
[3]1977..	(NA)	(NA)	.2	.1	(Z)	-	.4	(Z)	.1	.3	-50	-50	32	27
1976..	932.0	20.0	.4	.3	(Z)	.1	.8	.1	(D)	(D)	300	14	57	33
1975..	888.3	14.9	.1	.1	.1	-	.7	.1	.3	.3	-	-	37	35
1974..	870.2	18.1	.1	.1	(D)	(D)	.7	.1	.2	.3	100	133	76	32
1973..	697.0	23.0	(Z)	(D)	(D)	(D)	.3	(Z)	.2	.1	(X)	(X)	11	30
Virginia.....[3]1979..	(NA)	(NA)	56.4	24.9	29.5	2.1	110.1	34.6	53.3	22.2	-26	11	9	6
[3]1979..	(NA)	(NA)	55.8	24.7	29.1	2.0	109.2	34.3	52.9	22.0	-26	11	9	6
[3]1978..	27,069.5	1,040.1	76.3	29.2	43.4	3.8	98.9	26.8	51.6	20.4	1	19	2	7
[3]1978..	(NA)	(NA)	75.5	28.9	42.8	3.8	98.0	26.6	51.1	20.2	1	19	2	7
[3]1977..	23,988.6	953.0	75.5	39.2	32.8	3.5	83.1	23.6	41.8	17.7	-12	6	3	3
[3]1977..	(NA)	(NA)	74.7	38.8	32.4	3.5	82.4	23.4	41.5	17.5	-13	5	3	3
1976..	20,470.5	907.4	86.1	30.7	51.7	3.8	78.4	26.9	36.8	14.6	-8	23	7	5
1975..	17,700.5	672.0	93.4	70.2	17.4	5.8	63.7	20.0	29.1	14.6	78	19	15	5
1974..	16,719.3	784.5	52.5	31.1	17.4	4.0	53.4	16.5	24.6	12.5	13	36	8	6
1973..	14,699.7	615.1	46.3	23.1	21.4	1.8	39.4	13.1	17.6	8.7	(X)	(X)	11	7
West Virginia.....[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	182.4	58.9	96.8	26.8	(X)	18	(X)	1
[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	180.9	58.4	96.0	26.5	(X)	18	(X)	1
[3]1978..	9,743.7	512.0	47.7	26.1	20.8	.9	154.4	53.8	75.7	24.9	-61	35	5	1
[3]1978..	(NA)	(NA)	47.2	25.8	20.5	.9	153.2	53.4	75.1	24.7	-61	35	5	1
[3]1977..	8,705.9	402.3	122.6	32.2	88.5	1.9	114.4	37.0	55.5	21.9	56	9	1	2
[3]1977..	(NA)	(NA)	121.2	31.9	87.4	1.9	113.4	36.7	55.0	21.7	54	8	1	2
1976..	7,937.6	288.8	78.6	41.4	36.2	1.0	104.7	33.1	49.2	22.4	21	39	11	2
1975..	6,743.7	363.9	65.1	48.6	15.5	1.1	r75.6	r22.8	37.9	r15.0	-9	18	4	2
1974..	6,893.4	299.6	71.4	51.5	18.1	1.8	64.2	21.1	29.3	13.8	50	39	12	3
1973..	5,609.1	230.7	47.5	22.9	23.9	.7	46.3	13.8	21.8	10.7	(X)	(X)	4	4
North Carolina.....[3]1979..	(NA)	(NA)	58.7	28.0	(S)	(S)	129.2	36.0	65.7	27.5	10	20	1	3
[3]1979..	(NA)	(NA)	58.1	27.8	(S)	(S)	128.1	35.7	65.2	27.2	10	21	1	3
[3]1978..	45,259.2	1,513.2	53.4	35.0	14.5	3.8	107.5	32.5	51.5	23.5	12	1	7	4
[3]1978..	(NA)	(NA)	52.8	34.7	14.3	3.8	106.3	32.1	50.9	23.2	12	1	7	4
[3]1977..	40,912.2	1,345.3	47.5	28.7	16.3	2.4	106.5	27.5	54.3	24.7	-27	34	6	10
[3]1977..	(NA)	(NA)	47.0	28.4	16.1	2.4	105.6	27.3	53.8	24.5	-28	33	6	10
1976..	35,818.9	1,294.6	65.1	36.6	25.6	2.9	79.3	23.9	39.1	16.1	-19	13	5	4
1975..	31,432.8	1,236.7	80.1	55.5	23.3	1.4	70.1	21.9	33.8	14.4	10	6	8	3
1974..	31,191.1	1,199.1	72.6	50.0	20.6	1.9	66.0	20.3	30.4	15.3	12	23	3	4
1973..	27,440.6	1,053.6	64.9	40.7	20.7	3.5	53.7	16.0	26.7	11.1	(X)	(X)	3	9
South Carolina.....[3]1979..	(NA)	(NA)	40.5	23.5	13.5	3.6	108.1	35.2	54.2	18.7	-25	23	4	11
[3]1979..	(NA)	(NA)	40.1	23.3	13.3	3.5	107.2	34.9	53.8	18.5	-25	23	4	11
[3]1978..	21,124.6	978.7	54.0	24.5	27.3	2.3	88.0	24.4	48.1	15.4	58	15	4	10
[3]1978..	(NA)	(NA)	53.4	24.3	26.9	2.3	87.2	24.2	47.7	15.3	58	15	4	10
[3]1977..	18,882.4	788.6	34.2	15.0	16.7	2.4	76.2	22.2	40.3	13.8	16	64	6	10
[3]1977..	(NA)	(NA)	33.8	14.9	16.5	2.4	75.6	22.0	40.0	13.7	14	63	6	10
1976..	16,610.1	868.0	29.6	8.0	18.9	2.6	46.4	12.1	27.0	7.4	-34	26	15	7
1975..	13,715.0	807.0	45.0	12.6	29.3	3.1	36.8	11.5	18.7	6.7	44	32	10	6
1974..	14,037.1	848.6	31.3	16.9	11.2	3.2	27.8	6.7	14.5	6.6	73	34	7	5
1973..	12,472.1	595.9	18.1	(D)	(D)	(D)	20.7	4.6	10.9	5.2	(X)	(X)	9	4
Georgia.....[3]1979..	(NA)	(NA)	51.2	36.6	(S)	(S)	108.9	39.1	52.0	17.8	-31	10	7	2
[3]1979..	(NA)	(NA)	50.7	36.3	(S)	(S)	108.0	38.8	51.6	17.6	-31	10	7	2
[3]1978..	35,812.2	1,459.7	74.2	35.8	37.5	.9	99.3	29.5	52.8	16.7	26	10	4	3
[3]1978..	(NA)	(NA)	73.4	35.5	37.0	.9	98.6	29.3	52.4	16.6	26	11	4	3
[3]1977..	32,834.5	1,143.4	58.9	32.4	24.6	1.8	90.0	26.4	47.5	16.0	93	37	5	3
[3]1977..	(NA)	(NA)	58.2	32.1	24.3	1.8	89.2	26.2	47.1	15.9	91	36	5	3
1976..	28,391.4	852.9	30.5	16.8	13.0	.6	65.6	22.5	30.1	12.9	-27	20	6	5
1975..	23,250.8	687.0	42.0	21.2	19.5	1.3	54.6	18.2	25.5	10.9	-26	17	5	4
1974..	23,584.3	912.2	56.5	35.8	19.0	1.6	46.6	11.5	24.5	10.6	-9	27	4	3
1973..	21,092.4	669.2	62.2	42.6	17.9	1.8	36.7	9.1	20.0	7.7	(X)	(X)	3	4
Florida.....[3]1979..	(NA)	(NA)	62.8	29.1	30.1	3.7	137.2	46.9	68.9	21.5	48	6	3	2
[3]1979..	(NA)	(NA)	62.1	28.9	29.7	3.6	136.1	46.5	68.3	21.3	48	6	3	2
[3]1978..	24,991.4	1,081.1	42.4	18.2	21.1	3.1	129.1	49.2	57.2	22.4	11	15	5	2
[3]1978..	(NA)	(NA)	41.9	18.0	20.8	3.1	127.8	48.7	56.6	22.2	11	15	5	2
[3]1977..	20,980.6	737.3	38.1	15.4	20.7	2.0	112.1	40.9	52.1	19.1	-67	-5	5	2
[3]1977..	(NA)	(NA)	37.7	15.3	20.4	2.0	111.2	40.6	51.7	18.9	-68	-5	5	2
1976..	18,091.3	867.0	117.1	47.7	66.6	2.8	117.6	46.9	49.0	21.7	-40	35	13	12
1975..	16,335.8	819.2	194.7	122.9	67.4	4.4	r87.3	r32.9	33.1	r21.4	61	17	12	5
1974..	15,758.4	736.0	120.9	81.4	36.1	3.4	74.5	26.5	29.2	18.8	97	68	2	4
1973..	13,725.6	519.9	61.3	31.7	26.8	2.9	44.3	16.4	18.1	9.8	(X)	(X)	5	5

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State		Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
		Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
East South Central Division	[3]1979..	(NA)	(NA)	259.3	144.6	91.6	23.1	536.2	201.4	237.8	97.0	-4	14	(NA)	(NA)
	[3]1979..	(NA)	(NA)	256.6	143.4	90.5	22.7	531.8	199.9	235.9	96.0	-4	14	(NA)	(NA)
	[3]1978..	94,681.9	4,079.5	269.9	143.9	96.4	29.4	471.4	188.7	202.8	79.8	-7	16	(NA)	(NA)
	[3]1978..	(NA)	(NA)	266.9	142.5	95.1	29.0	467.6	187.2	201.2	79.1	-7	16	(NA)	(NA)
	[3]1977..	85,402.6	3,466.7	291.2	150.4	127.5	13.4	405.8	156.2	185.7	64.0	-10	27	(NA)	(NA)
	[3]1977..	(NA)	(NA)	288.0	149.0	125.9	13.2	402.6	155.0	184.2	63.5	-11	26	(NA)	(NA)
	1976..	73,879.7	2,791.7	325.0	184.2	131.6	9.4	320.6	134.4	137.8	48.5	-20	19	(NA)	(NA)
	1975..	64,774.1	2,624.3	407.5	262.9	137.1	7.6	r270.5	r110.8	119.4	r40.2	32	26	7	(NA)
	1974..	63,550.9	2,715.7	308.3	198.4	94.1	15.9	213.9	85.7	88.7	39.4	49	34	(NA)	(NA)
	1973..	54,116.9	1,897.7	207.2	125.3	72.7	9.1	160.1	64.2	68.8	27.0	(X)	(X)	(NA)	(NA)
Kentucky	[3]1979..	(NA)	(NA)	47.9	37.6	(S)	(S)	112.5	37.1	47.3	28.2	-6	12	6	4
	[3]1979..	(NA)	(NA)	47.4	37.3	(S)	(S)	111.6	36.8	46.9	27.9	-6	12	6	4
	[3]1978..	25,716.5	799.8	51.1	35.7	14.4	.9	100.7	42.6	37.3	20.8	40	31	12	2
	[3]1978..	(NA)	(NA)	50.5	35.4	14.2	.9	99.9	42.3	37.0	20.6	40	31	12	2
	[3]1977..	22,874.7	715.9	36.5	21.0	13.6	1.9	77.0	35.0	25.8	16.2	-22	11	2	2
	[3]1977..	(NA)	(NA)	36.1	20.8	13.4	1.9	76.4	34.7	25.6	16.1	-23	10	2	2
	1976..	20,268.5	521.6	47.0	24.7	19.8	2.4	69.4	33.5	21.9	14.0	-25	15	7	7
	1975..	17,647.4	484.5	62.7	43.2	17.4	2.1	60.1	26.6	23.6	10.0	-7	26	9	5
	1974..	17,207.8	549.7	67.4	48.6	17.1	1.7	47.6	16.9	21.1	9.6	-4	18	13	6
	1973..	14,332.1	504.4	70.1	48.6	20.6	1.0	40.4	14.2	19.2	7.0	(X)	(X)	34	4
Tennessee	[3]1979..	(NA)	(NA)	84.0	37.0	38.9	8.1	164.9	47.7	86.7	30.5	5	17	8	3
	[3]1979..	(NA)	(NA)	83.1	36.7	38.4	8.0	163.5	47.3	86.0	30.2	5	17	8	3
	[3]1978..	31,750.2	1,156.2	80.0	42.0	30.2	7.7	140.4	41.9	74.2	24.2	-27	5	5	3
	[3]1978..	(NA)	(NA)	79.1	41.6	29.8	7.6	139.3	41.6	73.6	24.0	-27	5	5	3
	[3]1977..	28,752.0	961.1	109.7	61.9	43.2	4.6	133.3	40.8	73.4	19.1	-12	21	8	3
	[3]1977..	(NA)	(NA)	108.5	61.3	42.7	4.5	132.2	40.5	72.8	18.9	-13	20	8	3
	1976..	24,755.5	781.3	124.1	75.5	45.5	3.2	109.9	34.1	60.1	15.8	-5	14	21	5
	1975..	21,768.2	826.1	130.3	61.8	65.2	3.3	r96.2	r30.1	53.0	r13.1	82	22	18	6
	1974..	21,608.1	935.4	71.5	34.7	32.0	4.8	78.7	28.1	37.9	12.8	83	31	9	5
	1973..	18,913.7	673.5	39.0	22.7	13.6	2.6	60.2	24.4	25.4	10.4	(X)	(X)	10	5
Alabama	[3]1979..	(NA)	(NA)	105.9	59.1	34.1	12.7	181.5	87.2	68.3	25.9	-6	20	2	3
	[3]1979..	(NA)	(NA)	104.8	58.6	33.7	12.5	180.0	86.6	67.8	25.6	-6	20	2	3
	[3]1978..	23,351.3	1,610.9	112.8	53.2	39.5	20.0	150.9	67.6	58.6	24.7	8	14	3	3
	[3]1978..	(NA)	(NA)	111.5	52.7	39.0	19.7	149.7	67.1	58.1	24.5	8	14	3	3
	[3]1977..	21,010.1	1,318.9	104.1	50.7	47.7	5.8	132.1	60.9	51.6	19.8	-1	41	2	3
	[3]1977..	(NA)	(NA)	103.0	50.2	47.1	5.7	131.1	60.4	51.2	19.6	-2	40	2	3
	1976..	17,988.1	1,151.9	105.5	67.1	35.4	3.1	93.4	44.6	35.2	13.7	-27	27	4	2
	1975..	15,886.7	1,054.4	144.5	105.0	37.6	1.9	73.7	34.7	27.4	11.6	25	33	8	3
	1974..	15,698.2	910.9	115.2	73.8	32.8	8.6	55.6	24.3	19.7	11.6	61	45	7	3
	1973..	13,020.4	480.8	71.4	39.0	28.1	4.2	38.3	17.0	16.3	5.0	(X)	(X)	5	3
Mississippi	[3]1979..	(NA)	(NA)	21.6	10.9	(S)	(S)	77.3	29.4	35.5	12.4	-17	-3	19	9
	[3]1979..	(NA)	(NA)	21.4	10.8	(S)	(S)	76.7	29.2	35.2	12.3	-17	-3	19	9
	[3]1978..	13,863.9	512.6	26.1	12.9	12.3	.8	79.3	36.5	32.8	10.1	-36	25	16	6
	[3]1978..	(NA)	(NA)	25.8	12.8	12.1	.8	78.7	36.2	32.5	10.0	-36	25	16	6
	[3]1977..	12,765.8	470.8	40.8	16.9	23.0	1.1	63.4	19.6	34.9	9.0	-16	32	4	7
	[3]1977..	(NA)	(NA)	40.4	16.7	22.7	1.1	62.9	19.4	34.6	8.9	-17	31	4	7
	1976..	10,867.6	336.9	48.4	16.9	30.9	.7	47.9	22.2	20.6	5.0	-31	18	4	8
	1975..	9,471.8	259.3	70.0	52.9	16.9	.3	40.5	19.4	15.6	5.5	29	27	11	14
	1974..	9,036.8	319.7	54.2	41.3	12.2	.8	32.0	16.4	10.0	5.4	103	51	13	17
	1973..	7,845.7	239.0	26.7	15.0	10.4	1.3	21.2	8.6	7.9	4.7	(X)	(X)	7	5
West South Central Division	[3]1979..	(NA)	(NA)	682.7	399.2	238.4	45.0	1,356.1	613.6	551.9	190.5	-11	19	(NA)	(NA)
	[3]1979..	(NA)	(NA)	675.6	396.0	235.3	44.3	1,344.9	608.9	547.5	188.5	-11	19	(NA)	(NA)
	[3]1978..	164,474.4	7,756.6	764.2	465.2	250.7	48.3	1,140.8	479.1	477.1	184.8	13	13	(NA)	(NA)
	[3]1978..	(NA)	(NA)	755.8	460.8	247.4	47.4	1,131.3	475.1	473.1	183.3	13	13	(NA)	(NA)
	[3]1977..	147,205.8	8,223.4	673.5	253.9	369.1	50.8	1,012.5	437.9	421.5	152.9	-9	42	(NA)	(NA)
	[3]1977..	(NA)	(NA)	666.0	251.5	364.5	50.1	1,004.0	434.2	418.0	151.6	-10	41	(NA)	(NA)
	1976..	123,076.1	7,212.2	743.9	342.6	374.1	27.3	713.8	306.0	302.0	106.0	20	35	(NA)	(NA)
	1975..	105,924.8	5,669.7	619.6	379.4	219.5	20.8	528.4	214.0	236.2	78.0	25	25	1	(NA)
	1974..	95,541.1	4,676.9	496.2	292.6	183.0	20.6	422.5	165.8	191.1	65.4	60	26	(NA)	(NA)
	1973..	70,122.3	2,723.3	310.9	178.7	122.4	9.7	331.0	131.3	146.0	53.2	(X)	(X)	(NA)	(NA)
Arkansas	[3]1979..	(NA)	(NA)	65.1	30.1	(S)	(S)	70.1	23.3	(S)	(S)	31	23	19	11
	[3]1979..	(NA)	(NA)	64.4	29.9	(S)	(S)	69.5	23.1	(S)	(S)	31	23	19	11
	[3]1978..	13,963.1	606.1	49.8	21.7	27.0	1.2	56.9	17.8	27.9	11.3	48	22	15	10
	[3]1978..	(NA)	(NA)	49.3	21.5	26.6	1.2	56.5	17.7	27.7	11.2	48	22	15	10
	[3]1977..	12,276.1	470.1	33.6	19.9	12.6	1.1	46.7	15.5	22.0	9.2	117	35	6	9
	[3]1977..	(NA)	(NA)	33.2	19.7	12.4	1.1	46.3	15.4	21.8	9.1	114	33	6	9
	1976..	10,604.8	472.7	15.5	6.8	8.2	.5	34.7	11.8	14.3	8.6	-47	26	13	14
	1975..	9,416.9	342.7	29.4	17.4	10.7	1.4	27.6	9.3	13.7	4.6	38	28	15	10
	1974..	9,071.3	353.6	21.3	11.5	8.8	1.0	21.5	7.8	9.7	4.0	-8	-23	14	5
	1973..	7,845.7	239.0	26.7	15.0	10.4	1.3	21.2	8.6	7.9	4.7	(X)	(X)	7	5
Louisiana	[3]1979..	(NA)	(NA)	220.5	107.5	98.1	15.0	405.5	172.1	185.8	47.6	-10	35	1	2
	[3]1979..	(NA)	(NA)	218.2	106.6	96.8	14.8	402.2	170.8	184.3	47.1	-10	35	1	2
	[3]1978..	31,852.7	2,103.8	245.9	113.2	112.1	20.8	300.1	89.2	169.5	41.4	5	14	2	1
	[3]1978..	(NA)	(NA)	243.2	112.1	110.6	20.5	297.7	88.5	168.1	41.1	5	14	2	1
	[3]1977..	29,493.3	2,072.8	234.5	61.1	153.9	19.7	262.3	89.8	142.0	30.7	16	25	2	1
	[3]1977..	(NA)	(NA)	231.9	60.5	152.0	19.4	260.1	89.0	140.7	30.4	14	24	2	1
	1976..	25,225.2	1,560.8	203.0	74.0	124.5	4.5	210.6	98.3	87.6	24.8	6	40	5	8
	1975..	22,160.4	1,164.1	191.1	106.8	76.0	8.4	150.3	65.9	68.2	16.0	36	33	2	5
	1974..	19,576.0	948.2	140.9	77.2	62.4	1.4	113.4	49.5	51.6	12.2	96	44	4	3
	1973..	12,968.2	704.3	72.0	31.3	38.5	2.1	78.7	33.8	35.8	9.1	(X)	(X)	10	5
Oklahoma	[3]1979..	(NA)	(NA)	24.4	18.2	(S)	(S)	42.1	17.3	(S)	(S)	-5	24	4	10
	[3]1979..	(NA)	(NA)	24.1	18.1	(S)	(S)	41.8	17.2	(S)	(S)	-5	24	4	10
	[3]1978..	14,011.8	445.0	25.8	19.7	5.9	.2	33.9	14.4	12.5	7.1	128	-14	5	9
	[3]1978..	(NA)	(NA)	25.5	19.5	5.8	.2	33.6	14.3	12.4	7.0	128	-14	5	9
	[3]1977..	12,564.5	485.8	11.3	5.4	5.7	.4	39.3	21.2	12.2	5.9	-55	106	5	7
	[3]1977..	(NA)	(NA)	11.2	5.3	5.6	.4	39.0	21.0	12.1	5.9	-56	104	5	7
	1976..	10,126.0	410.6	25.3	19.0	6.3	.1	19.1	10.3	4.6	4.2	72	-4	32	9
	1975..	8,889.5	358.3	14.7	10.3	4.2	.2	19.9	9.3	6.4	4.2	-29	2	16	13
	1974..	7,945.2	339.2	20.7	18.5	1.4	.7	19.6	9.5	6.4	3.7	50	45	35	12
	1973..	6,336.1	253.5	13.8	9.5	4.2	.1	13.5	5.1	5.7	2.7	(X)	(X)	34	11

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State	Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
	Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid Waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
West South Central Division--Continued														
Texas	[3]1979	(NA)	(NA)	372.7	243.4	106.6	22.7	838.4	400.9	320.1	117.4	-16	12	1	1
	[3]1979	(NA)	(NA)	368.8	241.4	105.2	22.3	831.4	397.8	317.5	116.1	-16	12	1	1
	[3]1978	104,646.8	4,601.7	442.7	310.6	105.8	26.1	749.8	357.9	267.1	125.1	12	13	4	3
	[3]1978	(NA)	(NA)	437.8	307.7	104.4	25.8	743.5	354.6	264.9	124.0	12	13	4	3
	[3]1977	92,871.9	5,194.7	394.1	167.6	197.0	29.6	664.2	311.4	245.5	107.1	-21	48	1	1
	[3]1977	(NA)	(NA)	389.7	166.0	194.5	29.2	658.6	308.8	243.4	106.2	-22	47	1	1
	1976	77,120.1	4,768.1	500.1	242.8	235.1	22.2	449.4	185.6	195.5	68.4	30	36	2	2
	1975	65,458.0	3,804.6	384.4	244.9	128.6	10.8	330.6	129.5	148.0	53.2	23	23	1	2
	1974	58,948.6	3,035.9	313.3	185.4	110.4	17.5	268.0	99.0	123.4	45.5	55	27	4	1
	1973	42,982.3	1,534.0	201.9	120.5	75.6	5.7	210.6	84.0	96.6	29.7	(X)	(X)	6	4
Mountain Division	[3]1979	(NA)	(NA)	102.3	73.2	22.9	6.1	241.5	170.7	47.8	22.9	5	19	(NA)	(NA)
	[3]1979	(NA)	(NA)	101.2	72.6	22.6	6.0	239.5	169.4	47.4	22.7	5	19	(NA)	(NA)
	[3]1978	38,054.2	1,620.7	97.2	79.6	13.7	3.6	202.5	148.6	30.8	23.1	-48	16	(NA)	(NA)
	[3]1978	(NA)	(NA)	96.1	78.8	13.5	3.6	201.1	147.6	30.6	22.9	-48	17	(NA)	(NA)
	[3]1977	32,713.3	1,486.5	187.9	155.0	30.7	1.8	174.0	122.3	32.7	19.3	(X)	31	(NA)	(NA)
	[3]1977	(NA)	(NA)	185.8	153.5	30.3	1.8	172.5	121.2	32.4	19.1	(X)	29	(NA)	(NA)
	1976	29,474.0	1,158.8	(D)	(D)	(D)	(D)	132.8	88.6	(D)	(D)	(X)	23	(NA)	(NA)
	1975	26,074.6	1,236.4	191.8	162.4	24.0	5.4	r107.9	r75.8	21.3	r11.0	8	18	2	(NA)
	1974	25,427.6	1,137.5	177.2	154.4	21.2	1.8	91.5	55.1	20.7	15.6	-2	33	(NA)	(NA)
	1973	20,804.7	829.6	181.3	157.1	23.5	.6	68.8	35.2	18.4	15.3	(X)	(X)	(NA)	(NA)
Montana	[3]1979	(NA)	(NA)	11.5	9.8	(S)	(S)	21.5	16.0	3.9	1.5	35	31	6	4
	[3]1979	(NA)	(NA)	11.4	9.7	(S)	(S)	21.3	15.9	3.9	1.5	35	31	6	4
	[3]1978	3,070.5	130.6	8.5	6.8	(D)	(D)	16.4	11.9	3.3	1.2	-76	13	10	4
	[3]1978	(NA)	(NA)	8.4	6.7	(D)	(D)	16.3	11.8	3.3	1.2	-76	13	10	4
	[3]1977	2,683.4	119.8	35.2	29.7	(D)	(D)	14.5	10.7	2.4	1.4	40	-34	7	6
	[3]1977	(NA)	(NA)	34.8	29.4	(D)	(D)	14.4	10.7	2.4	1.4	39	-35	7	6
	1976	2,524.9	85.6	25.1	(D)	(D)	.1	22.0	17.3	3.9	.8	11	68	5	3
	1975	2,202.0	76.3	22.7	21.0	(D)	(D)	13.1	10.0	2.5	.5	(X)	2	3	6
	1974	2,217.4	99.8	(D)	(D)	(D)	(D)	12.9	7.6	4.4	.8	(X)	8	(X)	9
	1973	1,793.7	66.3	17.3	15.9	1.4	(Z)	11.9	7.2	(D)	(D)	(X)	(X)	8	4
Idaho	[3]1979	(NA)	(NA)	27.6	16.9	7.6	3.0	33.4	17.4	10.7	5.2	200	39	7	7
	[3]1979	(NA)	(NA)	27.3	16.8	7.5	3.0	33.1	17.3	10.6	5.2	200	39	7	7
	[3]1978	4,485.6	194.7	9.2	5.6	2.1	1.6	24.0	11.9	6.6	5.4	-65	28	18	7
	[3]1978	(NA)	(NA)	9.1	5.5	2.1	1.6	23.8	11.9	6.5	5.4	-65	28	18	7
	[3]1977	3,657.7	158.7	26.4	16.1	(D)	(D)	18.8	8.6	5.8	4.5	66	1	18	8
	[3]1977	(NA)	(NA)	26.1	15.9	(D)	(D)	18.6	8.5	5.7	4.5	64	-	18	8
	1976	3,448.1	159.9	15.9	11.7	3.9	.3	18.7	8.2	6.9	3.6	-25	31	3	11
	1975	3,048.5	143.0	21.3	15.1	(D)	(D)	r14.3	r7.3	5.1	r1.8	50	15	8	6
	1974	2,903.2	132.6	14.2	6.9	6.4	1.0	12.4	5.3	3.7	3.4	-	23	10	7
	1973	2,345.2	75.2	14.2	2.3	11.7	.2	10.1	4.4	2.9	2.8	(X)	(X)	7	8
Wyoming	[3]1979	(NA)	(NA)	2.6	2.3	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	1	(X)
	[3]1979	(NA)	(NA)	2.6	2.3	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	1	(X)
	[3]1978	1,402.6	53.5	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1977	1,287.8	36.2	2.8	1.8	(D)	(D)	4.7	2.2	1.6	.9	180	96	24	25
	[3]1977	(NA)	(NA)	2.8	1.8	(D)	(D)	4.7	2.2	1.6	.9	180	96	24	25
	1976	833.2	30.5	1.0	.5	.5	(Z)	2.4	.7	(D)	(D)	-38	(X)	15	20
	1975	846.2	21.2	1.6	.7	.9	-	(D)	(D)	(D)	(D)	-82	-17	22	(X)
	1974	712.6	17.2	8.8	7.4	1.4	-	2.3	1.0	1.1	.2	(X)	-26	66	35
	1973	547.6	15.6	(D)	(D)	(D)	(D)	3.1	2.1	0.8	.3	(X)	(X)	(X)	36
Colorado	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	51.6	29.5	15.0	7.1	(X)	39	(X)	4
	[3]1979	(NA)	(NA)	(S)	(S)	(S)	(S)	51.2	29.3	14.9	7.0	(X)	39	(X)	4
	[3]1978	11,765.5	550.7	19.4	12.4	6.3	.6	37.0	20.2	10.4	6.5	26	6	4	6
	[3]1978	(NA)	(NA)	19.2	12.3	6.2	.6	36.7	20.0	10.3	6.4	26	6	4	6
	[3]1977	10,018.0	443.1	15.4	8.6	6.5	.2	34.8	14.2	15.6	4.9	-52	28	39	8
	[3]1977	(NA)	(NA)	15.2	8.5	6.4	.2	34.5	14.1	15.5	4.9	-109	26	39	8
	1976	9,535.5	385.2	31.9	11.9	11.0	9.0	27.2	10.3	10.5	6.4	26	27	27	9
	1975	8,388.2	365.0	25.3	10.4	(D)	(D)	20.6	9.1	7.2	4.3	81	6	7	6
	1974	7,885.2	358.0	14.0	9.9	3.9	.2	19.4	5.8	7.1	6.6	-32	14	11	12
	1973	6,473.3	310.6	20.7	18.1	2.3	.3	17.1	5.4	5.9	5.8	(X)	(X)	17	9
New Mexico	[3]1979	(NA)	(NA)	3.8	2.0	(S)	(S)	30.6	28.8	(S)	(S)	(X)	(X)	18	5
	[3]1979	(NA)	(NA)	3.8	2.0	(S)	(S)	30.3	28.6	(S)	(S)	(X)	(X)	18	5
	[3]1978	2,126.0	56.6	(S)	(S)	(S)	(S)	(D)	22.5	1.0	(D)	(X)	(X)	(X)	(X)
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	(D)	22.3	1.0	(D)	(X)	(X)	(X)	(X)
	[3]1977	2,009.2	75.0	(D)	(D)	1.0	.2	21.9	19.6	.7	1.6	(X)	448	(X)	5
	[3]1977	(NA)	(NA)	(D)	(D)	1.0	.2	21.7	19.4	.7	1.6	(X)	443	(X)	5
	1976	1,534.0	119.5	2.0	1.5	.4	.1	4.0	3.2	.3	.6	(X)	(X)	21	5
	1975	1,303.1	177.9	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)	(X)	82	(X)	(X)
	1974	1,272.9	144.2	(D)	(D)	(D)	(D)	1.7	1.2	.1	.3	(X)	325	(X)	5
	1973	1,060.5	59.0	(D)	(D)	(D)	(D)	.4	.1	.1	.1	(X)	(X)	(X)	15
Arizona	[3]1979	(NA)	(NA)	16.7	14.8	(S)	(S)	65.8	51.3	(S)	(S)	(X)	-2	7	5
	[3]1979	(NA)	(NA)	16.5	14.7	(S)	(S)	65.3	50.9	(S)	(S)	(X)	-2	7	5
	[3]1978	8,051.9	318.2	(S)	(S)	(S)	(S)	67.4	59.1	3.3	4.8	(X)	12	(X)	15
	[3]1978	(NA)	(NA)	(S)	(S)	(S)	(S)	66.9	58.7	3.3	4.8	(X)	12	(X)	15
	[3]1977	7,022.4	213.7	4.0	2.4	(D)	(D)	60.4	53.9	3.0	3.2	-69	47	11	14
	[3]1977	(NA)	(NA)	4.0	2.4	(D)	(D)	59.9	53.5	3.0	3.3	-69	45	11	14
	1976	6,232.9	183.2	12.9	11.3	1.6	(Z)	41.2	37.2	2.0	2.0	(X)	13	3	2
	1975	5,517.0	292.9	(D)	(D)	(D)	(D)	36.4	32.2	2.0	2.2	-45	37	(X)	2
	1974	5,742.3	247.1	83.5	82.4	(D)	(D)	26.5	21.5	2.0	2.9	-18	104	1	4
	1973	4,939.7	219.4	102.2	101.6	.4	.1	13.0	6.7	1.8	4.5	(X)	(X)	1	8
Utah	[3]1979	(NA)	(NA)	14.7	13.1	(S)	(S)	30.5	22.7	4.7	3.0	-69	18	8	3
	[3]1979	(NA)	(NA)	14.5	13.0	(S)	(S)	30.2	22.5	4.7	3.0	-69	18	8	3
	[3]1978	5,935.9	248.2	48.0	(D)	.6	(D)	25.8	18.6	3.9	3.1	(X)	51	1	3
	[3]1978	(NA)	(NA)	47.5	(D)	.6	(D)	25.6	18.5	3.9	3.1	(X)	51	1	3
	[3]1977	5,092.8	393.6	(D)	(D)	5.1	(Z)	17.1	11.9	2.9	2.3	(X)	30	(X)	3
	[3]1977	(NA)	(NA)	(D)	(D)	5.0	(Z)	16.9	11.8	2.9	2.3	(X)	28	(X)	3
	1976	4,640.6	141.9	(D)	(D)	(D)	(D)	13.2	9.7	2.4	1.1	(X)	5	(X)	2
	1975	4,131.2	131.6	(D)	(D)	(D)	(D)	12.6	9.5	2.3	.8	118	5	(X)	5
	1974	4,053.8	114.3	28.4	23.4	4.8	.3	12.0	9.2	1.8	1.0	279	29	8	3
	1973	3,124.8	70.8	7.5	4.6	2.9	(Z)	9.3	6.5	2.4	.4	(X)	(X)	10	7

See footnotes at end of table.

Table 1B. Pollution Abatement Capital Expenditures and Operating Costs, by Form of Abatement and State: 1973 to 1979—Continued

(In millions of dollars, except percents)

Division and State		Selected data from the Annual Survey of Manufactures (ASM)		Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual costs (GAC), including payments to government units				Percent change[1]		Standard error of estimates (percent)	
		Total value of shipments	Total new capital expenditures	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	PACE	GAC	PACE	GAC
Mountain Division--Continued															
Nevada	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978..	1,216.2	68.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)	(X)	(X)
	[3]1977..	942.0	46.4	1.5	0.3	1.2	-	1.8	1.0	0.6	0.2	-69	-56	5	17
	[3]1977..	(NA)	(NA)	1.5	0.3	1.2	-	1.8	1.0	0.6	0.2	-69	-56	5	17
	1976..	724.8	53.0	4.9	3.9	1.1	(Z)	4.1	2.0	1.3	0.7	-42	-31	32	20
	1975..	638.4	28.5	8.5	6.1	(D)	(D)	5.9	4.3	0.9	0.7	37	37	17	26
	1974..	640.2	24.3	6.2	3.9	2.3	(Z)	4.3	3.5	0.4	0.4	13	13	16	35
	1973..	519.9	12.7	5.5	2.1	3.4	(Z)	3.8	2.8	(D)	(D)	(X)	(X)	47	34
Pacific Division	[3]1979..	(NA)	(NA)	389.3	231.1	129.6	28.6	793.2	368.4	270.2	154.6	24	12	(NA)	(NA)
	[3]1979..	(NA)	(NA)	385.2	229.2	127.9	28.1	786.7	365.6	268.0	153.1	24	12	(NA)	(NA)
	[3]1978..	181,258.8	6,184.8	314.4	192.5	111.1	10.5	706.9	336.0	231.8	139.4	-8	15	(NA)	(NA)
	[3]1978..	(NA)	(NA)	310.9	190.7	109.7	10.4	700.8	333.1	229.8	138.2	-8	15	(NA)	(NA)
	[3]1977..	160,237.0	5,032.4	343.1	(D)	158.7	(D)	616.5	303.6	201.0	112.1	(X)	13	(NA)	(NA)
	[3]1977..	(NA)	(NA)	339.3	(D)	156.7	(D)	611.4	301.1	199.3	111.2	(X)	10	(NA)	(NA)
	1976..	135,959.6	4,133.7	(D)	(D)	140.2	15.1	546.9	246.7	202.1	98.0	(X)	20	(NA)	(NA)
	1975..	119,286.4	3,993.2	365.7	228.6	115.4	21.8	r455.4	207.4	164.9	r83.2	-7	18	4	(NA)
	1974..	114,938.7	3,656.3	394.7	275.9	97.9	21.0	385.8	164.4	147.0	74.4	20	17	(NA)	(NA)
	1973..	98,045.4	2,775.4	330.2	217.7	94.4	13.0	329.6	151.5	117.1	61.0	(X)	(X)	(NA)	(NA)
Washington	[3]1979..	(NA)	(NA)	153.8	71.2	72.7	10.1	160.9	79.9	60.7	20.3	52	22	5	1
	[3]1979..	(NA)	(NA)	152.2	70.6	71.7	9.9	159.6	79.3	60.2	20.1	52	22	5	1
	[3]1978..	25,604.1	943.3	101.3	43.4	54.4	3.4	131.4	62.0	48.8	20.5	-11	7	4	2
	[3]1978..	(NA)	(NA)	100.2	43.0	53.7	3.4	130.3	61.5	48.4	20.3	-11	7	4	2
	[3]1977..	21,746.9	850.0	114.4	47.1	65.4	1.9	122.4	54.7	49.6	18.2	30	14	5	2
	[3]1977..	(NA)	(NA)	113.1	46.7	64.6	1.9	121.4	54.2	49.2	18.0	28	14	5	2
	1976..	18,842.8	662.2	88.3	31.1	56.4	.9	106.9	46.1	40.2	20.6	-22	10	6	3
	1975..	16,932.5	808.0	113.9	66.2	44.6	3.1	97.6	38.0	35.8	23.8	-9	27	7	3
	1974..	16,068.2	560.0	125.3	91.6	25.8	8.1	77.0	29.1	27.5	20.5	5	25	5	3
	1973..	13,524.2	446.3	119.2	78.5	38.6	2.1	61.7	21.7	25.6	14.5	(X)	(X)	4	6
Oregon	[3]1979..	(NA)	(NA)	54.1	33.0	(S)	(S)	92.7	29.2	37.3	26.2	39	23	10	4
	[3]1979..	(NA)	(NA)	53.5	32.7	(S)	(S)	91.9	29.0	37.0	25.9	39	23	10	4
	[3]1978..	16,753.0	659.1	39.0	25.5	11.5	1.9	75.4	25.0	29.6	20.9	-23	15	10	4
	[3]1978..	(NA)	(NA)	38.6	25.3	11.4	1.9	74.7	24.8	29.3	20.7	-23	15	10	4
	[3]1977..	14,370.0	574.5	50.7	30.1	18.8	1.7	65.7	24.2	27.6	14.0	74	16	6	5
	[3]1977..	(NA)	(NA)	50.1	29.8	18.6	1.7	65.1	24.0	27.3	13.9	71	15	6	5
	1976..	12,229.2	378.2	29.2	9.0	(D)	(D)	56.7	20.8	25.5	10.4	-51	41	8	6
	1975..	10,310.8	439.3	59.5	29.7	21.3	8.5	40.1	15.4	17.7	7.0	62	17	4	8
	1974..	9,899.7	412.7	36.8	26.6	7.8	.5	34.2	13.7	13.0	7.5	12	-3	6	8
	1973..	9,067.0	332.6	32.8	20.1	9.2	3.5	35.2	15.8	14.0	5.4	(X)	(X)	9	7
California	[3]1979..	(NA)	(NA)	174.8	124.5	44.7	5.5	520.3	256.8	161.7	101.8	4	8	6	1
	[3]1979..	(NA)	(NA)	173.0	123.5	44.1	5.4	516.0	254.8	160.4	100.8	4	8	6	1
	[3]1978..	135,765.2	4,493.1	167.6	120.1	42.4	5.0	483.4	247.5	142.7	93.4	5	15	7	1
	[3]1978..	(NA)	(NA)	165.7	119.0	41.9	4.9	479.6	245.5	141.6	92.7	5	15	7	1
	[3]1977..	120,895.8	3,385.4	159.3	90.5	59.8	8.9	420.8	223.6	121.0	76.3	-6	15	4	1
	[3]1977..	(NA)	(NA)	157.5	89.7	59.0	8.8	417.3	221.7	120.0	75.7	-7	14	4	1
	1976..	102,041.0	2,867.1	169.2	106.8	55.5	7.0	366.7	175.3	128.9	62.5	-10	21	16	2
	1975..	89,415.1	2,572.8	188.1	130.9	47.5	9.8	r302.6	149.4	105.4	r47.9	-7	16	6	2
	1974..	86,449.7	2,583.6	202.2	153.6	41.1	7.5	261.2	117.4	100.1	43.1	28	17	6	4
	1973..	73,880.5	1,917.2	157.6	112.8	38.0	6.7	223.4	110.3	74.1	39.2	(X)	(X)	6	8
Alaska	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	8.6	.6	6.4	1.6	(X)	-1	(X)	4
	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	8.5	.6	6.3	1.6	(X)	-1	(X)	4
	[3]1978..	1,464.6	65.0	(S)	(S)	(S)	(S)	8.7	.3	7.4	1.0	(X)	817	(X)	3
	[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	8.6	.3	7.4	1.0	(X)	856	(X)	3
	[3]1977..	1,250.3	178.1	15.0	(D)	13.9	(D)	.9	(Z)	.3	.6	(X)	-78	8	30
	[3]1977..	(NA)	(NA)	14.8	(D)	13.7	(D)	.9	(Z)	.3	.6	(X)	-78	8	30
	1976..	991.8	170.6	(D)	(D)	10.8	(D)	4.1	.6	2.6	.8	(X)	52	26	55
	1975..	827.7	121.6	2.0	1.1	(D)	(D)	2.7	.7	1.6	.4	(X)	-7	8	10
	1974..	672.9	49.8	(D)	(D)	(D)	(D)	2.9	.9	1.4	.5	(X)	107	(X)	16
	1973..	487.3	42.7	(D)	(D)	(D)	(D)	1.4	.5	.7	.2	(X)	(X)	(X)	6
Hawaii	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	10.8	1.9	4.1	4.7	(X)	42	(X)	13
	[3]1979..	(NA)	(NA)	(S)	(S)	(S)	(S)	10.7	1.9	4.1	4.7	(X)	42	(X)	13
	[3]1978..	1,671.9	24.3	(S)	(S)	(S)	(S)	7.6	1.0	3.1	3.5	(X)	13	(X)	16
	[3]1978..	(NA)	(NA)	(S)	(S)	(S)	(S)	7.6	1.0	3.1	3.5	(X)	13	(X)	16
	[3]1977..	1,974.0	44.4	3.8	2.8	.8	.2	6.7	1.2	2.5	3.0	-27	-46	53	15
	[3]1977..	(NA)	(NA)	3.8	2.8	.8	.2	6.7	1.2	2.5	3.0	-27	-46	53	15
	1976..	1,854.8	55.6	5.2	.9	(D)	(D)	12.5	3.9	4.9	3.7	136	1	14	13
	1975..	1,800.3	51.5	2.2	.7	(D)	(D)	12.4	3.9	4.2	4.3	(X)	18	11	14
	1974..	1,848.2	50.2	(D)	(D)	(D)	(D)	10.5	3.3	4.4	2.8	(X)	33	(X)	14
	1973..	1,086.4	36.6	(D)	(D)	(D)	(D)	7.9	3.2	2.8	2.0	(X)	(X)	(X)	19

Note: Totals may not agree precisely with detail because of independent rounding. See "Limitations of Data" in the text for specific limitations of the 1973 statistics.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. r Revised. (S) Data suppressed because did not meet blication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. See text. (X) Not applicable.

[1] The calculation of the percent change is based upon the change from the previous year to the subsequent year (e.g. 1973 to 1974). For 1977 through 1979, the comparison is done rately for all establishment totals and establishments with 20 or more employees.

[2] Major industry group 23, Apparel and Other Textile Products, is excluded from all but the U.S. totals of the first two columns.

[3] Two lines of data are presented for 1977 through 1979. The top line for each year represents the estimate for all establishments and is comparable to the estimates for 1973 to 76. The bottom line is the estimate for establishments with 20 or more employees. See text.

Table 2A. Pollution Abatement Assets, Capital Expenditures, and Operating Costs, by Form of Abatement and Industry for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	Industry	Pollution abatement assets (end of year)				Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual operating costs (GAC)					Total cost recovered	Standard error of estimates (percent)	
		Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	Total operating costs	Total payment to government units	Air	Water	Solid waste		PACE	GAC
	All industries[1]	24,937.1	14,021.4	9,577.3	1,338.3	3,564.5	2,071.9	1,245.7	246.9	7,399.9	579.8	3,061.8	2,529.9	1,228.4	1,338.2	1	1
20	Food and kindred products	981.9	370.4	537.1	74.3	192.8	59.7	117.6	15.2	504.2	176.9	91.0	136.9	99.4	80.2	5	6
21	Tobacco products	36.4	29.5	3.9	3.1	(D)	(D)	(D)	(D)	14.3	2.9	7.0	1.6	2.8	2.9	(X)	4
22	Textile mill products	280.0	120.0	143.9	16.1	39.2	21.9	15.2	2.1	101.7	32.8	19.0	30.2	19.7	10.4	10	4
24	Lumber and wood products	395.5	217.2	100.0	78.3	93.6	67.5	12.3	13.8	115.4	4.6	40.2	23.7	46.9	28.4	1	5
25	Furniture and fixtures	87.3	72.1	6.5	8.7	22.4	16.8	2.1	3.5	29.3	5.7	11.9	1.8	9.9	2.7	13	7
26	Paper and allied products	3,929.8	2,062.7	1,691.8	175.3	426.4	207.0	180.6	38.8	698.2	62.8	176.6	348.1	110.6	196.3	1	2
27	Printing and publishing	74.1	60.7	5.2	8.2	23.8	19.4	1.9	2.5	49.5	9.2	9.5	3.7	27.1	12.1	7	9
28	Chemicals and allied products	6,159.5	2,558.1	3,019.2	582.2	770.9	314.6	360.7	95.6	1,667.4	68.5	485.3	835.3	278.4	230.4	1	9
29	Petroleum and coal products	3,518.0	2,213.8	1,241.1	63.1	534.3	397.8	119.4	17.1	1,173.8	7.1	750.7	365.1	50.9	324.1	8	7
30	Rubber, misc. plastics products	159.3	92.4	55.7	11.2	25.1	12.9	9.3	2.9	111.7	14.7	32.2	21.4	43.3	13.7	9	4
31	Leather and leather products	35.3	6.0	25.8	3.5	(D)	(D)	(D)	(D)	22.5	6.4	1.3	8.9	5.9	.9	(X)	16
32	Stone, clay, glass products	1,027.3	818.3	146.9	62.0	145.6	110.2	25.4	10.0	293.6	12.7	188.0	36.4	56.5	82.4	9	10
33	Primary metal industries	5,975.1	4,345.9	1,559.3	69.9	823.1	588.8	227.3	6.9	1,587.2	29.8	981.7	417.9	157.7	241.8	1	1
34	Fabricated metal products	525.3	291.9	209.9	23.6	66.1	36.7	24.5	4.9	220.9	38.1	57.0	68.0	57.8	13.4	7	1
35	Machinery, except electrical	401.9	191.0	145.7	65.3	84.5	38.5	38.2	7.8	200.2	27.7	50.1	47.6	74.8	20.0	2	1
36	Electrical, electronic equipment	384.2	148.4	212.0	23.8	90.9	41.8	42.0	7.1	182.3	31.0	46.7	58.4	46.3	24.1	5	1
37	Transportation equipment	706.5	337.2	333.7	35.6	189.5	120.1	59.5	9.9	331.8	37.0	96.4	95.5	102.8	37.0	1	1
38	Instruments, related products	191.8	58.2	108.5	25.0	23.2	13.0	7.7	2.5	69.2	7.0	10.6	25.1	26.5	15.2	12	1
39	Misc. manufacturing industries	67.6	27.6	30.8	9.2	(S)	(S)	(S)	(S)	26.3	4.6	6.5	4.3	10.9	2.3	(X)	16

Note: Totals may not agree precisely with detail because of independent rounding.

(D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products is excluded.

Table 2B. Pollution Abatement Assets, Capital Expenditures, and Operating Costs, by Form of Abatement and State for Establishments With 20 or More Employees: 1979

(Millions of dollars)

Division and State	Pollution abatement assets (end of year)				Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual operating costs (GAC)					Total cost recovered	Standard error of estimates (percent)	
	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	Total operating costs	Total payment to government units	Air	Water	Solid waste		PACE	GAC
United States[1]	24,937.1	14,021.4	9,577.6	1,338.3	3,564.5	2,071.9	1,245.7	246.9	7,399.9	579.8	3,061.8	2,529.9	1,228.4	1,338.2	1	1
New England Division:																
Maine	197.2	51.1	140.8	5.3	36.9	18.9	(D)	(D)	43.8	4.2	7.1	25.4	7.1	9.4	2	4
New Hampshire	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
Vermont	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	.6	(S)	(S)	(S)	.9	(X)	(X)
Massachusetts	149.8	69.9	72.9	7.0	31.7	18.5	(S)	(S)	78.5	8.7	23.5	25.1	21.2	7.1	19	6
Rhode Island	17.4	6.6	10.5	.3	2.7	(S)	(S)	-	8.9	1.6	1.7	3.1	2.5	1.5	18	9
Connecticut	146.0	45.1	81.6	19.4	19.5	8.4	(S)	(S)	64.1	4.8	20.6	26.9	11.8	8.2	10	9
Middle Atlantic Division:																
New York	863.0	316.0	459.7	87.3	161.1	54.4	60.6	46.1	313.9	28.4	89.7	116.0	79.8	55.2	1	5
New Jersey	699.2	313.9	363.2	22.2	86.2	43.5	38.1	4.7	322.0	18.1	135.2	122.1	46.7	63.6	6	1
Pennsylvania	1,614.6	996.8	517.4	100.5	283.3	164.7	109.7	8.9	515.4	31.4	255.2	146.5	82.3	56.9	4	1
East North Central Division:																
Ohio	1,403.6	877.0	471.2	55.4	209.1	145.2	54.9	9.0	490.4	50.2	198.0	152.5	89.6	43.3	1	3
Indiana	1,191.2	686.8	482.0	22.4	225.9	145.7	74.5	5.7	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Illinois	1,211.5	719.8	438.4	53.3	179.5	118.8	49.3	11.4	420.5	52.5	165.7	120.1	82.2	132.1	5	1
Michigan	988.5	504.0	451.0	33.6	218.5	130.9	77.8	9.8	388.1	40.1	141.4	123.6	83.0	38.9	1	7
Wisconsin	391.7	159.3	209.6	22.9	34.3	14.3	17.2	2.8	(S)	(S)	(S)	(S)	(S)	(S)	7	(X)
West North Central Division:																
Minnesota	251.2	133.4	113.8	3.9	61.5	30.4	29.6	1.6	78.9	18.3	22.5	23.6	14.5	8.1	6	3
Iowa	240.8	97.3	135.6	8.0	24.8	9.5	12.0	3.3	79.0	13.3	24.2	28.5	13.0	18.8	8	2
Missouri	239.8	146.9	84.0	8.8	36.2	19.7	14.7	1.8	96.1	9.9	45.4	21.0	19.8	16.3	3	3
North Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
South Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
Nebraska	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	16.9	4.0	4.7	3.8	4.4	1.6	(X)	6
Kansas	319.4	215.1	99.4	4.9	111.5	79.8	(S)	(S)	92.5	4.8	50.8	24.2	(S)	7.0	2	5
South Atlantic Division:																
Delaware	128.6	70.6	54.5	3.5	33.3	28.4	4.3	.6	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Maryland	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	123.3	9.9	56.1	41.9	15.5	8.1	(X)	2
District of Columbia	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
Virginia	367.5	190.0	160.7	16.7	55.8	24.7	29.1	2.0	109.2	11.9	34.3	41.8	21.2	17.0	9	6
West Virginia	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	180.8	4.5	58.4	91.9	26.0	7.3	(X)	1
North Carolina	402.3	179.4	202.5	20.5	58.1	27.8	(S)	(S)	128.1	21.5	35.7	46.3	24.6	36.0	1	3
South Carolina	1,593.1	783.0	538.4	271.7	40.1	23.3	13.3	3.5	107.2	6.2	34.9	49.2	17.0	28.1	4	11
Georgia	395.6	214.9	165.2	15.5	50.7	36.3	(S)	(S)	107.9	14.1	38.8	39.1	15.9	16.1	7	2
Florida	514.9	256.0	235.2	23.7	62.1	28.9	29.7	3.6	136.1	13.5	46.5	56.8	19.4	37.5	3	2
East South Central Division:																
Kentucky	280.8	143.8	116.9	20.1	47.4	37.3	(S)	(S)	111.6	10.8	36.8	37.2	26.8	26.9	6	4
Tennessee	530.7	263.7	238.0	29.0	83.1	36.7	38.4	8.0	163.4	15.0	47.3	73.0	28.2	25.3	8	3
Alabama	778.1	431.2	292.0	54.9	104.8	58.6	33.7	12.5	180.0	7.6	86.6	61.2	24.6	10.9	2	3
Mississippi	237.9	129.6	81.3	27.0	21.4	10.8	(S)	(S)	76.7	8.5	29.2	27.3	11.7	23.6	19	9
West South Central Division:																
Arkansas	189.7	86.8	89.3	13.6	64.4	29.9	(S)	(S)	69.5	4.3	23.1	(S)	(S)	11.7	19	11
Louisiana	1,207.7	469.1	668.5	70.0	218.2	106.6	96.8	14.8	402.2	1.7	170.8	182.9	46.8	90.0	1	2
Oklahoma	172.4	121.1	45.4	6.0	24.1	18.1	4.8	(S)	41.9	2.1	17.2	12.1	(S)	5.9	4	10
Texas	2,664.5	1,491.8	1,050.3	122.4	368.8	241.4	105.2	22.3	831.4	22.1	397.8	300.9	110.6	221.6	1	1
Mountain Division:																
Montana	91.5	77.1	13.1	1.3	11.4	9.7	(S)	(S)	21.3	.5	15.9	3.4	1.4	3.0	6	4
Idaho	98.3	54.0	29.7	14.5	27.3	16.8	7.5	3.0	33.1	.7	17.3	10.2	4.9	3.1	7	7
Wyoming	23.6	13.1	10.0	.5	2.6	2.3	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Colorado	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	51.1	3.1	29.3	12.6	6.2	7.6	(X)	4
New Mexico	34.7	31.6	2.9	.2	3.8	2.0	(S)	(S)	30.2	.2	28.6	(S)	(S)	8.4	18	5
Arizona	345.4	327.1	14.2	4.0	16.5	14.7	(S)	(S)	65.3	1.3	50.9	(S)	(S)	16.0	7	5
Utah	365.9	348.6	15.6	1.6	14.5	13.0	(S)	(S)	30.2	.7	22.5	4.4	2.6	7.2	8	3
Nevada	8.5	4.6	3.7	.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	11
Pacific Division:																
Washington	848.6	419.8	399.8	29.0	152.2	70.6	71.7	9.9	159.6	7.5	79.3	55.5	17.3	54.6	5	1
Oregon	340.8	183.4	119.2	38.2	53.5	32.7	(S)	(S)	91.9	5.4	29.0	33.1	24.4	40.0	10	4
California	2,201.1	1,817.1	338.4	45.7	173.0	123.5	44.1	5.4	516.0	58.5	254.8	120.0	82.7	97.5	6	1
Alaska	51.8	5.6	43.5	2.7	(S)	(S)	(S)	(S)	8.5	.1	.6	6.2	1.5	4.6	(X)	4
Hawaii	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	10.7	.6	1.9	3.6	4.6	1.1	(X)	13

Note: Totals may not agree precisely with detail because of independent rounding.

(D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the U.S. and State totals.

Table 2C. Pollution Abatement Assets, Capital Expenditures, and Operating Costs, by Form of Abatement and SMSA for Establishments With 20 or More Employees: 1979

(Millions of dollars)

Standard metropolitan statistical area	Pollution abatement assets (end of year)				Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual operating costs (GAC)					Total cost recovered	Standard error of estimates (percent)	
	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	Total operating costs	Total payment to government units	Air	Water	Solid waste		PACE	GAC
Akron, Ohio	38.8	23.0	14.3	1.5	5.6	4.1	.3	1.1	16.5	2.5	8.6	2.9	2.6	1.1	1	3
Albany, Ga	12.6	3.4	8.5	.6	(S)	(S)	(S)	(S)	3.9	1.0	.5	1.8	.5	-	(X)	1
Albany-Schenectady-Troy, N.Y	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	27.3	1.8	5.9	14.3	5.3	4.4	(X)	8
Alexandria, La	6.8	4.1	2.7	-	(S)	(S)	(S)	(S)	1.0	.1	.4	.5	.1	-	(X)	3
Allentown-Bethlehem-Easton, Pa.-N.J	220.9	125.3	91.2	4.4	35.4	23.6	9.7	2.1	56.2	1.5	31.7	16.1	6.9	7.8	4	9
Altoona, Pa	2.7	2.0	.6	.1	1.9	1.8	-	-	1.9	.5	.6	.3	.5	-	16	17
Amarillo, Tex	28.0	16.6	11.3	.1	(S)	(S)	(S)	(S)	4.4	.2	1.6	2.4	.2	-	(X)	17
Anaheim-Santa Ana-Garden Grove, Calif	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	13.1	3.3	4.1	1.9	3.8	.7	(X)	11
Anderson, Ind	15.3	7.0	8.2	.1	2.9	1.1	.3	1.5	7.3	1.2	2.6	2.1	1.4	.3	8	1
Ann Arbor, Mich	39.4	20.7	17.7	.9	3.9	.9	1.6	1.4	8.0	1.8	1.1	3.0	2.2	1.2	1	6
Appleton-Oshkosh, Wis	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	15.1	2.9	3.3	5.9	2.9	1.8	(X)	11
Asheville, N.C	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.3	.4	.5	.9	.4	.1	(X)	18
Atlanta, Ga	42.1	20.4	19.2	2.5	14.8	11.5	3.2	.1	16.4	4.0	4.4	3.5	4.5	2.7	8	6
Augusta, Ga.-S.C	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	21.0	1.0	7.8	7.5	4.7	1.0	(X)	7
Austin, Tex	3.7	2.7	.6	.4	2.8	2.0	.7	-	1.8	.3	.5	.2	.8	.1	15	19
Baltimore, Md	238.3	94.1	139.1	5.1	16.5	9.4	6.1	1.0	98.6	5.7	43.7	36.6	12.7	4.8	9	2
Baton Rouge, La	430.2	134.6	276.3	19.3	46.1	20.7	24.3	1.1	147.8	-	66.1	69.8	11.9	34.1	2	1
Battle Creek, Mich	4.5	2.9	1.4	.2	1.7	1.4	.3	-	5.1	2.0	.6	1.7	.8	.7	5	5
Bay City, Mich	7.6	1.7	5.8	.1	(S)	(S)	(S)	(S)	3.1	.4	.5	1.5	.8	.5	(X)	13
Beaumont-Port Arthur-Orange, Tex	585.6	274.8	282.6	28.1	86.4	70.6	14.7	1.1	172.3	.2	80.6	76.8	14.6	28.5	1	1
Billings, Mont	30.2	20.3	9.7	.1	3.0	2.6	.4	-	9.1	.5	5.9	2.4	.4	1.1	1	1
Binghamton, N.Y.-Pa	24.7	3.8	20.6	.3	3.8	.8	3.0	-	8.3	.8	2.1	4.5	.8	1.1	1	2
Birmingham, Ala	181.8	132.2	48.6	1.1	34.3	29.7	4.5	.1	44.8	.6	29.4	12.2	2.6	.4	2	2
Boston, Mass	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	28.6	3.2	9.0	5.9	10.5	2.5	(X)	10
Bridgeport, Conn	18.0	9.3	8.3	.3	2.4	1.3	1.1	-	8.5	.3	3.5	2.9	1.8	.5	18	5
Buffalo, N.Y	269.5	106.2	131.3	32.1	84.8	27.8	25.8	31.3	94.9	6.9	31.8	34.8	21.4	15.7	2	3
Canton, Ohio	22.5	14.7	6.7	1.0	14.5	12.2	2.2	.1	17.9	1.5	7.1	6.9	2.4	2.1	1	4
Cedar Rapids, Iowa	20.3	12.9	6.1	1.3	3.0	1.8	.2	1.0	8.7	3.6	3.5	.9	.7	2.0	11	6
Champaign-Urbana-Rantoul, Ill	4.1	1.0	3.1	.1	(S)	(S)	(S)	(S)	2.3	.2	.3	1.2	.6	.3	(X)	2
Charleston, S.C	57.7	38.3	18.7	.8	11.1	8.5	2.4	.2	9.9	.3	4.0	3.5	2.1	13.1	10	13
Charleston, W. Va	153.8	44.5	104.3	4.9	13.4	2.2	8.5	2.6	54.6	3.0	7.7	39.7	4.2	2.4	18	3
Charlotte-Gastonia, N.C	20.2	13.5	5.9	.8	(S)	(S)	(S)	(S)	10.4	2.2	3.6	2.3	2.2	.2	(X)	18
Chattanooga, Tenn.-Ga	39.7	20.9	16.4	2.4	8.1	6.4	1.6	.1	16.3	3.8	4.7	4.0	3.7	.7	16	11
Chicago, Ill	596.3	351.0	225.8	19.5	81.7	53.8	22.3	5.7	240.4	37.5	84.0	66.6	52.3	112.2	3	1
Cincinnati, Ohio-Ky.-Ind	76.3	42.9	30.3	3.0	26.9	22.9	3.8	.3	39.4	9.3	11.5	8.5	10.1	4.1	4	5
Cleveland, Ohio	310.4	195.4	111.2	3.8	39.6	33.2	5.5	.9	114.7	9.9	47.5	36.9	20.4	2.7	5	1
Columbia, Mo	19.0	10.1	7.7	1.3	6.3	3.4	1.8	1.1	7.1	.3	2.2	2.4	2.2	2.2	15	9
Columbus, Ga.-Ala	6.6	3.8	2.7	.1	2.1	2.1	-	-	1.8	.6	.3	.3	.5	.2	1	6
Columbus, Ohio	49.0	30.8	14.0	4.2	5.2	3.6	.8	.8	24.8	7.2	5.9	6.7	5.0	5.6	13	7
Corpus Christi, Tex	149.1	111.5	33.4	4.2	45.5	43.2	1.4	.9	33.5	.1	22.6	7.8	3.0	8.9	1	1
Dallas-Fort Worth, Tex	61.7	44.4	14.3	3.0	13.4	10.3	2.4	.7	35.8	7.6	11.8	6.1	10.3	3.3	18	8
Danbury, Conn	4.9	1.1	3.7	.1	1.1	.9	.1	-	2.1	.1	.5	.7	.8	.4	18	13
Davenport-Rock Island-Moline, Iowa-Ill	46.6	32.4	11.5	2.6	8.8	6.9	1.6	.2	13.0	2.3	4.8	2.8	3.1	1.2	3	6
Dayton, Ohio	49.5	27.5	17.4	4.7	17.5	5.2	10.6	1.7	21.6	2.4	7.8	5.7	5.8	4.4	1	5
Decatur, Ill	32.0	21.6	9.3	1.2	5.7	3.6	1.7	.4	6.6	1.2	2.3	1.8	1.3	1.6	1	4
Denver-Boulder, Colo	40.6	18.5	20.7	1.4	8.4	3.4	4.1	.9	31.4	2.4	16.1	7.9	4.9	3.0	15	6
Des Moines, Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.8	1.0	2.2	.6	1.1	3.4	(X)	15
Detroit, Mich	408.5	236.2	166.8	5.6	97.5	57.3	38.8	1.4	197.8	20.0	86.9	45.5	45.4	11.3	1	1
Dubuque, Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.1	.3	1.1	.7	.9	.3	(X)	5
El Paso, Tex	103.6	100.0	3.1	.5	13.6	13.3	.2	.1	15.4	.2	13.8	1.0	.4	18.0	1	5
Erie, Pa	20.0	15.0	4.1	1.0	5.7	1.5	4.2	.1	7.7	3.1	1.8	.9	1.9	.5	9	4
Eugene-Springfield, Oreg	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.4	.3	2.0	1.9	1.2	.6	(X)	5
Evansville, Ind.-Ky	49.7	15.4	31.2	3.0	5.5	2.3	3.2	-	22.6	.9	3.8	14.8	3.0	14.2	4	1
Fargo-Moorhead, N. Dak.-Minn	8.1	3.7	4.4	-	4.9	2.4	2.6	-	(S)	(S)	(S)	(S)	(S)	-	1	(X)
Fayetteville, N.C	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	.4	.3	.4	.1	.3	(X)	13
Fayetteville-Springdale, Ark	2.6	.4	2.0	.2	(S)	(S)	(S)	(S)	2.7	1.2	.5	.7	.3	.4	(X)	12
Fitchburg-Leominster, Mass	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.3	1.5	1.0	.5	.3	.3	(X)	8
Flint, Mich	45.7	27.0	16.6	2.1	18.4	6.6	11.6	.1	19.5	1.3	7.8	6.1	4.3	4.7	1	1
Florence, Ala	43.8	36.6	7.2	-	2.8	1.8	1.1	-	21.9	.1	18.8	2.5	.6	.5	1	1
Fort Wayne, Ind	14.9	10.1	3.5	1.4	2.7	1.3	1.2	.1	8.7	1.2	2.9	1.8	2.9	.5	8	9
Fresno, Calif	9.4	6.4	2.1	.9	1.2	.3	.6	.3	4.7	1.6	1.7	.6	.8	1.2	19	9
Gadsden, Ala	22.5	10.0	12.4	.1	3.3	.5	2.7	-	8.9	-	4.6	2.5	1.7	.1	1	1
Gainesville, Fla	7.0	.9	6.1	-	4.0	.4	3.6	-	1.2	-	.2	.8	.2	-	1	13
Galveston-Texas City, Tex	175.8	109.6	64.1	2.1	20.7	8.3	11.4	1.1	52.9	1.9	27.3	17.6	6.1	15.2	1	1
Gary-Hammond-East Chicago, Ind	834.9	518.5	314.4	2.0	159.5	111.4	47.1	1.0	221.1	2.1	135.8	64.1	19.2	9.9	1	1
Grand Rapids, Mich	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	17.4	3.1	2.3	8.4	3.5	.9	(X)	18
Green Bay, Wis	25.7	4.6	20.4	.7	1.3	-	1.0	.3	17.8	5.1	.6	10.2	1.9	2.3	6	5
Greensboro-Winston-Salem-High Point, N.C	71.5	47.9	18.5	5.1	10.3	7.4	1.2	1.7	23.7	6.2	9.5	5.0	3.0	.9	10	9
Greenville-Spartanburg, S.C	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	12.0	2.8	1.6	4.9	2.6	4.4	(X)	7
Hamilton-Middletown, Ohio	163.0	104.1	57.7	1.2	6.5	5.0	1.5	-	29.4	2.2	10.5	15.3	1.4	.1	8	1

See footnotes at end of table.

Table 2C. Pollution Abatement Assets, Capital Expenditures, and Operating Costs, by Form of Abatement and SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Pollution abatement assets (end of year)				Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual operating costs (GAC)					Total cost recovered	Standard error of estimates (percent)	
	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	Total operating costs	Total payment to government units	Air	Water	Solid waste		PACE	GAC
Harrisburg, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9.1	1.6	5.4	1.1	1.0	.5	(X)	5
Hartford, Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.9	.7	1.6	3.8	1.8	1.0	(X)	17
Honolulu, Hawaii	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.9	.6	1.3	1.6	1.5	1.0	(X)	14
Houston, Tex.	1,086.1	567.5	468.0	50.6	105.5	38.0	55.0	12.5	380.6	8.0	169.5	148.3	54.8	99.8	1	1
Huntington-Ashland, W. Va.-Ky.-Ohio	99.4	53.9	41.3	4.3	12.0	9.6	1.6	.8	39.1	.7	16.5	18.8	3.2	15.3	4	3
Indianapolis, Ind.	51.6	33.7	13.2	4.7	13.5	9.1	3.6	.9	28.6	4.1	12.4	5.9	6.2	4.8	19	2
Jackson, Mich.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.3	.4	.2	.8	.2	(X)	9
Jacksonville, Fla.	158.2	40.9	113.6	3.7	10.6	2.9	7.5	.2	47.4	3.9	11.7	28.7	3.1	17.1	4	2
Jersey City, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	17.1	1.4	7.8	4.9	3.0	.7	(X)	9
Johnstown, Pa.	66.6	23.6	43.0	-	1.2	.6	.6	-	11.0	.3	4.5	5.0	1.2	.3	2	1
Kalamazoo-Portage, Mich.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11.2	1.8	1.4	4.0	3.9	1.1	(X)	6
Kansas City, Mo.-Kans.	150.4	98.2	49.9	2.3	28.1	20.8	7.1	.2	47.6	4.6	21.8	8.0	13.2	8.8	7	8
Kenosha, Wis.	1.5	.3	.8	.4	(S)	(S)	(S)	(S)	2.0	.5	.2	.5	.8	.3	(X)	1
Killeen-Temple, Tex.	86.3	33.9	42.6	9.9	13.3	3.7	6.2	3.4	24.8	1.0	4.1	14.1	5.5	1.4	3	2
Knoxville, Tex.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11.2	1.0	5.1	3.8	1.3	5.5	(X)	14
Lafayette-West Lafayette, Ind.	38.0	4.8	31.3	1.8	5.8	1.4	3.7	.7	13.4	.6	1.6	8.7	2.5	.3	1	4
Lake Charles, La.	176.7	83.9	87.3	5.4	42.9	17.2	21.2	4.5	52.8	-	26.1	19.9	6.8	21.9	4	1
Lakeland-Winter Haven, Fla.	76.0	42.5	30.2	3.3	4.9	1.3	3.5	.1	22.0	.2	10.3	9.2	2.3	7.6	10	3
Lancaster, Pa.	29.7	20.9	7.1	1.7	4.6	2.9	1.5	.2	11.4	1.9	4.3	2.4	2.9	2.1	17	7
Lansing-East Lansing, Mich.	26.1	16.6	8.7	.8	6.3	2.5	3.8	-	12.6	2.0	4.6	3.7	2.3	.4	2	3
Las Vegas, Nev.	7.5	3.7	3.7	.1	.7	.1	.6	.1	3.6	-	2.6	.8	.2	.3	3	11
Lawrence-Haverhill, Mass.-N.H.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.2	1.3	.6	1.5	1.8	.4	(X)	16
Lexington, Ky.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.5	.3	1.8	2.0	1.4	.8	(X)	14
Lima, Ohio	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	15.0	.8	6.0	5.7	2.6	.8	(X)	6
Lincoln, Nebr.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.2	.7	.5	.4	.7	-	(X)	14
Little Rock-North Little Rock, Ark.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.1	.6	2.3	2.5	2.8	1.0	(X)	19
Long Branch-Asbury Park, N.J.	10.0	2.3	7.3	.4	3.5	.8	2.5	.2	7.4	1.0	.6	4.6	1.3	-	2	9
Lorain-Elyria, Ohio	64.2	35.7	27.5	1.0	11.1	1.5	9.5	-	27.8	1.3	11.3	10.4	4.9	1.8	1	2
Los Angeles-Long Beach, Calif.	548.6	403.1	130.8	14.8	63.1	44.1	17.5	1.5	249.5	17.2	108.5	42.7	28.3	57.1	15	1
Louisville, Ky.-Ind.	110.1	70.7	34.9	4.5	7.3	5.2	1.3	.8	42.4	8.1	15.6	8.8	9.8	3.0	8	4
Lowell, Mass.-N.H.	1.4	.9	.5	-	(S)	(S)	(S)	(S)	1.8	.2	.2	.2	1.3	.1	(X)	14
Lubbock, Tex.	3.6	2.4	.7	.5	(S)	(S)	(S)	(S)	1.8	.2	.2	.3	1.1	-	(X)	4
Lynchburg, Va.	17.3	12.8	4.0	.5	3.5	3.3	.1	.1	3.5	.2	1.8	.6	.9	.2	1	11
Macon, Ga.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.7	.8	1.8	2.7	.5	.9	(X)	4
Madison, Wis.	2.2	.6	1.4	.2	(S)	(S)	(S)	(S)	2.0	.7	.2	.5	.5	-	(X)	9
Mansfield, Ohio	14.2	7.0	7.1	.1	2.2	1.1	1.1	-	3.3	.3	1.1	1.6	.3	.1	1	7
Memphis, Tenn.-Ark.-Miss.	47.0	11.3	33.5	2.2	(S)	(S)	(S)	(S)	38.6	4.6	5.9	22.9	5.2	10.4	(X)	8
Milwaukee, Wis.	70.1	52.2	16.1	1.8	10.0	5.0	4.6	.4	(S)	(S)	(S)	(S)	(S)	(S)	9	(X)
Minneapolis-St. Paul, Minn.-Wis.	115.5	77.5	36.0	2.0	14.0	8.5	4.2	1.3	43.7	8.9	17.0	8.4	9.4	3.2	16	4
Mobile, Ala.	128.3	51.9	74.7	1.7	13.8	4.8	8.7	.4	26.2	1.1	6.9	14.8	3.5	3.5	10	2
Modesto, Calif.	2.9	1.1	1.4	.5	(S)	(S)	(S)	(S)	4.0	1.9	.2	.6	1.2	.5	(X)	10
Monroe, La.	45.4	20.0	25.0	.3	10.8	-	10.4	.4	9.1	.1	2.9	4.9	1.2	2.8	1	1
Montgomery, Ala.	7.2	4.4	2.1	.7	7.2	3.8	3.0	.5	(S)	(S)	(S)	(S)	(S)	(S)	19	(X)
Muncie, Ind.	9.5	4.8	4.6	-	1.4	.4	.9	.1	2.0	.2	.8	.6	.3	.5	1	10
Muskegon-Muskegon Heights, Mich.	18.9	16.3	2.5	.1	5.7	5.5	.2	-	7.4	2.1	1.8	2.5	1.0	.5	2	4
Nashville-Davidson, Tenn.	52.8	31.2	15.5	6.1	4.4	1.3	2.9	.2	14.1	2.3	3.0	3.6	5.2	.4	10	3
Nassau-Suffolk, N.Y.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	12.1	1.4	.6	4.2	5.9	1.0	(X)	11
New Britain, Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.2	.3	.8	.5	.1	(X)	7
New Brunswick-Perth Amboy-Sayreville, N.J.	130.1	94.6	33.7	1.8	10.7	7.2	3.2	.3	76.5	3.3	49.3	15.9	8.0	25.2	4	2
New Haven-West Haven, Conn.	14.9	3.8	10.0	1.2	1.0	.3	.7	-	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
New London-Norwich, Conn.-R.I.	20.8	2.6	17.3	.8	4.7	.3	4.3	.1	13.7	.8	4.1	7.2	1.7	1.5	1	6
New Orleans, La.	75.2	50.3	24.2	.6	7.7	5.6	1.8	.3	23.2	1.0	8.9	9.9	3.4	3.8	1	2
New York, N.Y.-N.J.	72.2	35.0	31.3	5.9	11.8	5.8	4.7	1.3	55.4	8.8	19.9	10.1	16.6	3.7	11	5
Newark, N.J.	203.3	88.5	109.8	5.0	22.7	9.7	12.6	.4	94.1	5.1	39.4	37.2	12.4	19.9	4	2
Newport News-Hampton, Va.	27.7	13.6	12.1	2.1	6.3	1.7	4.6	-	12.0	1.6	4.6	3.7	2.0	2.0	1	1
Norfolk-Virginia Beach-Portsmouth, Va.-N.C.	16.0	7.9	7.8	.3	2.9	1.0	1.9	-	4.7	1.2	1.4	.9	1.2	.2	1	15
Northeast Pennsylvania	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.8	1.0	1.7	1.6	3.5	.4	(X)	17
Odessa, Tex.	15.1	13.1	1.5	.5	5.8	5.6	.2	-	(S)	(S)	(S)	(S)	(S)	(S)	2	(X)
Oklahoma City, Okla.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.7	1.2	2.0	1.0	1.5	.4	(X)	8
Omaha, Nebr.-Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.2	2.3	2.2	1.4	2.2	.7	(X)	8
Orlando, Fla.	8.6	2.7	5.2	.7	1.5	.5	.9	-	3.7	1.3	.8	.8	.9	.2	13	14
Owensboro, Ky.	3.5	2.8	.3	.4	(S)	(S)	(S)	(S)	1.4	.4	.7	.1	.2	.1	(X)	10
Oxnard-Simi Valley-Ventura, Calif.	4.9	4.4	.3	.1	(S)	(S)	(S)	(S)	4.1	1.2	2.3	.2	.5	1.3	(X)	10
Parkersburg-Marietta, W. Va.-Ohio	138.1	88.5	46.1	3.6	4.8	1.8	2.8	.3	48.6	.4	20.9	20.5	6.8	13.8	17	10
Pensacola, Fla.	68.9	52.4	14.8	1.7	1.3	.2	1.1	.1	14.2	.3	8.5	4.6	1.0	1.5	13	3
Peoria, Ill.	115.2	67.2	39.6	8.4	9.5	3.4	5.8	.3	29.9	1.2	16.3	8.3	4.1	.4	3	1
Petersburg-Colonial Heights-Hopewell, Va.	39.8	20.6	17.9	1.3	7.3	2.5	4.5	.3	11.7	2.9	3.7	3.5	1.6	1.6	1	1
Philadelphia, Pa.-N.J.	415.7	236.2	112.6	66.8	62.9	29.4	28.7	4.8	178.7	12.0	89.8	52.6	24.3	29.8	8	2
Phoenix, Ariz.	14.6	6.4	6.6	1.6	5.7	4.0	1.4	.2	6.6	1.3	2.1	1.8	1.5	4.0	12	5
Pine Bluff, Ark.	22.3	10.5	11.2	.6	3.2	1.2	2.0	-	6.5	-	2.4	3.3	.7	1.0	1	4

See footnotes at end of table.

Table 2C. Pollution Abatement Assets, Capital Expenditures, and Operating Costs, by Form of Abatement and SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Pollution abatement assets (end of year)				Pollution abatement capital expenditures (PACE)				Pollution abatement gross annual operating costs (GAC)					Total cost recovered	Standard error of estimates (percent)	
	Total	Air	Water	Solid waste	Total	Air	Water	Solid waste	Total operating costs	Total payment to Government units	Air	Water	Solid waste		PACE	GAC
Pittsburgh, Pa.	632.2	441.0	186.9	4.2	145.3	82.6	61.9	.8	181.2	4.5	102.2	45.8	28.7	10.0	1	1
Portland, Maine	19.4	2.3	16.8	.3	1.9	1.3	.6	-	5.8	1.1	.3	3.3	1.1	2.3	18	16
Portland, Oreg.-Wash.	159.5	102.9	49.2	7.3	18.2	14.9	2.9	.4	35.9	3.2	14.5	10.9	7.3	14.8	16	7
Poughkeepsie, N.Y.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.4	.1	1.2	4.2	2.9	2.4	(X)	1
Providence-Warwick-Pawtucket, R.I.-Mass.	26.3	10.4	13.5	2.5	3.6	2.2	1.3	.1	11.9	1.9	2.6	4.5	3.0	1.6	15	7
Provo-Orem, Utah	29.8	27.9	1.7	.2	1.1	1.0	-	.2	6.6	-	5.7	.3	.6	-	12	3
Pueblo, Colo.	71.8	59.0	12.1	.7	5.6	4.0	1.6	-	14.4	-	11.4	2.6	.4	.1	1	9
Racine, Wis.	6.6	4.2	2.3	.2	1.0	.7	.2	.1	4.4	1.1	1.1	1.1	1.1	.1	2	5
Raleigh-Durham, N.C.	16.2	6.3	9.4	.5	1.9	.4	1.2	.3	6.0	1.2	1.3	2.2	1.3	.9	9	11
Reading, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	14.4	1.2	6.0	5.2	2.1	2.3	(X)	18
Richmond, Va.	29.0	9.3	18.9	.8	5.7	1.7	3.9	-	15.2	1.1	1.7	7.9	4.6	4.7	18	7
Riverside-San Bernardino-Ontario, Calif.	206.9	181.3	23.8	1.8	28.1	26.8	1.1	.2	44.8	3.3	24.0	10.9	6.6	8.7	2	3
Roanoke, Va.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	.4	.5	.1	.2	.5	(X)	8
Rochester, N.Y.	150.2	41.0	86.5	22.8	14.0	6.8	4.2	3.0	41.0	3.8	5.2	18.7	13.3	12.0	6	5
Sacramento, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.8	2.5	1.9	1.9	1.5	.4	(X)	10
Saginaw, Mich.	76.5	55.6	20.4	.4	24.4	18.1	3.3	3.0	21.2	1.9	12.4	4.3	2.6	1.3	1	2
St. Cloud, Minn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.5	.1	.8	.4	.4	(X)	12
St. Joseph, Mo.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.7	.4	.2	.4	.1	(X)	18
St. Louis, Mo.-Ill.	265.2	164.2	85.6	15.4	61.6	41.5	16.1	3.9	93.6	9.4	50.0	19.4	14.8	14.5	1	2
Salem, Oreg.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.8	.3	.6	2.3	1.6	2.3	(X)	17
Salt Lake City-Ogden, Utah	331.9	318.4	12.3	1.2	11.3	10.6	.6	.1	21.6	.5	16.7	2.6	1.8	6.3	6	3
San Angelo, Tex.	11.8	2.6	9.2	-	(S)	(S)	(S)	(S)	332.1	.1	.8	-	.2	-	(X)	1
San Diego, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	10.4	2.4	2.1	1.5	4.3	.2	(X)	7
San Francisco-Oakland, Calif.	265.4	147.4	104.7	13.2	43.4	32.1	10.1	1.2	130.2	8.8	65.8	37.7	17.8	14.5	4	2
San Jose, Calif.	48.4	25.4	19.3	3.7	12.3	3.4	8.8	.1	26.4	6.4	8.3	6.6	5.1	3.1	6	4
Santa Rosa, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.3	.1	.2	.5	-	(X)	19
Savannah, Ga.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	21.9	.2	8.4	12.0	1.3	.3	(X)	6
Seattle-Everett, Wash.	105.9	48.1	56.4	1.3	28.8	8.0	20.3	.5	(S)	(S)	(S)	(S)	(S)	(S)	5	(X)
Sherman-Denison, Tex.	3.3	.4	2.8	.1	(S)	(S)	(S)	(S)	1.5	.2	.1	.9	.3	.6	(X)	9
South Bend, Ind.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.9	.9	.9	.7	1.4	-	(X)	13
Spokane, Wash.	24.3	22.5	1.5	.3	5.4	5.1	-	.3	6.6	.1	5.1	.9	.6	2.5	5	10
Springfield, Ill.	14.9	14.9	-	-	1.6	1.5	.1	-	1.6	.1	.9	.1	.5	-	1	1
Springfield, Mo.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	.8	.4	.2	.6	-	(X)	9
Springfield, Ohio	1.0	.4	.7	-	(S)	(S)	(S)	(S)	1.0	.1	.1	.3	.5	-	(X)	5
Springfield-Chicopee-Holyoke, Mass.-Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11.1	1.0	5.4	2.7	2.1	2.1	(X)	15
Stamford, Conn.	2.6	.4	2.1	.1	(S)	(S)	(S)	(S)	2.1	.2	.1	1.0	.8	-	(X)	14
Steubenville-Weirton, Ohio-W. Va.	157.9	96.1	60.8	1.0	28.0	19.2	8.7	-	62.4	.1	23.1	26.2	13.0	2.3	3	1
Stockton, Calif.	19.4	12.2	6.3	.9	2.3	.6	1.6	.2	9.7	3.2	2.8	1.9	1.8	1.7	10	9
Syracuse, N.Y.	38.8	13.4	21.0	4.5	2.9	1.3	1.3	.2	16.0	1.5	4.6	4.9	4.9	1.4	4	4
Tacoma, Wash.	84.0	62.2	21.2	.6	6.8	6.1	.5	.2	28.4	1.0	22.7	3.2	1.6	2.3	6	2
Tampa-St. Petersburg, Fla.	64.4	40.2	17.3	6.9	3.1	1.2	1.8	.1	22.1	2.2	9.6	3.5	6.8	7.2	17	10
Terre Haute, Ind.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	14.5	.5	2.3	9.9	1.8	1.3	(X)	17
Texarkana, Tex.-Ark.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.0	.3	1.0	1.9	.9	.9	(X)	16
Toledo, Ohio-Mich.	122.3	74.0	44.2	4.1	10.1	6.6	3.2	.3	46.9	3.7	20.1	12.9	10.2	3.2	5	6
Topeka, Kans.	5.5	1.5	4.0	-	(S)	(S)	(S)	(S)	2.7	.2	.3	1.4	.8	.6	(X)	4
Trenton, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	6.0	1.2	2.9	.9	1.0	.1	(X)	9
Tucson, Ariz.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.9	-	6.6	1.2	.1	.7	(X)	13
Tulsa, Okla.	42.2	21.8	19.3	1.1	3.4	2.3	1.1	.1	14.8	.4	7.1	5.7	1.6	1.9	8	6
Tuscaloosa, Ala.	2.8	.7	1.9	.2	(S)	(S)	(S)	(S)	4.8	.2	2.9	1.3	.5	.3	(X)	2
Tyler, Tex.	12.8	8.9	3.9	-	6.5	4.6	1.9	-	2.2	.1	.8	.7	.5	.4	1	1
Vallejo-Fairfield-Napa, Calif.	61.4	54.0	7.3	.1	1.4	1.3	.1	-	29.8	2.3	20.7	5.1	1.8	1.9	2	1
Vineland-Millville-Bridgeton, N.J.	12.1	5.8	5.7	.6	(S)	(S)	(S)	(S)	6.9	.8	2.0	3.0	1.0	.6	(X)	10
Washington, D.C.-Md.-Va.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.1	1.1	.5	.7	.9	.4	(X)	11
Waterbury, Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.7	.8	.2	2.1	.7	.2	(X)	12
Waterloo-Cedar Falls, Iowa	1.8	.8	1.0	-	2.5	2.1	.3	.1	6.1	.4	2.5	1.3	2.0	.2	7	1
West Palm Beach-Boca Raton, Fla.	14.8	5.5	8.7	.6	(S)	(S)	(S)	(S)	3.1	.1	1.1	1.1	.8	.3	(X)	10
Wheeling, W. Va.-Ohio	34.6	14.3	18.4	1.8	3.3	1.8	1.3	.2	(S)	(S)	(S)	(S)	(S)	(S)	12	(X)
Wichita, Kans.	182.3	124.7	55.4	2.2	85.3	59.6	24.9	.9	51.6	.5	33.5	16.2	1.4	1.6	1	6
Williamsport, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	.7	.2	.6	.6	-	(X)	15
Wilmington, Del.-N.J.-Md.	194.6	82.8	105.6	6.2	32.6	24.9	5.9	1.9	85.4	3.9	24.3	49.0	8.2	2.6	1	2
Wilmington, N.C.	35.5	6.6	23.0	6.0	(S)	(S)	(S)	(S)	11.4	.1	2.0	5.9	3.5	5.9	(X)	4
Worcester, Mass.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.4	.3	2.2	1.1	.7	.1	(X)	6
York, Pa.	34.2	17.8	15.4	1.1	3.5	2.0	1.2	.3	12.5	1.6	3.2	5.1	2.6	2.1	11	7
Youngstown-Warren, Ohio	131.9	90.1	38.6	3.3	20.2	17.3	2.5	.5	35.2	2.6	19.3	9.1	4.2	.7	2	2

Note: Totals may not agree precisely with detail because of independent rounding. No major industry groups are shown. No SMSA totals are shown where PACE and GAC are less than $1.0 million or the standard error is 20 or greater. Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the SMSA totals.

- Represents zero. (S) Data suppressed because they did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

Table 3A. Air Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides, hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
		9-14	17-22	25-29	37-38	41-45	49-53	57-61	65-70	73-77	81-85	89-94	97-101	105-109		
	All industries[1]	2,071.9	1,780.5	291.3	1,191.0	311.2	383.2	186.5	3,061.8	742.4	563.1	1,057.5	698.8	750.4	1	1
20	Food and kindred products	57.9	52.7	5.3	48.8	1.7	4.2	3.3	91.0	25.3	12.4	41.2	12.1	39.5	5	2
201	Meat products	4.4	4.2	.2	3.2	(D)	.1	(D)	3.6	1.3	.5	1.4	.2	.2	6	2
2011	Meatpacking plants	2.2	2.1	.1	1.5	(D)	-	(D)	2.2	.9	.4	.9	.1	.2	1	2
2013	Sausages and other prepared meats	1.0	.9	-	.8	(D)	-	(D)	(S)	(S)	(S)	(S)	(S)	(S)	6	(X)
202	Dairy products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.5	.6	.4	.2	1.3	(X)	18
203	Preserved fruits and vegetables	2.1	1.8	.3	2.0	-	.1	-	6.5	2.3	.7	1.7	1.9	.5	14	4
2032	Canned specialties	-	-	-	-	-	-	-	1.4	.1	.1	(D)	(D)	-	(X)	1
2037	Frozen fruits and vegetables	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	1.2	.3	.2	.3	.4	(X)	8
2038	Frozen specialties	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	.2	.1	(D)	(D)	-	(X)	14
204	Grain mill products	14.7	13.1	1.6	13.8	(D)	-	(D)	28.4	7.3	3.9	13.2	4.0	10.4	4	2
2041	Flour, other grain mill products	3.9	3.7	.2	3.9	-	-	-	5.5	1.9	.8	1.5	1.3	3.7	9	6
2043	Cereal breakfast foods	1.1	1.0	.1	1.1	-	-	-	2.3	.5	(D)	.4	(D)	.9	15	1
2046	Wet corn milling	5.5	5.1	.3	4.9	(D)	-	(D)	14.8	2.4	(D)	10.0	(D)	3.8	1	1
2047	Dog, cat, and other pet food	1.0	1.0	-	1.0	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	10	(X)
206	Sugar, confectionery products	9.0	8.4	.6	9.0	-	-	-	8.7	3.7	1.2	2.7	1.0	.6	12	6
2061	Raw cane sugar	(D)	(D)	(D)	1.6	-	-	-	2.9	(D)	(D)	(D)	.6	-	(X)	14
2062	Cane sugar refining	(D)	(D)	(D)	.2	-	-	-	1.4	(D)	(D)	(D)	.1	-	(X)	1
2063	Beet sugar	(D)	(D)	(D)	4.7	-	-	-	2.2	1.0	.3	.9	-	-	(X)	12
207	Fats and oils	11.2	10.6	.6	9.1	-	.6	1.5	14.1	4.6	2.3	4.9	2.2	21.9	15	9
2075	Soybean oil mills	5.9	5.4	.4	(D)	-	(D)	(D)	8.0	2.5	1.5	3.0	1.0	12.4	6	8
2079	Shortening and cooking oils	1.7	1.7	-	(D)	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	5	(X)
208	Beverages	10.0	8.3	1.7	5.8	1.0	3.2	-	21.0	3.8	2.4	12.6	2.2	1.3	14	2
2082	Malt beverages	5.8	4.3	1.5	3.7	.8	1.3	-	16.4	2.8	(D)	9.8	(D)	1.1	15	2
2085	Distilled liquor, except brandy	(D)	(D)	(D)	(D)	(D)	(D)	-	2.8	.2	(D)	2.4	(D)	-	(X)	4
2086	Bottled and canned soft drinks	(D)	(D)	(D)	(D)	(D)	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
209	Misc. foods, kindred products	2.8	2.8	-	2.2	-	(D)	(D)	6.8	1.6	.6	4.1	.4	3.1	4	5
2095	Roasted coffee	1.7	1.7	-	1.4	-	(D)	(D)	4.4	.6	.2	3.3	.2	2.3	1	1
2099	Food preparations, n.e.c.	1.0	.9	-	.8	-	-	.1	2.1	.9	.3	.7	.2	.5	12	17
21	Tobacco products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	7.0	2.7	2.7	1.5	.1	2.9	(X)	1
2111	Cigarettes	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.9	1.3	1.9	.7	-	2.8	(X)	1
2141	Tobacco stemming and redrying	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.8	1.4	.7	.6	.1	-	(X)	1
22	Textile mill products	21.9	16.8	5.1	19.1	.6	2.0	.3	19.0	7.8	3.9	5.3	2.0	.8	11	10
2211	Weaving mills, cotton	4.3	4.1	.1	4.3	-	-	-	3.9	1.3	1.5	.7	.4	-	15	19
225	Knitting mills	1.6	1.4	.1	.9	-	.6	.1	2.0	.9	.3	.6	.1	(D)	6	8
2258	Warp knit fabric mills	1.0	.9	-	.3	-	.6	-	1.0	.3	.2	.5	-	(D)	10	12
2262	Finishing plants, manmade fiber, silk	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.6	.1	.2	.3	(D)	(X)	16
229	Miscellaneous textile goods	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.7	1.2	.6	1.2	.6	.1	(X)	18
2295	Coated fabrics, not rubberized	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.9	.7	.2	.6	.4	.1	(X)	16
24	Lumber and wood products	67.5	56.1	11.4	53.7	.2	11.8	1.8	40.2	17.1	8.6	10.9	3.6	6.3	15	16
243	Millwork, plywood, structural members	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9.8	5.1	2.0	1.4	1.3	1.8	(X)	10
2436	Softwood veneer and plywood	11.1	10.9	.2	8.5	-	2.6	-	6.8	3.3	1.7	1.1	.8	1.1	17	13
249	Miscellaneous wood products	7.3	6.4	.8	6.8	-	.4	-	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
2499	Wood products, n.e.c.	4.8	4.0	.8	4.4	-	.3	-	(S)	(S)	(S)	(S)	(S)	(S)	15	(X)
25	Furniture and fixtures	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11.9	5.8	2.1	2.1	2.0	2.3	(X)	8
251	Household furniture	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9.6	5.0	1.7	1.2	1.6	2.2	(X)	9
2511	Wood household furniture	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.4	3.7	1.4	.9	1.4	1.9	(X)	11
2512	Upholstered household furniture	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.6	.1	.1	.2	.2	(X)	19
252	Office furniture	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.3	.1	.6	.1	.1	(X)	18
26	Paper and allied products	207.0	173.2	33.8	153.4	21.2	16.5	15.9	176.6	59.0	22.2	60.1	35.3	83.1	1	3
2611	Pulpmills	18.0	17.3	.6	15.3	(D)	-	(D)	15.3	5.5	2.4	5.6	1.8	12.7	1	1
2621	Papermills, except building paper	109.0	86.7	22.3	81.2	17.5	1.6	8.7	67.3	27.3	8.9	22.6	8.6	37.6	1	2
2631	Paperboard mills	59.7	57.1	2.6	53.4	2.4	.9	3.0	72.0	21.9	8.9	21.4	19.7	24.9	1	3
264	Misc. converted paper products	14.0	7.9	6.1	2.2	.3	9.9	1.6	9.6	3.2	1.4	3.2	1.9	6.6	12	7
2641	Paper coating and glazing	8.6	4.0	4.6	1.1	-	7.5	-	5.9	1.9	.8	2.4	.8	4.8	6	11
2643	Bags, except textile bags	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
2645	Die-cut paper and board	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.4	.3	.2	.4	.6	-	(X)	9
2647	Sanitary paper products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.4	.2	.2	.2	.4	(X)	12
27	Printing and publishing	19.4	18.5	.9	5.3	-	14.0	.1	9.5	1.6	.9	3.3	3.7	7.4	9	5
275	Commercial printing	17.7	17.4	.3	4.0	-	13.7	-	8.2	1.4	.5	2.8	3.5	5.5	9	5
2751	Commercial printing, letterpress	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.9	.5	(D)	(D)	(D)	1.3	(X)	2
2752	Commercial printing, lithographic	3.0	2.7	.3	.8	-	1.7	-	2.4	.4	(D)	(D)	(D)	.9	15	14
2754	Commercial printing, gravure	13.6	13.6	-	2.0	-	11.6	-	2.9	.5	.3	1.0	1.1	3.3	11	10
28	Chemicals and allied products	314.6	285.9	28.7	135.3	41.9	87.2	50.5	485.3	118.6	86.0	186.6	94.0	124.6	4	4
281	Industrial inorganic chemicals	79.6	76.6	3.0	50.1	9.9	6.6	13.0	105.0	27.7	23.1	31.4	22.8	24.5	5	5
2812	Alkalies and chlorine	5.7	5.4	.3	.9	.1	.8	3.8	(D)	(D)	(D)	(D)	(D)	(D)	2	(X)
2813	Industrial gases	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
2816	Inorganic pigments	(D)	(D)	(D)	(D)	(D)	(D)	(D)	17.7	6.5	2.8	3.0	5.3	4.8	(X)	8
2819	Industrial inorganic chemicals, n.e.c.	67.7	66.6	1.1	46.7	9.3	3.4	8.4	73.2	17.3	17.9	21.6	16.4	17.2	5	7
282	Plastics materials, synthetics	62.0	51.2	10.7	25.3	8.0	18.2	10.5	65.5	19.7	10.6	24.2	11.0	13.8	3	3
2821	Plastics materials and resins	49.0	39.3	9.7	15.3	(D)	16.8	10.4	44.5	13.4	6.6	17.3	7.2	8.7	4	4
2822	Synthetic rubber	(D)	(D)	(D)	(D)	(D)	(D)	(D)	5.3	.6	1.0	3.3	.4	3.5	(X)	1
2823	Cellulosic manmade fibers	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.7	.5	.6	.2	(D)	(D)	(X)	1
2824	Organic fibers, noncellulosic	(D)	9.6	(D)	9.1	-	(D)	(D)	14.0	5.2	2.5	3.5	2.8	.8	(X)	1
283	Drugs	5.8	5.1	.6	2.9	.1	2.1	.7	15.8	2.7	2.0	7.8	3.3	.6	4	2
2833	Medicinals and botanicals	2.7	(D)	(D)	1.4	.1	(D)	(D)	7.4	.7	.9	4.9	.9	(D)	9	3
2834	Pharmaceutical preparations	2.9	(D)	(D)	1.3	-	(D)	(D)	8.3	2.0	1.0	2.8	2.5	(D)	2	4

See footnotes at end of table.

Table 3A. Air Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides, hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	Chemicals and allied products--Continued															
284	Soaps, cleaners, toilet goods	7.1	6.1	1.1	3.6	.2	2.5	.8	10.5	2.7	1.8	3.1	2.9	3.1	10	7
2841	Soap and other detergents	3.1	2.7	.4	2.6	-	-	.5	7.3	1.8	1.2	1.8	2.5	3.1	18	10
2843	Surface active agents	3.0	2.4	.6	.4	.2	2.2	.2	2.6	.6	.4	1.2	.3	-	17	14
2851	Paints and allied products	1.0	(D)	(D)	.8	-	(D)	(D)	3.5	.7	.8	1.0	1.0	.1	17	12
286	Industrial organic chemicals	107.6	99.2	8.5	26.3	16.6	51.0	13.7	187.5	38.6	31.6	79.4	38.0	54.8	3	1
2865	Cyclic crudes and intermediates	21.4	21.3	.1	7.4	.2	11.0	2.8	24.7	7.1	3.5	6.7	7.4	9.0	4	4
2869	Industrial organic chemicals, n.e.c.	83.7	75.3	8.4	16.5	16.4	40.0	10.8	161.1	30.6	27.9	72.4	30.2	45.7	3	1
287	Agricultural chemicals	42.2	38.2	4.0	20.2	6.9	4.8	10.3	70.6	20.2	10.6	26.3	13.4	18.9	9	5
2873	Nitrogenous fertilizers	7.3	(D)	(D)	2.9	(D)	(D)	1.3	16.9	5.3	2.1	6.8	2.7	4.1	4	8
2874	Phosphatic fertilizers	23.8	(D)	(D)	12.8	(D)	(D)	3.1	29.9	11.1	4.3	9.1	5.4	10.5	1	4
2879	Agricultural chemicals, n.e.c.	(S)	(S)	(S)	(S)	(S)	(D)	(S)	21.0	2.7	3.6	9.7	5.1	3.7	(X)	13
289	Miscellaneous chemical products	9.2	(D)	(D)	5.9	-	(D)	(D)	26.8	6.2	5.5	13.4	1.7	8.8	17	14
2892	Explosives	1.6	(D)	(D)	.2	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	5	(X)
29	Petroleum and coal products	397.8	277.1	120.6	38.2	167.2	120.4	72.0	750.7	117.9	113.5	314.3	205.1	200.0	5	2
2911	Petroleum refining	391.1	270.9	120.2	32.7	167.2	119.3	71.9	731.1	112.6	111.0	307.9	199.7	197.5	6	1
295	Paving and roofing materials	(S)	(S)	(S)	(S)	(S)	(S)	(S)	14.6	3.2	2.2	4.1	5.1	2.4	(X)	14
2952	Asphalt felts and coatings	(S)	(S)	(S)	(S)	(S)	(S)	(S)	10.6	2.1	.8	3.2	4.6	2.1	(X)	13
299	Misc. petroleum, coal products	1.8	1.6	.3	1.6	-	.1	.1	5.0	2.1	.3	2.4	.2	.1	15	8
2999	Petroleum and coal products, n.e.c.	1.5	1.2	.2	1.5	-	-	-	4.3	1.9	.2	2.1	.1	-	18	8
30	Rubber, misc. plactics products	12.9	12.2	.7	9.0	-	2.9	1.0	32.2	8.7	4.6	14.8	4.1	8.9	13	5
3011	Tires and inner tubes	1.4	1.4	-	1.4	-	-	-	11.1	2.4	2.0	5.7	1.0	3.1	2	1
3041	Rubber, plastics hose and belting	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	.5	.2	.7	.1	(D)	(X)	14
3069	Fabricated rubber products, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.8	1.3	.7	.9	.9	(D)	(X)	13
3079	Miscellaneous plastics products	9.0	8.6	.4	5.9	-	2.2	.9	15.7	4.5	1.7	7.4	2.0	3.5	18	11
31	Leather and leather products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	.4	.3	.4	.2	.1	(X)	13
32	Stone, clay, glass products	110.2	95.7	14.6	106.4	2.3	.5	1.1	188.0	64.6	36.2	59.1	28.1	67.5	10	1
3211	Flat glass	1.0	1.0	-	1.0	.1	-	-	3.3	2.2	.5	.3	.3	-	7	6
322	Glass, pressed or blown	7.4	7.2	.1	7.0	-	-	.3	10.6	5.6	1.3	2.2	1.5	1.9	5	7
3221	Glass containers	1.7	1.6	-	1.4	-	-	.1	3.5	1.6	.5	1.1	.3	.6	16	5
3229	Pressed and blown glass, n.e.c.	5.7	5.6	.1	5.6	-	-	.1	7.1	4.1	.7	1.1	1.2	1.3	5	10
3241	Cement, hydraulic	41.0	39.8	1.2	41.0	-	-	-	80.4	24.3	17.6	23.7	14.8	48.4	19	9
3255	Clay refractories	2.0	1.9	-	(D)	(D)	-	-	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
326	Pottery and related products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	.7	.5	.8	.1	.5	(X)	18
327	Concrete, gypsum, plaster products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	22.3	7.2	4.4	8.8	1.9	3.6	(X)	16
329	Misc. nonmetallic mineral products	35.0	29.4	5.6	34.1	-	.4	.5	55.6	15.8	9.9	21.3	8.6	12.2	12	10
3292	Asbestos products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.5	2.6	1.4	1.5	2.1	1.0	(X)	13
3296	Mineral wool	15.5	12.5	3.0	15.4	-	.1	-	25.9	5.9	4.1	12.9	3.1	7.4	14	9
3297	Nonclay refractories	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.2	1.0	.8	.5	1.0	-	(X)	17
33	Primary metal industries	588.8	559.6	29.2	482.8	68.9	22.3	14.9	981.7	243.2	203.0	265.1	270.4	182.4	19	18
331	Blast furnace, basic steel products	410.0	387.6	22.4	358.5	43.6	1.7	6.2	552.6	131.8	112.7	150.2	158.0	69.7	1	1
3312	Blast furnaces and steel mills	403.9	381.6	22.3	353.3	43.6	1.6	5.4	528.7	124.5	106.3	141.6	156.3	(D)	1	3
3313	Electrometallurgical products	4.3	4.3	-	4.1	-	-	.2	22.1	6.5	6.1	8.2	1.3	(D)	2	3
332	Iron and steel foundries	61.2	58.8	2.4	43.5	2.9	14.4	.4	126.9	41.6	31.0	37.5	16.8	.6	14	4
3321	Gray iron foundries	46.7	44.8	1.9	29.2	2.9	(D)	(D)	105.3	32.0	27.0	33.3	13.0	.5	18	4
3322	Malleable iron foundries	3.8	3.8	-	3.7	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	16	(X)
3325	Steel foundries, n.e.c.	9.9	9.3	.6	9.7	-	(D)	(D)	12.1	5.6	2.3	2.7	1.5	-	18	9
333	Primary nonferrous metals	87.5	85.1	2.4	56.9	22.2	3.8	4.6	254.3	57.9	48.2	62.1	86.0	103.3	1	1
3331	Primary copper	31.8	31.8	-	(D)	15.8	-	(D)	101.3	14.8	19.2	28.9	38.4	43.8	4	2
3332	Primary lead	(D)	2.2	(D)	.3	(D)	-	(D)	16.9	4.2	2.9	2.7	7.1	(D)	(X)	3
3333	Primary zinc	(D)	(D)	(D)	(D)	.2	-	-	10.7	5.1	1.2	(D)	(D)	5.1	(X)	1
3334	Primary aluminum	38.2	(D)	(D)	29.4	(D)	3.6	(D)	92.0	21.7	19.6	23.0	27.7	34.8	1	1
3339	Primary nonferrous metals, n.e.c.	7.6	(D)	(D)	4.1	(D)	.2	(D)	33.4	12.2	5.3	(D)	(D)	8.6	7	3
3341	Secondary nonferrous metals	(S)	(S)	(S)	(S)	(S)	(S)	(S)	15.5	4.6	3.2	4.7	3.1	4.9	(X)	14
335	Nonferrous rolling and drawing	11.7	11.4	.3	8.2	.1	1.4	1.8	26.4	5.4	6.8	9.6	4.6	3.5	2	3
3351	Copper rolling and drawing	1.3	1.2	.1	(D)	-	-	(D)	4.7	1.4	1.4	1.4	.5	.6	1	3
3353	Aluminum sheet, plate, and foil	6.8	6.8	-	(D)	-	.5	(D)	7.8	2.1	1.5	1.5	2.7	.8	1	1
3356	Nonferrous rolling and drawing, n.e.c.	1.1	.9	.2	.7	.1	.1	.2	7.0	.9	2.9	2.6	.7	1.9	14	4
3357	Nonferrous wiredrawing, insulating	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.5	.7	.7	3.8	.4	.2	(X)	13
34	Fabricated metal products	36.7	32.9	3.7	24.7	2.5	7.5	2.0	57.0	15.1	11.5	22.1	8.3	5.0	8	4
341	Metal cans, shipping containers	3.1	1.6	1.4	.9	-	2.1	.1	11.2	1.3	1.2	7.3	1.4	.7	13	9
3411	Metal cans	2.5	1.2	1.3	.1	-	1.5	.1	8.6	1.0	.9	5.9	.8	.3	9	5
342	Cutlery, handtools, and hardware	2.8	2.4	.4	2.5	-	.1	.2	6.4	1.3	2.0	2.5	.6	.1	11	4
3429	Hardware, n.e.c.	1.9	1.5	.3	1.7	-	-	.2	4.9	.7	1.8	2.2	.2	-	12	3
343	Plumbing, heating, except electric	1.5	1.3	.3	1.2	-	.1	.2	2.9	1.3	.5	.5	.6	-	16	15
3432	Plumbing fittings and brass goods	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.6	.2	.2	.2	-	(X)	14
344	Fabricated structural metal products	6.6	6.2	.4	4.5	-	2.1	-	8.5	2.0	2.0	3.5	.9	1.1	17	4
3443	Fabricated platework, boiler shop	1.7	1.7	-	1.5	-	.1	-	4.9	1.0	1.4	(D)	.2	-	11	4
3444	Sheet metalwork	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.3	.2	.4	.6	.4	(X)	7
345	Screw machine products, bolts, etc.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.4	.3	.1	.1	.8	(X)	18
346	Metal forgings and stampings	6.5	6.1	.4	5.1	.3	.9	.2	10.0	3.1	2.2	3.4	1.3	.1	5	6
3462	Iron and steel forgings	2.8	2.5	.3	(D)	.2	(D)	(D)	2.9	1.3	.6	.9	.1	-	11	17
3463	Nonferrous forgings	1.0	(D)	(D)	(D)	-	-	-	1.7	.3	(D)	(D)	(D)	-	2	1
3465	Automotive stampings	2.0	(D)	(D)	1.6	.1	(D)	(D)	2.8	.7	(D)	(D)	(D)	-	1	2
3469	Metal stampings, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.4	.4	.6	.3	.1	(X)	18
348	Ordnance and accessories, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.2	.8	.8	1.2	.4	.1	(X)	4
3483	Ammunition, except small arms, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.6	(D)	.2	(D)	-	(X)	13
3484	Small arms	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	.2	(D)	.8	(D)	.1	(X)	1

See footnotes at end of table.

Table 3A. Air Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides, hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	Fabricated metal products--Continued															
349	Misc. fabricated metal products	5.7	5.3	.3	4.5	-	.4	.6	6.6	2.8	1.1	1.9	.8	.2	11	9
3494	Valves and pipe fittings	3.4	3.1	.3	2.8	-	.1	.4	4.5	2.3	.6	1.0	.6	.2	11	9
35	Machinery, except electrical	38.5	36.1	2.4	29.4	1.0	5.5	2.7	50.1	12.5	11.4	18.4	7.7	2.3	2	2
351	Engines and turbines	3.0	2.9	.1	2.4	-	.2	.4	11.1	2.1	1.3	5.9	1.9	-	3	1
3511	Turbines, turbine generator sets	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.3	.5	.2	2.8	1.8	-	(X)	1
3519	Internal combustion engines, n.e.c.	2.6	2.6	-	2.2	-	-	.3	5.9	1.6	1.1	3.1	.1	-	3	1
352	Farm and garden machinery	9.6	8.9	.7	9.6	-	-	-	7.9	1.5	1.7	2.8	1.9	.1	1	1
3523	Farm machinery and equipment	9.5	8.8	.7	9.5	-	-	-	7.8	1.5	1.6	2.8	1.9	.1	1	1
353	Construction, related machinery	8.8	8.6	.2	6.3	(D)	(D)	(D)	10.2	3.1	2.7	2.7	1.7	.4	5	5
3531	Construction machinery	6.2	6.2	-	4.4	(D)	(D)	(D)	7.4	2.0	1.9	2.2	1.4	(D)	1	3
354	Metalworking machinery	3.1	2.8	.3	2.8	-	.2	.1	2.9	1.3	.5	.6	.5	.1	12	17
3541	Machine tools, metal cutting	1.7	1.7	-	1.7	-	.1	-	1.0	.3	.3	.3	.1	-	2	10
355	Special industry machinery	2.9	2.8	.1	2.1	.1	-	.5	4.2	1.0	.8	2.0	.3	.2	18	12
3559	Special industry machinery, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.9	.6	.6	1.6	.1	.2	(X)	17
356	General industrial machinery	3.5	3.5	.1	2.5	(D)	(D)	-	5.2	1.2	1.7	1.6	.6	.1	15	4
3562	Ball and roller bearings	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	.1	.8	.4	-	-	(X)	5
3568	Power transmission equipment, n.e.c.	.3	.3	-	.3	-	-	-	1.1	.3	.3	.4	.2	-	12	11
357	Office and computing machines	2.5	2.5	.1	.6	.2	1.6	.1	3.3	.7	1.2	1.0	.4	.9	3	10
3573	Electronic computing equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
3579	Office machines, typewriters, etc.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.4	.2	.3	.7	.1	.9	(X)	6
358	Refrigeration and service machines	2.4	1.7	.7	1.1	-	.9	.4	3.6	1.0	1.0	1.3	.3	.4	8	2
3585	Refrigeration, heating equipment	2.3	1.7	.7	1.1	-	.9	.4	3.3	.9	.9	1.2	.3	.4	8	2
359	Misc. machinery, except electric	2.6	2.4	.2	1.4	-	(D)	(D)	1.6	.6	.5	.4	-	.1	17	10
3592	Carburetors, pistons, rings, etc.	1.5	1.5	-	.8	-	(D)	(D)	1.2	.5	.3	.3	-	.1	4	6
36	Electric, electronic equipment	41.8	30.1	11.7	17.9	1.3	12.2	10.4	46.7	14.5	10.2	14.6	7.4	12.9	5	2
361	Electric distributing equipment	2.3	1.8	.5	.7	.1	1.2	.4	1.5	.6	.3	.4	.2	-	2	2
3613	Switchgear, switchboard apparatus	1.9	1.7	(D)	.5	(D)	(D)	.1	1.0	.3	.2	.4	.1	-	2	3
362	Electrical industrial apparatus	3.3	1.6	1.7	1.8	-	1.1	.3	9.7	1.9	1.6	4.8	1.4	5.6	3	3
3624	Carbon and graphite products	2.2	.7	(D)	1.3	-	(D)	-	7.4	1.3	1.0	3.9	1.2	5.3	3	5
363	Household appliances	5.7	2.2	3.5	3.5	.1	1.8	.1	5.3	1.2	1.7	2.0	.4	.3	4	1
3631	Household cooking equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
3632	Household refrigerators, freezers	1.4	.7	.7	.9	-	.2	-	1.1	.2	.3	.5	.1	-	1	1
3633	Household laundry equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.2	.6	.7	.2	-	(X)	1
3639	Household appliances, n.e.c.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.2	.2	.5	.4	.1	.2	(X)	4
364	Electric lighting, wiring equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.4	.8	1.3	1.1	1.1	.1	(X)	7
3647	Vehicular lighting equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
366	Communication equipment	3.1	2.8	.4	1.5	.1	1.2	.3	6.3	1.2	1.9	1.8	1.4	1.6	11	1
3661	Telephone and telegraph apparatus	1.3	(D)	(D)	.8	(D)	(D)	-	4.3	.8	1.3	1.0	1.2	(D)	17	1
3662	Radio and TV communication equipment	1.8	(D)	(D)	.8	(D)	(D)	.2	2.1	.4	.6	.9	.2	(D)	15	5
367	Electronic components, accessories	13.7	8.9	4.8	3.5	.8	6.5	2.9	8.9	4.0	2.0	1.3	1.6	2.3	11	3
3674	Semiconductors, related devices	8.0	3.7	4.3	(D)	(D)	3.3	1.3	3.7	1.3	1.0	.8	.6	(D)	3	5
3679	Electronic components, n.e.c.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.3	2.4	.7	.3	.9	(D)	(X)	5
369	Misc. electronic equipment, supplies	10.0	9.5	.5	3.3	.2	.3	6.2	9.4	4.6	1.2	2.7	.9	2.6	13	7
3691	Storage batteries	7.8	7.7	.1	1.6	-	.1	5.6	7.3	3.7	.8	2.2	.6	1.4	16	9
3694	Engine electrical equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.6	.2	.3	-	.2	(X)	1
37	Transportation equipment	120.1	103.5	16.5	46.2	1.5	68.8	3.7	96.4	23.5	30.4	32.5	10.1	.4	1	1
371	Motor vehicles and equipment	106.4	90.4	16.0	35.5	1.4	67.4	2.1	79.2	19.8	25.1	28.1	6.2	.4	1	1
3711	Motor vehicles and car bodies	90.7	76.6	14.2	24.9	(D)	65.5	(D)	57.7	13.1	19.4	19.9	5.3	-	1	1
3714	Motor vehicle parts, accessories	15.2	13.5	1.7	10.2	(D)	1.8	(D)	20.7	6.5	5.3	8.0	.9	.3	3	1
372	Aircraft and parts	4.3	(D)	(D)	3.0	.1	(D)	(D)	8.0	1.6	3.0	2.4	1.0	.1	4	8
3721	Aircraft	1.6	(D)	(D)	1.5	-	(D)	(D)	2.5	.5	.7	1.0	.4	-	1	1
3724	Aircraft engines and engine parts	1.1	1.0	.1	.8	-	.1	-	3.9	.8	2.0	.6	.4	-	13	17
3728	Aircraft equipment, n.e.c.	1.6	1.5	.1	.7	-	.4	.3	1.6	.3	.3	.8	.2	-	7	7
373	Ship, boat building, repairing	6.1	5.8	.3	5.7	-	.4	-	4.3	1.1	.5	.3	2.5	-	6	2
3731	Ship building and repairing	5.4	5.4	-	5.4	-	-	-	4.1	1.0	.4	.1	2.5	-	1	1
3743	Railroad equipment	1.2	(D)	(D)	.2	-	(D)	(D)	2.5	.4	.9	1.1	.1	-	19	4
376	Guided missiles, space vehicles	1.6	1.5	-	.7	-	.3	.6	1.4	.3	.8	.2	.1	-	1	1
3761	Guided missiles, space vehicles	1.1	1.1	-	.6	-	.1	.4	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
38	Instruments, related products	13.0	9.2	3.7	2.6	.9	5.3	4.2	10.6	2.1	2.3	3.5	2.7	2.0	16	3
382	Measuring, controlling devices	1.2	.7	.5	.6	.1	.4	.2	(S)	(S)	(S)	(S)	(S)	(S)	12	(X)
384	Medical instruments, supplies	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.5	.3	.7	-	.1	(X)	18
3861	Photographic equipment and supplies	7.4	7.1	.3	1.1	(D)	4.4	(D)	7.4	1.1	1.7	2.3	2.4	1.8	1	1
39	Misc. manufacturing industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	6.5	1.8	.8	1.7	2.2	1.8	(X)	10
399	Miscellaneous manufactures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	4.1	.7	.2	(D)	(D)	.9	(X)	13
3996	Hard surface floor coverings	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.9	.5	.1	(D)	(D)	.9	(X)	14

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. See text. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products is excluded.

Table 3B. Air Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	United States[1]	2,071.9	1,780.5	291.3	1,191.0	311.2	383.2	186.5	3,061.8	742.4	563.1	1,057.5	698.8	750.4	1	11
	New England Division:															
	Maine	18.9	(D)	(D)	17.1	(D)	(D)	.1	7.1	2.9	1.7	1.8	.7	5.2	1	7
26	Paper and allied products	17.3	(D)	(D)	15.7	(D)	(D)	-	5.9	2.4	1.4	1.6	.5	4.7	1	1
	New Hampshire	2.0	1.8	.3	1.1	.7	.2	-	2.8	.7	.5	.7	.9	.7	1	1
26	Paper and allied products	1.6	1.4	.2	.7	.7	.2	-	1.1	.4	.1	.1	.5	-	1	1
	Vermont	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Massachusetts	18.5	16.8	1.8	8.7	3.1	5.3	1.4	23.5	6.2	3.6	11.0	2.8	4.2	11	9
28	Chemicals and allied products	1.5	(D)	(D)	.4	-	(D)	(D)	2.3	1.0	.4	.6	.2	(D)	11	4
30	Rubber, miscellaneous plastics products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	.4	.1	.5	(D)	(D)	(X)	19
35	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.4	.2	.3	.3	-	(X)	9
36	Electric, electronic equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.3	.3	.9	.3	(D)	(X)	15
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Rhode Island	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.7	.4	.5	.1	1.5	(X)	11
	Connecticut	8.4	7.4	1.0	6.4	.2	1.4	.4	20.6	2.6	2.3	14.4	1.4	1.5	19	5
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	.2	.1	(D)	(D)	.2	(X)	(X)
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.3	.3	(D)	(D)	-	(X)	13
34	Fabricated metal products	1.6	1.3	.3	1.2	-	.3	.1	2.1	.4	.4	1.2	.2	.3	13	12
37	Transportation equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	.6	.3	.5	-	-	(X)	3
	Middle Atlantic Division:															
	New York	54.4	46.2	8.1	31.1	6.9	9.8	6.6	89.7	20.5	20.5	35.4	13.4	19.3	4	5
20	Food and kindred products	3.3	3.1	.2	1.7	(D)	(D)	-	1.7	.6	.3	.5	.2	1.0	8	6
26	Paper and allied products	3.2	(D)	(D)	(D)	(D)	(D)	(D)	3.0	.5	(D)	1.3	(D)	(D)	1	6
28	Chemicals and allied products	9.7	9.3	.4	6.3	.3	1.4	1.6	(S)	(S)	(S)	(S)	(S)	(S)	4	(X)
29	Petroleum and coal products	-	-	-	-	-	-	-	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.9	1.7	.9	1.3	.9	.7	(X)	11
33	Primary metal industries	16.2	13.7	(D)	9.7	(D)	-	.1	25.5	5.0	6.6	11.1	2.8	.2	1	4
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	.4	.7	.5	.3	-	(X)	10
35	Machinery, except electrical	2.1	2.0	.1	1.2	(D)	.6	(D)	3.4	.8	.9	1.2	.5	(D)	5	14
36	Electric, electronic equipment	2.8	1.9	.9	.6	.2	1.8	.2	5.5	1.1	1.5	.9	2.1	2.7	7	6
37	Transportation equipment	1.9	1.9	-	.8	(D)	-	(D)	(D)	(D)	(D)	(D)	(D)	-	4	1
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	4.2	.4	1.1	(D)	(D)	-	(X)	4
	New Jersey	43.5	38.7	4.7	15.7	10.8	6.6	10.4	135.2	21.6	21.8	51.9	39.9	42.8	4	2
20	Food and kindred products	1.7	1.5	.2	1.4	-	(D)	(D)	5.4	.9	.5	3.7	.3	(D)	6	6
28	Chemicals and allied products	15.7	14.1	1.6	4.4	.5	3.0	7.8	42.2	7.2	4.8	23.1	7.1	3.9	9	3
29	Petroleum and coal products	14.2	(D)	(D)	(D)	(D)	(D)	(D)	51.2	6.5	8.8	(D)	(D)	18.2	1	1
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.5	2.6	1.0	3.3	.7	2.2	(X)	11
33	Primary metal industries	2.7	2.5	.2	1.7	(D)	(D)	.7	14.9	1.6	4.5	7.2	1.7	15.2	16	10
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.8	.3	.8	1.6	.2	.8	(X)	9
35	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.1	.4	1.2	-	-	(X)	6
36	Electric, electronic equipment	1.2	(D)	(D)	.2	(D)	-	(D)	1.9	.4	.3	1.1	.1	.7	4	2
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	(X)	(X)
	Pennsylvania	164.7	155.8	8.9	116.3	33.0	9.4	6.0	255.2	61.8	47.4	93.9	52.0	30.7	2	1
20	Food and kindred products	1.2	(D)	(D)	1.1	-	-	.1	3.6	.5	.4	2.3	.5	.3	1	9
24	Lumber and wood products	2.0	(D)	(D)	2.0	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	17	(X)
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	7.0	2.3	(D)	3.1	(D)	(D)	(X)	5
28	Chemicals and allied products	12.5	(D)	(D)	2.0	(D)	2.4	(D)	18.6	3.7	3.9	6.5	4.5	4.7	1	5
29	Petroleum and coal products	9.4	7.7	(D)	3.1	(D)	(D)	.2	40.5	6.8	(D)	10.5	(D)	8.3	1	2
33	Primary metal industries	101.3	99.1	2.2	86.1	(D)	(D)	.1	137.6	32.9	28.4	56.6	19.7	3.7	1	1
34	Fabricated metal products	2.6	2.5	.1	1.6	-	.9	(D)	7.2	1.8	1.6	3.0	.8	-	8	4
35	Machinery, except electrical	2.2	2.1	.1	1.8	(D)	-	.1	6.0	1.2	.5	2.3	2.0	-	10	3
36	Electric, electronic equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.8	1.9	.9	1.0	1.0	.1	(X)	8
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.5	.8	.7	1.0	-	-	(X)	1
38	Instruments, related products	1.1	(D)	(D)	.2	.1	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	11	(X)
39	Miscellaneous manufacturing industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.3	.3	.1	(D)	(D)	(D)	(X)	1
	East North Central Division:															
	Ohio	145.2	136.3	8.9	90.9	19.3	24.1	10.9	198.0	49.6	50.1	61.4	37.0	19.3	2	1
20	Food and kindred products	3.4	3.3	.1	2.1	.5	.3	.3	3.3	1.0	.6	1.2	.5	1.4	11	8
26	Paper and allied products	4.6	(D)	(D)	3.8	-	(D)	(D)	3.1	1.2	.4	1.0	.5	.7	9	11
28	Chemicals and allied products	16.0	15.4	.6	5.7	2.5	1.9	5.9	14.5	4.2	2.4	5.4	2.4	5.5	7	9
29	Petroleum and coal products	7.8	7.8	-	.6	(D)	(D)	-	13.6	2.2	(D)	(D)	2.4	(D)	2	1
30	Rubber, miscellaneous plastics products	2.4	2.0	.4	1.7	-	.5	.2	11.1	2.3	1.5	6.3	.9	(D)	10	2
32	Stone, clay, glass products	5.1	(D)	(D)	5.0	-	(D)	(D)	13.4	4.1	2.5	4.7	2.1	2.3	10	12
33	Primary metal industries	71.2	65.5	5.7	57.6	(D)	(D)	3.9	107.5	26.7	31.4	26.2	23.3	4.5	2	1
34	Fabricated metal products	7.6	7.2	.4	5.7	(D)	1.4	(D)	9.3	2.9	2.3	3.1	1.0	.3	1	6
35	Machinery, except electrical	3.8	3.8	.1	2.8	-	.9	-	4.7	1.4	1.8	1.2	.3	(D)	14	5
36	Electric, electronic equipment	1.3	1.1	.2	1.1	-	.2	-	3.0	.6	.5	1.7	.1	1.1	9	12
37	Transportation equipment	19.7	(D)	(D)	2.3	.2	(D)	(D)	13.3	2.8	4.2	(D)	(D)	.2	1	4
	Indiana	145.7	139.3	6.4	121.6	8.4	13.7	2.0	177.3	50.2	30.6	37.0	59.4	15.6	2	1
20	Food and kindred products	2.2	1.9	.3	2.0	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	6	(X)
27	Printing and publishing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	3.2	3.1	.1	1.7	-	(D)	(D)	5.2	1.6	.6	1.2	1.8	.4	14	15
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.8	1.2	1.4	1.3	1.8	1.2	(X)	19
33	Primary metal industries	106.2	105.3	.9	103.8	1.1	(D)	(D)	118.0	33.4	21.9	24.9	37.8	(D)	2	1
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	.4	.5	.8	.2	-	(X)	17
35	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	.5	.3	.3	.4	-	(X)	13
36	Electric, electronic equipment	2.9	(D)	(D)	1.7	-	.5	.7	5.2	1.4	1.1	(D)	(D)	.5	3	1
37	Transportation equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.6	1.2	1.5	.7	.2	-	(X)	3

See footnotes at end of table.

Table 3B. Air Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Million of dollars)

SIC	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	East North Central Division--Continued															
	Illinois	118.8	98.6	20.2	67.7	19.7	24.0	7.4	165.7	46.5	27.4	51.1	40.6	85.3	7	2
20	Food and kindred products	4.7	4.6	.1	4.0	-	-	.7	10.7	2.3	1.3	6.7	.5	1.7	3	1
27	Printing and publishing	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	23.1	22.8	.3	15.5	.6	4.5	2.5	24.5	6.5	3.5	7.6	6.9	2.8	2	8
29	Petroleum and coal products	23.1	(D)	(D)	(D)	(D)	(D)	(D)	38.3	9.3	7.7	10.7	10.6	8.6	1	1
30	Rubber, miscellaneous plastics products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.5	(D)	(D)	.5	(D)	(X)	3
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	58.4	19.6	9.2	13.1	16.5	(D)	(X)	3
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.5	.9	.5	1.8	1.3	1.0	(X)	13
35	Machinery, except electrical	11.2	11.1	.1	9.7	(D)	(D)	(D)	9.1	2.3	1.6	4.3	.9	(D)	1	2
36	Electric, electronic equipment	2.6	(D)	(D)	1.3	(D)	(D)	.1	2.1	(D)	.8	.5	(D)	.1	1	3
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.6	.7	.7	(D)	(D)	-	(X)	10
	Michigan	130.9	103.2	27.7	93.2	.8	32.3	4.6	141.4	28.6	36.9	44.1	31.7	11.6	5	2
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
28	Chemicals and allied products	6.0	(D)	(D)	1.3	(D)	(D)	.3	9.2	1.5	1.4	4.5	1.8	1.8	8	14
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	5.9	.6	1.2	.7	3.5	1.7	(X)	1
33	Primary metal industries	54.3	(D)	(D)	40.8	(D)	(D)	.1	76.4	12.9	21.0	21.6	20.9	3.2	1	1
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.2	.7	.7	.5	.2	-	(X)	9
35	Machinery, except electrical	3.1	(D)	(D)	2.7	-	(D)	(D)	4.2	1.1	.9	(D)	(D)	-	7	7
37	Transportation equipment	26.3	20.0	6.3	11.9	(D)	13.2	(D)	25.6	6.1	8.8	8.9	1.8	-	1	1
	Wisconsin	14.3	12.9	1.4	11.7	.4	1.9	.3	30.3	12.8	5.4	6.8	5.3	3.1	11	11
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	.7	.5	.6	.3	.7	(X)	12
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	.6	.3	.5	.1	.1	(X)	16
35	Machinery, except electrical	1.5	1.5	.1	1.4	-	.1	-	3.3	.6	.9	1.2	.6	.1	12	2
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.1	(D)	.5	(D)	-	-	(X)	1
	West North Central Division:															
	Minnesota	30.4	26.2	4.2	21.0	4.8	3.6	1.0	22.5	5.5	3.8	5.1	8.1	3.5	3	3
20	Food and kindred products	5.3	5.2	.1	(D)	-	(D)	-	3.6	1.5	.5	.8	.8	.7	7	8
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.8	1.1	.2	.5	-	(D)	(X)	4
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Iowa	9.5	8.8	.7	7.7	.4	1.2	.2	24.2	5.7	4.1	9.1	5.3	15.5	4	4
20	Food and kindred products	3.0	2.6	.4	2.6	(D)	.2	(D)	11.5	2.2	1.0	6.0	2.3	10.1	13	6
28	Chemicals and allied products	.9	.9	-	.7	(D)	-	(D)	1.7	.7	.4	.5	.1	.8	1	5
32	Stone, clay, glass products	.1	.1	-	.1	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	15	(X)
35	Machinery, except electrical	2.6	2.6	-	2.6	-	-	-	4.7	1.0	1.3	1.0	1.5	(D)	1	1
	Missouri	19.7	19.0	.6	10.5	2.5	5.0	1.7	45.4	8.5	13.1	10.7	13.1	12.6	4	4
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	.6	.4	.6	.5	.3	(X)	7
28	Chemicals and allied products	2.5	2.5	-	1.8	.1	.6	-	8.2	1.5	.9	1.5	4.3	2.2	11	9
29	Petroleum and coal products	2.1	2.1	-	.3	(D)	(D)	-	5.8	.8	(D)	4.3	(D)	(D)	11	13
32	Stone, clay, glass products	3.8	3.8	-	3.6	-	-	.3	5.7	1.5	1.5	1.5	1.4	(D)	13	19
33	Primary metal industries	3.1	3.1	-	1.6	(D)	-	(D)	11.3	2.1	2.4	1.7	5.2	(D)	16	5
37	Transportation equipment	5.5	5.5	-	1.4	.1	(D)	(D)	9.5	1.5	7.2	.7	.1	-	1	1
	North Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	South Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Nebraska	6.2	6.2	-	5.9	-	.1	.2	4.7	1.2	1.0	2.1	.4	.4	19	12
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.2	.3	.7	.1	-	(X)	7
	Kansas	79.8	72.2	7.5	12.7	57.9	8.7	.5	50.8	8.2	9.1	29.9	3.6	3.3	2	6
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.4	.1	.5	.2	1.2	(X)	8
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.2	.8	(D)	1.0	(D)	(D)	(X)	9
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	9.9	2.4	1.4	5.0	1.1	1.0	(X)	13
36	Electric, electronic equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.4	(D)	(D)	.1	.1	(X)	19
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	South Atlantic Division:															
	Delaware	28.4	23.9	4.6	15.6	9.3	.1	3.4	15.3	3.2	3.8	4.8	3.5	1.1	1	7
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	10.6	2.4	2.0	3.0	3.1	.5	(X)	9
29	Petroleum and coal products	-	-	-	-	-	-	-	2.8	.1	1.3	1.1	.3	-	(X)	1
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Maryland	18.2	16.6	1.6	11.7	2.5	3.2	1.1	56.1	10.3	9.7	21.4	14.7	5.5	7	3
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	4.0	(D)	(D)	1.0	(D)	(D)	.4	7.7	1.5	1.1	3.9	1.2	.5	3	12
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	District of Columbia	-	-	-	-	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Virginia	24.7	18.0	6.7	16.7	1.2	6.4	.4	34.3	15.0	5.2	6.0	8.2	7.7	19	16
20	Food and kindred products	1.5	(D)	(D)	1.4	(D)	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	5	(X)
22	Textile mill products	3.2	3.0	.2	2.6	(D)	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
25	Furniture and fixtures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.6	.8	.3	.3	.3	.8	(X)	18
26	Paper and allied products	3.2	3.2	-	(D)	(D)	.6	-	7.3	2.4	1.3	(D)	(D)	(D)	13	1
27	Printing and publishing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	-	-	-	-	-	-	(X)	(X)
28	Chemicals and allied products	5.5	(D)	(D)	2.3	(D)	2.9	(D)	7.2	3.0	1.0	1.0	2.2	.7	1	2
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.7	.7	.5	.5	1.0	(D)	(X)	2
36	Electric, electronic equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	(D)	.2	(D)	-	(D)	(X)	2
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	West Virginia	26.0	23.2	2.8	22.2	1.7	.7	1.4	58.4	13.5	14.5	16.2	14.1	2.1	5	2
28	Chemicals and allied products	4.5	(D)	(D)	3.1	-	.7	.7	16.1	3.8	3.3	6.9	2.1	.5	1	7
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	37.0	7.4	10.3	(D)	(D)	1.5	(X)	1
36	Electric, electronic equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.6	.2	.8	.1	-	(X)	3

See footnotes at end of table.

Table 3B. Air Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Capital expenditures: By type of pollutant: Particulates	Capital expenditures: By type of pollutant: Sulfur oxides	Capital expenditures: By type of pollutant: Nitrogen oxides hydrocarbons, and carbon monoxide	Capital expenditures: By type of pollutant: Heavy metals, radioactive and toxic substances, and other	Operating costs: Total	Operating costs: By kind of cost: Depreciation	Operating costs: By kind of cost: Labor	Operating costs: By kind of cost: Materials and supplies	Operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	South Atlantic Division--Continued															
	North Carolina	27.8	22.3	5.5	24.1	.6	.9	2.2	35.7	14.4	6.8	11.4	3.1	21.5	10	5
21	Tobacco products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.4	(D)	1.4	(D)	(D)	-	(X)	1
22	Textile mill products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.7	3.7	1.4	2.9	.7	.6	(X)	18
25	Furniture and fixtures	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.3	2.6	.6	.5	.5	.5	(X)	16
26	Paper and allied products	3.8	3.2	.6	(D)	(D)	(D)	(D)	5.6	1.8	.8	(D)	(D)	10.6	9	1
28	Chemicals and allied products	1.1	1.1	-	.6	.2	(D)	(D)	2.6	.7	.7	.9	.3	1.2	15	17
32	Stone, clay, glass products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.4	.5	(D)	(D)	(D)	(X)	14
35	Machinery, except electrical	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.1	(D)	(D)	.4	.2	(D)	(X)	1
	South Carolina	23.3	21.9	1.4	15.3	-	2.1	5.9	34.9	8.1	8.1	16.8	1.9	16.1	5	17
26	Paper and allied products	9.7	9.3	.4	(D)	-	.7	(D)	11.2	2.0	.9	(D)	(D)	(D)	4	4
28	Chemicals and allied products	7.6	(D)	(D)	(D)	-	.3	(D)	8.0	1.3	3.9	2.6	.2	.2	3	5
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.6	.5	(D)	(D)	(D)	-	(X)	9
	Georgia	36.3	31.2	5.2	28.8	.7	5.8	1.0	38.8	12.4	6.4	10.1	9.8	10.5	6	3
26	Paper and allied products	16.7	(D)	(D)	15.6	-	(D)	(D)	19.1	7.3	2.3	3.7	5.7	8.1	1	1
28	Chemicals and allied products	1.2	1.1	-	.7	-	.1	.4	7.2	1.5	1.5	2.7	1.5	(D)	11	9
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.3	.5	.3	(D)	(D)	(D)	(X)	1
	Florida	28.9	26.4	2.5	18.4	6.7	.8	3.0	46.5	14.6	5.5	13.6	12.8	15.6	4	4
20	Food and kindred products	1.8	1.6	.2	1.2	(D)	-	(D)	4.9	2.5	.6	1.3	.5	.5	16	3
26	Paper and allied products	2.5	(D)	(D)	1.1	(D)	(D)	(D)	13.3	4.8	1.4	3.2	3.8	2.7	1	1
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	21.1	5.8	2.4	6.3	6.6	6.3	(X)	2
36	Electric, electronic equipment	1.0	(D)	(D)	.1	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	4	(X)
	East South Central Division:															
	Kentucky	37.3	33.4	3.9	24.9	1.4	9.5	1.5	36.8	7.7	9.6	15.2	4.4	11.7	5	2
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	.3	.2	1.3	-	.2	(X)	9
21	Tobacco products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.5	(D)	.3	(D)	-	(X)	1
28	Chemicals and allied products	14.3	13.4	.9	(D)	.2	6.4	(D)	10.7	2.6	2.4	5.3	.4	1.7	4	7
33	Primary metal industries	9.6	9.6	-	(D)	-	(D)	-	9.1	1.0	(D)	2.9	(D)	-	1	1
36	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.2	.4	1.1	.1	(D)	(X)	2
36	Electric, electronic equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.1	.6	.9	1.4	.2	-	(X)	1
	Tennessee	36.7	32.7	3.9	29.1	3.0	3.1	1.5	47.3	15.7	8.9	12.5	10.2	10.4	8	6
20	Food and kindred products	2.1	2.0	.1	2.1	-	-	-	1.9	.7	.5	(D)	(D)	2.2	4	9
22	Textile mill products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
26	Paper and allied products	4.7	(D)	(D)	4.5	(D)	(D)	-	1.8	.9	.5	(D)	(D)	(D)	1	9
28	Chemicals and allied products	10.1	9.6	.6	5.1	2.5	1.3	1.2	25.0	5.2	4.2	8.1	7.6	1.8	14	5
33	Primary metal industries	8.0	8.0	-	8.0	-	-	-	7.5	3.3	1.9	1.2	1.1	(D)	14	8
36	Electric, electronic equipment	1.4	(D)	(D)	.3	-	(D)	(D)	1.4	-	.4	(D)	(D)	-	2	2
	Alabama	58.6	58.5	.1	51.1	1.1	3.1	3.3	86.6	26.0	11.4	17.5	31.8	6.4	3	3
26	Paper and allied products	17.0	17.0	-	14.6	-	(D)	(D)	10.4	4.8	.9	2.8	1.9	(D)	1	1
28	Chemicals and allied products	4.2	(D)	(D)	1.6	.2	(D)	(D)	9.9	4.3	1.5	2.3	1.7	2.9	3	1
29	Petroleum and coal products	-	-	-	-	-	-	-	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
33	Primary metal industries	32.4	32.4	-	30.5	.7	(D)	(D)	56.6	13.6	6.7	9.0	27.2	(D)	5	3
34	Fabricated metal products	.5	.5	-	.5	-	-	-	1.3	.4	.2	.7	-	-	18	11
	Mississippi	10.8	8.6	2.2	8.5	1.2	.9	.2	29.2	11.7	3.7	11.0	2.8	8.1	16	15
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3.1	.9	(D)	1.3	(D)	(D)	(X)	1
28	Chemicals and allied products	.6	(D)	(D)	.2	-	(D)	(D)	5.7	3.2	.3	1.2	1.0	(D)	9	8
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	West South Central Division:															
	Arkansas	29.9	19.5	10.4	8.2	6.6	4.2	10.9	23.1	8.7	4.3	5.1	5.0	8.4	12	11
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.6	.2	.2	.1	.2	(X)	6
26	Paper and allied products	2.8	2.6	.2	(D)	.5	-	(D)	4.8	1.6	.6	.9	1.7	1.0	1	1
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9.8	2.9	1.8	2.5	2.6	6.4	(X)	17
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Louisiana	106.6	85.9	20.7	35.0	37.0	26.3	8.3	170.8	32.7	25.6	76.3	36.1	56.1	2	1
26	Paper and allied products	13.9	(D)	(D)	(D)	2.4	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
28	Chemicals and allied products	39.6	35.5	4.1	(D)	10.0	(D)	6.1	47.5	11.4	10.6	12.6	13.0	23.7	4	2
29	Petroleum and coal products	41.1	29.6	11.5	(D)	24.6	(D)	1.1	102.0	14.6	(D)	55.8	(D)	27.7	1	1
33	Primary metal industries	5.8	5.8	-	4.6	-	(D)	(D)	10.3	2.8	1.5	3.1	2.9	1.5	11	13
	Oklahoma	18.1	6.1	12.0	3.3	1.6	1.9	11.3	17.2	6.6	3.3	6.1	1.2	5.3	3	7
29	Petroleum and coal products	14.0	(D)	(D)	.7	(D)	.8	(D)	6.7	.9	1.4	4.0	.4	2.1	1	1
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.7	(D)	.2	.1	(D)	.5	(X)	9
	Texas	241.4	175.3	66.0	53.3	26.1	106.3	55.7	397.8	76.7	61.0	170.4	89.6	148.6	1	3
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.7	1.2	.5	.7	.4	9.7	(X)	14
26	Paper and allied products	7.5	(D)	(D)	6.9	-	(D)	(D)	15.0	2.8	(D)	(D)	8.5	3.4	1	1
28	Chemicals and allied products	55.3	48.9	6.4	16.5	1.3	31.7	5.8	92.5	19.2	15.6	47.0	10.7	38.0	8	4
29	Petroleum and coal products	140.1	83.4	56.7	(D)	20.3	70.4	(D)	214.3	34.3	29.3	104.0	46.7	70.2	1	1
33	Primary metal industries	17.8	17.8	-	(D)	4.4	(D)	1.5	53.1	13.5	9.8	9.6	20.2	23.0	10	4
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.3	.5	.8	.1	-	(X)	19
35	Machinery, except electrical	1.6	1.1	.5	.6	-	.1	.9	(S)	(S)	(S)	(S)	(S)	(S)	11	(X)
36	Electric, electronic equipment	3.0	(D)	(D)	.4	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	19	(X)
37	Transportation equipment	1.3	(D)	(D)	.8	-	.2	.3	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
	Mountain Division:															
	Montana	9.7	9.1	.6	5.6	1.4	.4	2.3	15.9	3.8	2.9	5.6	3.5	2.8	5	5
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Idaho	16.8	16.8	-	12.3	2.2	-	2.3	17.3	5.3	4.4	5.2	2.5	.6	1	5
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	11.3	3.4	3.0	(D)	(D)	(D)	(X)	1
	Wyoming	2.3	2.3	-	1.0	.1	1.2	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)

See footnotes at end of table.

Table 3B. Air Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC	State and major industry group	Capital expenditures							Operating costs					Cost recovered	Standard error of estimates (percent)	
		Total	Abatement technique		By type of pollutant				Total	By kind of cost						
			End of line	Changes in production process	Particulates	Sulfur oxides	Nitrogen oxides hydrocarbons, and carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
	Mountain Division:--Continued															
	Colorado	14.0	13.8	.2	11.7	.4	1.1	.8	29.3	11.2	3.9	11.9	2.2	6.4	4	6
20	Food and kindred products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	New Mexico	2.0	1.7	.3	1.0	.8	-	.3	28.6	12.5	2.6	5.4	8.1	8.2	13	5
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Arizona	14.7	11.6	3.1	8.7	5.0	.7	.3	50.9	7.8	8.6	12.3	22.3	15.8	7	2
	Utah	13.0	12.8	.3	5.1	6.6	1.3	.1	22.5	5.8	5.0	10.9	.8	6.1	8	3
29	Petroleum and coal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
33	Primary metal industries	9.7	9.7	-	3.3	6.4	-	-	18.2	4.9	4.5	8.7	.1	6.0	1	1
	Nevada	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.7	.3	.5	1.7	.1	.2	(X)	6
	Washington	70.6	60.4	10.2	54.4	3.8	5.8	6.6	79.3	22.1	16.0	18.2	23.1	33.5	10	4
26	Paper and allied products	19.4	(D)	(D)	12.9	.2	(D)	(D)	11.6	6.9	1.3	2.7	.7	4.7	1	1
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	11.4	2.3	2.0	2.7	4.4	(D)	(X)	6
33	Primary metal industries	11.7	11.7	-	7.7	(D)	.6	(D)	39.7	6.8	8.5	7.0	17.3	13.5	3	1
	Oregon	32.7	31.3	1.4	22.1	.7	7.9	2.0	29.0	11.9	6.7	8.3	2.0	6.5	14	5
20	Food and kindred products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
24	Lumber and wood products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.6	3.9	2.2	1.3	.3	.6	(X)	14
26	Paper and allied products	5.2	(D)	(D)	(D)	(D)	(D)	(D)	8.1	4.0	1.4	2.3	.4	2.8	1	1
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	(S)	(S)	10.1	2.9	2.4	(D)	(D)	(D)	(X)	5
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	California	123.5	111.8	11.7	45.1	28.1	44.0	6.3	254.8	48.2	43.8	94.8	68.0	56.8	8	1
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.3	2.7	.9	1.6	2.0	1.4	(X)	10
26	Paper and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.3	.7	.4	1.0	.3	1.7	(X)	17
27	Printing and publishing	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.1	.2	(D)	(D)	-	(X)	11
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	22.7	5.5	3.9	10.6	2.7	5.0	(X)	8
29	Petroleum and coal products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	145.0	18.3	23.4	58.3	45.0	32.5	(X)	1
30	Rubber, miscellaneous plastics products	1.0	1.0	-	.4	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	14	(X)
32	Stone, clay, glass products	4.5	4.4	.1	4.4	-	-	.1	20.9	4.7	4.7	7.9	3.6	11.1	16	9
33	Primary metal industries	29.1	28.7	.4	15.4	(D)	(D)	.2	21.8	3.4	4.0	5.8	8.6	1.7	5	9
34	Fabricated metal products	2.7	2.0	.7	1.7	-	.7	.3	(S)	(S)	(S)	(S)	(S)	(S)	17	(X)
35	Machinery, except electrical	2.5	2.4	.1	.7	(D)	(D)	.7	(S)	(S)	(S)	(S)	(S)	(S)	19	(X)
36	Electric, electronic equipment	3.3	2.7	.6	.5	.4	1.5	.9	5.8	3.1	.9	1.3	.6	1.6	12	5
37	Transportation equipment	23.2	(D)	(D)	1.6	(D)	(D)	.4	9.3	4.9	1.9	1.3	1.1	-	2	3
	Alaska	1.7	1.7	-	1.7	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
	Hawaii	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	.5	.3	.6	.6	.2	(X)	15

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. See text. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the U.S. and State totals.

Table 3C. Air Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures							Operating costs					Cost recovered	Standard error of estimates (percent)	
	Total	Abatement technique		By type of pollutant				Total	By kind of cost						
		End of line	Changes in production process	Particulates	Sulfur oxides	Nitrogen oxides hydrocarbons, and carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Akron, Ohio	4.1	3.2	.9	1.9	-	2.1	.1	8.6	1.8	1.6	4.6	.6	.4	2	3
Albany-Schenectady-Troy, N.Y.	2.8	2.4	.4	1.9	-	.6	.3	5.9	2.1	1.1	2.2	.6	2.6	7	4
Allentown-Bethlehem-Easton, Pa.-N.J.	23.6	23.5	.2	15.5	7.5	.6	-	31.7	11.4	5.0	13.3	2.1	4.0	2	14
Amarillo, Tex.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.2	.9	.4	.1	-	(X)	8
Anaheim-Santa Ana-Garden Grove, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.1	1.3	1.2	1.3	.3	.2	(X)	15
Anderson, Ind.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.6	.7	.8	.4	.8	-	(X)	1
Ann Arbor, Mich.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.3	.1	.4	.3	-	(X)	9
Appleton-Oshkosh, Wis.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	3.3	1.1	.3	1.7	.2	-	(X)	16
Atlanta, Ga.	11.5	7.0	4.5	4.8	-	5.6	.4	4.4	1.4	.9	1.6	.5	.6	5	12
Augusta, Ga-S.C.	7.3	7.3	.1	5.6	.4	.1	1.2	7.8	.7	3.9	3.1	.2	(D)	2	1
Baltimore, Md.	9.4	8.2	1.3	7.8	.3	.7	.6	43.7	5.2	7.0	19.2	12.2	2.3	14	4
Baton Rouge, La.	20.7	15.4	5.3	7.8	4.1	7.4	1.4	66.1	10.9	8.1	41.9	5.1	20.4	1	1
Battle Creek, Mich.	1.4	1.4	-	1.4	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	2	(X)
Beaumont-Port Arthur-Orange, Tex.	70.6	23.1	47.4	4.8	7.1	13.1	45.6	80.6	8.7	17.6	44.1	10.2	22.8	1	2
Billings, Mont.	2.6	2.5	.1	.8	1.4	.4	-	5.9	.7	1.3	3.2	.7	(D)	1	1
Binghamton, N.Y.-Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	.4	.7	.2	.8	(D)	(X)	1
Birmingham, Ala.	29.7	29.7	-	28.3	.7	.3	.4	29.4	9.7	3.2	4.3	12.2	.3	2	3
Boston, Mass.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9.0	1.6	1.0	5.0	1.4	1.3	(X)	19
Bridgeport, Conn.	1.3	.8	.4	.9	-	.4	-	3.5	.7	.5	1.7	.6	.4	5	8
Buffalo, N.Y.	27.8	24.3	3.5	18.5	5.6	2.1	1.6	31.8	9.1	7.6	12.9	2.2	5.6	3	4
Canton, Ohio	12.2	7.5	4.6	9.9	2.2	.1	-	7.1	2.1	2.9	1.6	.5	(D)	1	4
Cedar Rapids, Iowa	1.8	1.5	.3	1.4	-	.3	.1	3.5	.7	.6	1.0	1.1	1.7	15	13
Charleston, S.C.	8.5	8.1	.4	8.1	-	-	.4	(S)	(S)	(S)	(S)	(S)	(S)	12	(X)
Charleston, W. Va.	(D)	(D)	(D)	1.7	(D)	.3	(D)	7.7	2.2	2.2	2.4	.8	.2	(X)	1
Chattanooga, Tenn.-Ga.	6.4	6.4	-	6.4	-	-	-	4.7	2.1	.9	1.0	.7	.1	19	12
Chicago, Ill.	53.8	48.6	5.2	37.9	1.4	9.6	4.9	84.0	24.7	12.7	23.9	22.7	72.7	3	3
Cincinnati, Ohio-Ky.-Ind.	22.9	22.4	.5	6.0	.1	16.5	.3	11.5	3.0	2.1	4.8	1.5	1.4	3	8
Cleveland, Ohio	33.2	32.2	.9	20.7	8.1	1.1	3.3	47.5	10.9	10.6	14.7	11.3	.6	6	1
Columbia, S.C.	3.4	3.1	.4	.7	-	.8	1.9	(S)	(S)	(S)	(S)	(S)	(S)	11	(X)
Columbus, Ga.-Ala.	2.1	2.1	-	2.1	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Columbus, Ohio	3.6	3.3	.2	2.3	.1	.9	.3	5.9	2.6	.9	1.7	.7	.3	17	14
Corpus Christi, Tex.	43.2	43.0	.2	1.1	-	42.1	-	22.6	6.5	2.1	3.0	10.9	8.8	1	1
Dallas-Fort Worth, Tex.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11.8	3.5	2.4	4.1	1.9	2.3	(X)	17
Davenport-Rock Island-Moline, Iowa-Ill.	6.9	6.9	-	6.6	-	.3	-	4.8	1.9	1.1	1.3	.5	.8	1	15
Dayton, Ohio	5.2	4.9	.3	3.4	.3	1.4	.1	7.8	2.3	1.5	2.5	1.6	4.0	3	12
Decatur, Ill.	3.6	3.6	-	2.6	-	1.0	-	2.3	.6	.7	.9	.1	1.0	1	1
Denver-Boulder, Colo.	3.4	3.3	-	1.7	.4	.8	.5	16.1	2.3	2.1	9.5	2.2	2.0	17	7
Detroit, Mich.	57.3	39.6	17.7	44.5	.6	8.9	3.3	86.9	13.1	24.8	23.8	25.2	3.4	1	1
Dubuque, Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.4	.4	.2	.2	.2	(X)	8
Duluth-Superior, Minn.-Wis.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.3	.2	.5	-	.7	(X)	12
El Paso, Tex.	13.3	13.3	-	4.3	8.9	.1	-	13.8	2.8	2.5	2.0	6.6	(D)	1	6
Erie, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.8	.1	.2	.6	-	(X)	9
Eugene-Springfield, Oreg.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	1.3	.3	.5	-	(D)	(X)	8
Evansville, Ind.-Ky.	2.3	2.0	.3	1.2	-	.2	.9	3.8	1.2	.7	.7	1.4	(D)	11	5
Fargo-Moorhead, N.D.-Minn.	2.4	2.4	-	2.4	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Fitchburg-Leominster, Mass.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	.7	.1	.2	-	-	(X)	7
Flint, Mich.	6.6	5.8	.8	3.0	-	3.6	-	7.8	.8	5.0	1.3	.8	-	1	1
Florence, Ala.	1.8	1.8	-	1.2	-	.5	.1	18.8	2.1	1.7	3.3	11.7	.4	1	1
Fort Wayne, Ind.	1.3	1.1	.2	1.0	-	.1	.2	(S)	(S)	(S)	(S)	(S)	(S)	9	(X)
Fresno, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.7	.4	.3	.8	.1	.9	(X)	10
Gadsden, Ala.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.6	.4	.9	.2	3.1	-	(X)	1
Galveston-Texas City, Tex.	(D)	(D)	.1	.7	(D)	(D)	-	27.3	5.2	2.3	16.6	3.3	(D)	(X)	1
Gary-Hammond-East Chicago, Ind.	111.4	111.2	.2	100.2	7.2	4.0	-	135.8	34.3	23.0	28.5	50.0	4.5	1	1
Greensboro-Winston-Salem-High Point, N.C.	7.4	7.2	.3	6.1	.2	-	1.1	9.5	4.8	2.1	2.2	.6	.5	13	10
Greenville-Spartanburg, S.C.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.5	.4	.5	.2	-	(X)	19
Hamilton-Middletown, Ohio	5.0	4.4	.5	5.0	-	-	-	10.5	5.2	1.6	2.1	1.7	-	10	2
Harrisburg, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.4	1.7	.8	2.7	.2	.2	(X)	7
Hartford, Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.6	.5	.3	.6	.2	.7	(X)	19
Houston, Tex.	38.0	34.9	3.0	8.3	1.8	25.9	2.0	169.5	33.9	20.1	75.9	39.6	42.8	2	1
Huntington-Ashland, W. Va.-Ky.-Ohio	9.6	9.3	.3	8.3	.6	.5	.2	16.5	2.9	5.2	5.2	3.3	3.9	3	5
Indianapolis, Ind.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	12.4	7.4	1.8	1.9	1.4	3.7	(X)	1
Jacksonville, Fla.	2.9	2.1	.8	1.2	.4	.3	1.0	11.7	2.3	1.3	4.6	3.5	2.4	2	3
Jersey City, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7.8	1.1	.7	5.3	.7	(D)	(X)	15
Kansas City, Mo.-Kans.	20.8	16.0	4.9	11.0	1.6	7.7	.5	21.8	5.4	3.2	10.2	2.9	6.9	10	5
Killeen-Temple, Tex.	3.7	3.3	.4	3.1	-	.6	-	4.1	.9	.8	.7	1.7	.3	11	6
Lafayette-West Lafayette, Ind.	1.4	1.4	-	.6	-	.6	.2	1.6	.2	.2	.5	.7	.2	1	3
Lake Charles, La.	17.2	9.1	8.1	5.9	2.3	6.9	2.1	26.1	7.3	4.2	13.3	1.4	9.2	8	1
Lakeland-Winter Haven, Fla.	1.3	1.3	-	.7	.1	-	.5	10.3	3.3	.9	3.3	2.8	4.8	4	3
Lancaster, Pa.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.3	1.0	.7	1.6	.9	2.0	(X)	10
Lansing-East Lansing, Mich.	2.5	2.1	.3	1.4	-	.5	.6	4.6	.5	.6	3.4	.1	-	1	3
Las Vegas, Nevada	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.6	.3	.5	1.7	.1	.2	(X)	6
Lexington, Ky.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.7	.4	.5	.2	.4	(X)	15
Lima, Ohio	(S)	(S)	(S)	(S)	(S)	(S)	(S)	6.0	1.1	1.6	.8	2.6	(D)	(X)	10
Little Rock-North Little Rock, Ark.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.3	.7	.7	.4	.5	(D)	(X)	4
Lorain-Elyria, Ohio	1.5	1.3	.2	.6	-	-	.9	11.3	1.7	4.7	1.8	3.2	1.3	1	1
Los Angeles-Long Beach, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	108.5	22.8	24.3	38.8	22.6	30.5	(X)	2
Louisville, Ky.-Ind.	5.2	3.7	1.5	3.5	.3	1.3	.1	15.6	3.4	4.6	5.4	2.2	1.8	11	5
Lynchburg, Va.	3.3	2.5	.8	3.3	-	-	-	1.8	.6	.5	.4	.3	.1	1	12
Macon, Ga.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	.4	.3	.3	.7	.7	(X)	3
Mansfield, Ohio	1.1	1.1	-	.7	-	-	.4	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)

See footnotes at end of table.

Table 3C. Air Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures							Operating costs					Cost recovered	Standard error of estimates (percent)	
	Total	Abatement technique		By type of pollutant				Total	By kind of cost						
		End of line	Changes in production process	Particulates	Sulfur oxides	Nitrogen oxides hydrocarbons, and carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Milwaukee, Wis.	5.0	4.4	.6	3.7	.1	1.0	.2	(S)	(S)	(S)	(S)	(S)	(S)	16	(X)
Minneapolis-St. Paul, Minn.-Wis.	8.5	4.6	3.9	2.0	2.6	3.5	.4	17.0	3.1	3.0	3.6	7.2	1.1	9	4
Mobile, Ala.	4.8	4.7	.1	3.7	.2	.2	.7	6.9	2.6	.8	2.5	.9	2.0	3	2
Monroe, La.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.9	1.2	.2	.7	.9	1.7	(X)	1
Muskegon-Muskegon Heights, Mich.	5.5	5.5	-	5.4	-	-	.1	1.8	.9	.3	.2	.4	.5	1	3
Nashville-Davidson, Tenn.	1.3	1.2	.1	1.2	-	.1	-	3.0	1.1	.8	.7	.4	.2	9	7
New Brunswick-Perth Amboy-Sayreville, N.J.	7.2	4.6	2.6	1.5	2.3	1.6	1.8	49.3	7.5	8.9	17.1	15.9	20.1	5	3
New London-Norwich, Conn.-R.I.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4.1	.2	.1	3.7	-	(D)	(X)	1
New Orleans, La.	5.6	5.6	-	3.1	-	2.5	-	8.9	2.5	1.5	2.4	2.4	3.3	1	1
New York, N.Y.-N.J.	5.8	4.8	1.0	3.3	.4	1.8	.3	19.9	2.4	2.2	12.6	2.7	1.3	12	5
Newark, N.J.	9.7	8.8	.9	4.6	.6	2.8	1.7	39.4	5.3	5.5	14.2	14.5	15.3	8	3
Newport News-Hampton, Va.	1.7	.8	.9	1.2	.1	.4	-	4.6	.6	.5	1.0	2.5	(D)	1	1
Norfolk-Virginia Beach-Portsmouth, Va.-N.C.	1.0	.8	.2	1.0	-	-	-	1.4	.8	.3	.2	.1	.1	1	11
Odessa, Tex.	5.6	.4	5.2	.2	-	5.4	-	(S)	(S)	(S)	(S)	(S)	(S)	2	(X)
Oklahoma City, Okla.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	.7	.4	.8	.1	.3	(X)	12
Omaha, Nebr.-Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.2	.4	.6	.8	.4	.3	(X)	8
Oxnard-Simi Valley-Ventura, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.3	1.8	.2	.2	-	1.3	(X)	3
Pensacola, Fla.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.5	3.7	.7	.2	3.9	(D)	(X)	2
Peoria, Ill.	(D)	(D)	1.1	(D)	(D)	.3	.1	16.3	5.3	1.9	4.3	4.8	(D)	(X)	1
Petersburg-Colonial Heights-Hopewell, Va.	(D)	(D)	1.3	(D)	-	(D)	.1	3.7	1.4	.8	.1	1.3	(D)	(X)	1
Philadelphia, Pa.-N.J.	29.4	26.5	2.9	16.0	1.1	7.2	5.1	89.8	15.9	15.7	34.4	23.8	18.6	6	2
Phoenix, Ariz.	4.0	.9	3.1	3.0	-	.7	.3	2.1	.3	.3	.4	1.1	3.8	17	9
Pine Bluff, Ark.	1.2	1.1	.1	.7	.5	-	-	2.4	.8	.2	.6	.8	1.0	1	3
Pittsburgh, Pa.	82.6	80.7	2.0	60.8	21.2	.6	-	102.2	24.4	20.8	36.5	20.6	5.2	1	1
Portland, Maine	(S)	(S)	(S)	(S)	(S)	(S)	(S)	.3	.1	.1	.1	-	2.1	(X)	4
Portland, Oreg.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	14.5	6.6	2.4	3.8	1.8	4.9	(X)	14
Poughkeepsie, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.2	.1	.6	.1	.4	(D)	(X)	1
Providence-Warwick-Pawtucket, R.I.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.6	.8	.5	1.1	.1	1.5	(X)	8
Provo-Orem, Utah	1.0	1.0	-	1.0	-	-	-	5.7	1.0	1.4	3.1	.1	-	1	2
Pueblo, Colo.	4.0	3.9	.1	4.0	-	-	-	11.4	8.3	1.3	1.7	-	.1	1	11
Racine, Wis.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.3	.1	.4	.3	-	(X)	4
Raleigh, Durham, N.C.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	.2	.4	.5	.1	.1	(X)	17
Richmond, Va.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.7	.7	.3	.4	.3	3.3	(X)	7
Riverside-San Bernardino-Ontario, Calif.	26.8	26.5	.3	12.8	13.1	.9	-	24.0	3.5	4.2	7.6	8.6	8.0	1	4
Rochester, N.Y.	6.8	6.7	.1	1.9	.6	3.8	.5	5.2	.8	1.1	.7	2.5	(D)	7	7
Saginaw, Mich.	18.1	17.5	.6	4.7	-	13.1	.3	12.4	4.8	1.7	4.5	1.3	.5	1	3
St. Louis, Mo.-Ill.	41.5	27.6	13.9	13.0	16.6	8.5	3.4	50.0	9.6	14.7	7.7	18.1	9.1	1	2
Salt Lake City-Ogden, Utah	10.6	10.6	-	3.6	6.6	.3	.1	16.7	4.7	3.5	7.8	.7	(D)	7	4
San Diego, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	.3	.3	.2	1.4	-	(X)	5
San Francisco-Oakland, Calif.	32.1	29.7	2.4	4.8	1.6	25.1	.6	65.8	8.1	5.6	23.3	28.8	7.6	3	3
San Jose, Calif.	3.4	3.2	.3	1.4	.3	1.3	.4	8.3	2.7	2.0	3.2	.5	1.1	5	3
Savannah, Ga.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	8.4	2.4	1.3	1.5	3.2	.1	(X)	5
Seattle-Everett, Wash.	8.0	7.9	.1	7.9	-	-	.1	5.2	2.3	1.6	.9	.3	7.6	19	8
Spokane, Wash.	5.1	5.1	-	1.8	3.1	.2	-	5.1	1.1	2.0	.5	1.4	(D)	5	13
Springfield, Ill.	1.5	1.5	-	.1	-	1.4	-	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Steubenville-Weirton, Ohio-W. Va.	19.2	16.7	2.6	17.5	1.7	-	-	23.1	3.5	5.9	4.3	9.3	.6	5	1
Stockton, Calif.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.8	1.8	.4	.4	.2	1.0	(X)	7
Syracuse, N.Y.	1.3	1.2	.1	.7	-	-	.6	4.6	.7	1.0	1.2	1.6	.9	3	12
Tacoma, Wash.	6.1	5.8	.3	5.6	.1	.4	-	22.7	2.2	3.5	1.7	15.3	2.1	6	1
Texarkana, Tex.-Ark.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.0	.3	.3	.4	-	-	(X)	16
Toledo, Ohio-Mich.	6.6	6.3	.3	1.3	4.7	.4	.2	20.1	5.2	3.2	10.1	1.6	2.1	4	10
Trenton, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.9	.2	.6	2.0	-	.1	(X)	13
Tucson, Ariz.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	6.6	2.8	1.3	2.4	-	(D)	(X)	16
Tulsa, Okla.	2.3	2.2	.1	.7	.4	1.2	-	7.1	1.4	1.9	3.6	.2	1.6	6	11
Tuscaloosa, Ala.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.9	-	.6	2.1	.1	.3	(X)	1
Tyler, Tex.	4.6	.5	4.1	-	4.0	.5	.1	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Vallejo-Fairfield-Napa, Calif.	1.3	1.3	.1	.1	.8	.4	-	20.7	2.1	1.9	14.8	1.9	1.0	2	1
Vineland-Millville-Bridgeton, N.J.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	.8	.3	.8	.1	(D)	(X)	2
Waterloo-Cedar Falls, Iowa	2.1	2.1	-	2.1	-	-	-	2.5	.4	.8	.7	.7	.1	3	1
West Palm Beach-Boca Raton, Fla.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	.9	.1	.1	-	-	(X)	2
Wheeling, W. Va.	1.8	1.6	.2	1.8	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
Wichita, Kans.	59.6	59.3	.3	.7	57.9	1.0	-	33.5	2.9	6.5	22.5	1.6	.7	1	9
Wilmington, Del.-N.J.-Md.	24.9	20.0	4.9	18.9	.4	1.0	4.6	24.3	4.7	5.4	5.7	8.5	1.1	1	4
Wilmington, N.C.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	.5	.5	.8	.3	1.2	(X)	19
Worcester, Mass.	1.0	.9	.1	.7	-	.3	-	2.2	.5	.5	1.1	.1	-	19	7
York, Pa.	2.0	1.9	.1	1.6	.2	.1	.1	3.2	1.1	.5	.6	1.0	1.8	9	16
Youngstown-Warren, Ohio	17.3	17.3	-	10.2	3.3	1.1	2.7	19.3	3.6	5.3	3.6	6.8	.3	1	2

Note: Totals may not agree precisely with detail because of independent rounding. No major industry groups are shown. No SMSA totals are shown where PACE and GAC are less than $1.0 million or the standard error is 20 or greater. Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the SMSA totals.

- Represents zero. (D) Withheld to avoid disclosing operatings of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. See text. (X) Not applicable.

Table 4A. Water Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	All industries[1]	1,245.7	1,080.9	164.8	3,015.6	485.7	2,529.9	568.3	544.5	848.7	568.3	396.9	1	1
20	Food and kindred products	111.1	86.1	25.0	297.9	161.0	136.9	35.7	33.9	38.4	28.9	24.6	5	4
201	Meat products	(S)	(S)	(S)	54.2	27.4	26.7	7.8	7.1	7.2	4.6	3.6	(X)	4
2011	Meatpacking plants	5.8	5.2	.6	26.7	15.3	11.4	3.7	3.3	2.8	1.7	2.8	3	1
2013	Sausages and other prepared meats	1.8	1.7	.1	5.5	3.0	2.4	.6	.8	.5	.6	-	9	7
2016	Poultry dressing plants	(S)	(S)	(S)	18.9	7.6	11.3	3.3	2.5	3.6	1.9	.5	(X)	10
2017	Poultry and egg processing	1.1	1.1	-	3.0	1.4	1.6	.3	.4	.4	.5	.2	15	19
202	Dairy products	(S)	(S)	(S)	30.3	19.6	10.8	2.5	3.0	1.7	3.5	1.9	(X)	9
2022	Cheese, natural and processed	(S)	(S)	(S)	9.1	2.9	6.2	1.4	1.9	.7	2.2	1.7	(X)	15
2023	Condensed and evaporated milk	(S)	(S)	(S)	3.3	2.0	1.2	.4	.4	.4	.1	-	(X)	19
2026	Fluid milk	(S)	(S)	(S)	15.3	12.3	3.0	.6	.7	.6	1.1	.2	(X)	9
203	Preserved fruits and vegetables	20.1	16.9	3.2	53.8	25.9	27.9	7.1	8.8	6.7	5.3	1.9	18	6
2032	Canned specialties	(S)	(S)	(S)	6.6	3.4	3.2	.7	1.1	.3	1.0	-	(X)	2
2033	Canned fruits and vegetables	(S)	(S)	(S)	20.8	12.6	8.2	1.9	2.2	2.4	1.6	.4	(X)	10
2035	Pickles, sauces, salad dressings	(S)	(S)	(S)	5.3	2.1	3.2	.8	.8	1.1	.5	(D)	(X)	18
2037	Frozen fruits and vegetables	2.9	2.8	.2	10.0	2.5	7.5	2.0	2.3	1.9	1.3	.8	5	6
2038	Frozen specialties	(S)	(S)	(S)	7.2	4.3	2.9	.5	1.4	.5	.5	.1	(X)	18
204	Grain mill products	7.8	6.3	1.4	32.0	12.6	19.4	4.1	3.4	7.1	4.8	3.8	3	7
2041	Flour, other grain mill products	(D)	(D)	(D)	1.5	1.0	.5	.1	.1	.1	.2	.1	(X)	14
2043	Cereal breakfast foods	(D)	(D)	(D)	2.0	1.6	.4	.1	.1	-	.2	-	(X)	11
2046	Wet corn milling	6.1	5.0	1.0	19.1	6.5	12.6	2.4	1.7	5.5	3.1	1.6	1	1
205	Bakery products	(S)	(S)	(S)	20.4	19.1	1.3	.2	.4	.3	.4	-	(X)	5
2051	Bread, cake, and related products	(D)	(D)	(D)	4.2	3.2	1.0	.2	.3	.3	.3	-	(X)	6
2052	Cookies and crackers	(D)	(D)	(D)	16.2	15.8	.3	.1	.1	.1	.1	-	(X)	1
206	Sugar, confectionery products	(S)	(S)	(S)	17.3	4.6	12.8	4.3	2.8	3.5	2.2	.3	(X)	7
2062	Cane sugar refining	(S)	(S)	(S)	3.3	.9	2.5	.9	.4	.7	.4	.1	(X)	2
2063	Beet sugar	(S)	(S)	(S)	5.4	.7	4.7	2.0	.6	1.9	.1	-	(X)	13
2065	Confectionery products	(S)	(S)	(S)	4.1	2.3	(D)	(D)	(D)	(D)	(D)	-	(X)	5
2066	Chocolate and cocoa products	(S)	(S)	(S)	1.3	.6	(D)	(D)	(D)	(D)	(D)	-	(X)	1
207	Fats and oils	10.2	9.7	.5	20.1	7.9	12.2	2.9	2.8	4.1	2.3	1.7	7	6
2075	Soybean oil mills	4.6	4.5	.2	5.8	2.7	3.1	1.0	.6	1.1	.3	.5	1	1
2079	Shortening and cooking oils	3.6	3.6	-	9.8	3.5	6.3	1.1	1.6	2.6	1.0	.9	7	3
208	Beverages	15.0	9.7	5.4	51.5	33.5	17.9	5.6	4.1	6.2	2.0	10.8	3	3
2082	Malt beverages	(S)	(S)	(S)	38.6	24.1	14.6	4.6	3.3	5.3	1.3	10.4	(X)	4
2083	Malt	(S)	(S)	(S)	1.3	1.0	.3	.2	.1	.1	-	-	(X)	3
2084	Wines, brandy, and brandy spirits	(S)	(S)	(S)	1.2	.5	.6	.1	.2	.3	.1	-	(X)	17
2086	Bottled and canned soft drinks	(S)	(S)	(S)	7.5	5.9	1.5	.4	.3	.4	.4	.4	(X)	12
209	Miscellaneous foods, kindred products	7.0	6.1	.9	18.3	10.4	7.9	1.3	1.5	1.5	3.6	.6	16	6
2091	Canned and cured seafoods	(D)	(D)	(D)	1.6	.7	.9	.2	.2	(D)	(D)	.4	(X)	9
2095	Roasted coffee	(D)	(D)	(D)	4.9	1.3	3.6	.1	.2	(D)	(D)	-	(X)	1
2099	Food preparations, n.e.c.	(S)	(S)	(S)	9.9	7.6	2.3	.7	.8	.5	.2	.2	(X)	14
21	Tobacco products	(D)	(D)	(D)	4.3	2.7	(D)	(D)	(D)	(D)	(D)	-	(X)	2
2111	Cigarettes	(D)	(D)	(D)	2.9	2.3	(D)	(D)	(D)	(D)	(D)	-	(X)	1
22	Textile mill products	15.2	14.1	1.1	60.2	30.1	30.2	11.1	5.3	7.8	6.0	7.2	(X)	6
2211	Weaving mills, cotton	(S)	(S)	(S)	7.3	2.9	4.4	1.9	.7	.6	1.2	(D)	(X)	1
2221	Weaving mills, manmade fiber, silk	(S)	(S)	(S)	8.8	4.8	4.0	1.2	.7	1.2	.8	4.3	(X)	4
225	Knitting mills	(S)	(S)	(S)	11.7	7.4	4.2	1.5	.8	1.3	.7	.2	(X)	14
2253	Knit outerwear mills	(S)	(S)	(S)	1.2	.8	.3	.1	.1	.1	-	.1	(X)	14
226	Textile finishing, except wool	2.9	(D)	(D)	17.5	6.5	11.0	5.0	1.6	2.9	1.5	(D)	11	14
2262	Finishing plants, manmade fiber, silk	1.8	(D)	(D)	9.2	1.6	7.6	3.4	1.0	1.9	1.2	(D)	4	16
2269	Finishing plants, n.e.c.	(S)	(S)	(S)	2.5	1.5	1.0	.2	.3	.3	.1	-	(X)	16
227	Floor covering mills	1.5	1.5	-	4.0	2.3	1.7	.3	.4	.8	.2	.3	5	12
2272	Tufted carpets and rugs	1.4	1.4	-	3.7	2.2	1.5	.3	.3	.7	.2	.3	5	14
228	Yarn and thread mills	(S)	(S)	(S)	4.9	2.9	2.0	.7	.6	.4	.3	.1	(X)	4
2281	Yarn mills, except wool	(S)	(S)	(S)	1.9	1.4	.5	.1	.2	(D)	(D)	-	(X)	15
2282	Throwing and winding mills	(S)	(S)	(S)	1.9	.8	1.2	.5	.4	(D)	(D)	-	(X)	2
24	Lumber and wood products	12.3	10.5	1.8	25.5	1.9	23.7	6.8	5.3	7.1	4.5	4.9	11	5
2411	Logging camps, log contractors	(S)	(S)	(S)	3.1	-	3.1	.6	1.4	.6	.5	(D)	(X)	15
242	Sawmills and planing mills	1.2	1.1	.1	3.1	.3	2.8	.9	1.1	.6	.2	-	18	11
2421	Sawmills, planing mills, general	1.2	1.1	.1	3.1	.3	2.8	.9	1.1	.6	.2	-	18	11
243	Millwork, plywood, structural members	(S)	(S)	(S)	4.8	.9	3.9	1.6	.8	.5	1.0	.1	(X)	11
2436	Softwood veneer and plywood	(S)	(S)	(S)	4.1	.3	3.7	1.6	.7	.5	.9	.1	(X)	11
249	Miscellaneous wood products	6.3	5.3	1.0	14.3	.5	13.8	3.6	2.0	5.3	2.8	(D)	13	9
2499	Wood products, n.e.c.	5.7	4.8	.9	11.4	.2	11.2	2.7	1.2	4.6	2.6	(D)	15	10
25	Furniture and fixtures	2.1	2.1	-	4.5	2.7	1.8	.4	.5	.5	.4	.1	13	7
251	Household furniture	(S)	(S)	(S)	2.2	1.4	.7	.2	.2	.2	.1	.1	(X)	14

See footnotes at end of table.

Table 4A. Water Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
26	Paper and allied products	180.6	149.7	31.0	400.5	52.4	348.1	96.4	58.9	133.8	59.0	73.4	1	2
2611	Pulpmills	40.0	39.2	.9	69.6	3.6	66.0	15.8	10.3	34.9	5.0	24.1	1	16
2621	Papermills, except building paper	95.0	76.1	18.9	195.9	25.3	170.5	49.6	30.0	60.9	30.0	33.4	2	1
2631	Paperboard mills	38.3	27.7	10.6	108.5	12.5	95.9	28.0	15.9	32.2	19.8	14.1	4	6
264	Miscellaneous converted paper products	3.9	3.5	.4	14.7	6.8	7.9	1.5	1.2	3.2	2.1	.1	7	10
2641	Paper coating and glazing	(S)	(S)	(S)	4.5	3.7	.8	.1	.2	.1	.4	-	(X)	14
2643	Bags, except textile bags	(S)	(S)	(S)	1.0	.4	.5	(D)	(D)	.2	.2	-	(X)	16
2645	Die-cut paper and board	1.2	.9	.3	2.6	.1	2.5	(D)	(D)	.6	1.1	-	9	9
2647	Sanitary paper products	1.6	1.6	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	11	(X)
265	Paperboard containers and boxes	(S)	(S)	(S)	7.1	3.3	3.8	.6	.9	1.2	1.1	1.1	(X)	16
2653	Corrugated and solid fiber boxes	(S)	(S)	(S)	4.7	1.9	2.8	.5	.6	.8	.8	.7	(X)	18
27	Printing and publishing	1.9	1.6	.2	9.4	5.8	3.7	.4	.9	1.4	.9	.3	11	6
2711	Newspapers	(D)	(D)	(D)	2.0	1.8	.2	-	-	-	.1	.2	(X)	8
2752	Commercial printing, lithographic	(S)	(S)	(S)	1.9	1.4	.5	.1	.1	.1	.2	.1	(X)	13
28	Chemicals and allied products	360.7	316.2	44.6	895.2	59.9	835.3	176.2	164.8	292.7	201.6	81.2	1	8
281	Industrial inorganic chemicals	74.1	67.5	6.6	153.2	5.4	147.7	31.8	28.9	61.0	26.1	17.8	9	2
2812	Alkalies and chlorine	11.3	11.3	-	29.9	.3	29.6	9.1	4.7	11.9	3.8	1.5	12	4
2813	Industrial gases	(D)	(D)	(D)	2.0	.2	1.8	(D)	(D)	(D)	.2	-	(X)	6
2816	Inorganic pigments	(D)	(D)	(D)	41.8	1.7	40.1	(D)	(D)	(D)	8.9	.5	(X)	4
2819	Industrial inorganic chemicals, n.e.c.	54.6	49.0	5.5	79.5	3.3	76.2	16.4	16.6	30.0	13.2	15.8	11	4
282	Plastics materials, synthetics	43.7	38.3	5.4	123.0	7.7	115.2	25.5	24.2	38.0	27.5	18.9	6	1
2821	Plastics materials and resins	36.0	32.6	3.4	74.1	6.4	67.7	14.8	11.0	22.4	19.5	13.6	7	3
2822	Synthetic rubber	1.1	(D)	(D)	11.0	1.0	9.9	(D)	2.9	(D)	1.7	(D)	8	2
2823	Cellulosic manmade fibers	2.8	(D)	(D)	9.7	-	9.7	(D)	2.5	(D)	.2	(D)	1	1
2824	Organic fibers, noncellulosic	3.8	3.7	.1	28.2	.3	27.9	6.7	7.9	7.3	6.1	.2	1	1
283	Drugs	13.5	9.5	4.0	39.6	6.2	33.4	5.9	6.3	9.8	11.5	3.8	7	3
2833	Medicinals and botanicals	7.6	(D)	(D)	20.3	.8	19.5	3.0	3.6	5.8	7.2	(D)	13	6
2834	Pharmaceutical preparations	5.7	(D)	(D)	18.7	5.2	13.5	2.9	2.5	3.9	4.2	(D)	5	1
284	Soaps, cleaners, toilet goods	5.0	4.5	.4	18.6	7.0	11.6	3.1	2.5	2.2	3.8	.3	11	6
2841	Soap and other detergents	1.8	1.7	.1	8.5	4.1	4.3	.8	.9	.9	1.7	.2	17	7
2842	Polishes and sanitation goods	(S)	(S)	(S)	2.0	.9	1.1	.2	.4	.3	.2	.1	(X)	18
2843	Surface active agents	(S)	(S)	(S)	5.8	1.4	4.5	1.9	.7	.7	1.2	-	(X)	13
2844	Toilet preparations	(S)	(S)	(S)	2.3	.6	1.7	.3	.4	.3	.7	-	(X)	1
2851	Paints and allied products	2.0	1.7	.3	5.8	1.7	4.1	.4	1.2	1.0	1.5	.5	18	12
286	Industrial organic chemicals	153.6	131.8	21.8	439.2	25.0	414.1	82.1	80.1	146.1	105.9	28.8	4	3
2861	Gum and wood chemicals	(S)	(S)	(S)	2.9	.5	2.4	.9	.6	.5	.4	.9	(X)	15
2865	Cyclic crudes and intermediates	19.5	19.1	.4	85.7	7.3	78.4	15.0	13.2	29.7	20.5	4.2	8	3
2869	Industrial organic chemicals, n.e.c.	133.8	112.4	21.4	350.6	17.2	333.4	66.2	66.3	115.9	85.0	23.7	4	1
287	Agricultural chemicals	47.9	46.7	1.3	94.0	.8	93.1	23.7	17.1	30.3	22.0	8.9	3	2
2873	Nitrogenous fertilizers	19.4	(D)	(D)	30.7	.2	30.5	8.3	4.6	9.4	8.2	(D)	4	7
2874	Phosphatic fertilizers	11.6	(D)	(D)	21.9	.1	21.8	8.1	2.9	7.9	2.9	6.3	5	2
2879	Agricultural chemicals, n.e.c.	16.8	16.6	.2	41.1	.6	40.5	7.1	9.6	12.9	10.8	(D)	8	2
289	Miscellaneous chemical products	(S)	(S)	(S)	21.9	6.0	15.9	3.6	4.5	4.3	3.5	2.2	(X)	9
2892	Explosives	(D)	(D)	(D)	2.4	.1	2.3	.4	1.1	.4	.4	-	(X)	12
2899	Chemical preparations, n.e.c.	(D)	(D)	(D)	13.7	2.9	10.7	2.5	2.3	3.2	2.7	2.0	(X)	11
29	Petroleum and coal products	119.4	99.2	20.2	370.8	5.7	365.1	57.8	80.2	146.7	80.4	118.8	1	1
2911	Petroleum refining	118.4	98.2	20.2	364.3	3.9	360.4	56.5	79.3	145.6	79.0	118.7	1	1
295	Paving and roofing materials	(S)	(S)	(S)	4.6	1.5	3.0	.9	.5	.8	.8	-	(X)	12
2952	Asphalt felts and coatings	(S)	(S)	(S)	4.2	1.5	2.7	.8	.4	.6	.8	-	(X)	12
299	Miscellaneous petroleum, coal products	(S)	(S)	(S)	1.9	.2	1.7	.4	.3	.3	.6	-	(X)	13
2992	Lubricating oils and greases	(S)	(S)	(S)	1.5	.2	1.3	.3	.3	.2	.5	-	(X)	16
30	Rubber, miscellaneous plastics products	9.3	8.6	.8	29.6	8.2	21.4	4.7	4.8	7.3	4.6	.4	14	10
3011	Tires and inner tubes	2.3	(D)	(D)	5.8	2.0	3.7	.6	1.5	.8	.8	(D)	5	2
3079	Miscellaneous plastics products	5.1	(D)	(D)	18.3	3.9	14.4	2.8	2.6	5.9	3.2	.3	13	14
31	Leather and leather products	(D)	(D)	(D)	14.6	5.7	8.9	3.2	1.5	2.0	2.2	.7	(X)	16
32	Stone, clay, glass products	25.4	19.2	6.1	45.1	8.7	36.4	10.4	8.8	11.8	5.4	5.9	16	5
3211	Flat glass	(S)	(S)	(S)	4.1	.8	3.3	2.1	.5	.5	.2	-	(X)	3
322	Glass, pressed or blown	2.9	2.7	.2	9.2	2.0	7.3	1.9	1.8	2.3	1.3	.3	15	5
3221	Glass containers	1.3	1.3	-	2.3	.9	1.5	.5	.4	.2	.3	.1	12	5
3229	Pressed and blown glass, n.e.c.	(S)	(S)	(S)	6.9	1.1	5.8	1.4	1.4	2.1	1.0	.2	(X)	6
3241	Cement, hydraulic	(S)	(S)	(S)	2.7	.2	2.6	.5	1.0	.9	.2	.6	(X)	10
326	Pottery and related products	(S)	(S)	(S)	2.7	.6	2.1	.5	.7	.6	.3	-	13	19
329	Misc. nonmetallic mineral products	14.6	9.6	5.1	16.8	3.6	13.2	2.8	2.8	5.7	1.9	4.4	(X)	10
3291	Abrasive products	(S)	(S)	(S)	2.0	.7	1.3	.1	.3	.9	-	-	(X)	4
3292	Asbestos products	(S)	(S)	(S)	2.1	.5	1.5	.4	.3	.4	.4	.6	(X)	16
3296	Mineral wool	7.2	2.1	5.0	7.7	1.6	6.1	1.2	1.5	2.6	.8	3.8	9	12
33	Primary metal industries	227.3	216.3	11.1	442.0	24.1	417.9	94.6	92.1	115.2	116.1	52.4	1	1
331	Blast furnace, basic steel products	192.6	182.6	10.1	343.2	10.9	332.2	78.6	66.9	84.8	102.0	42.4	1	1
3312	Blast furnances and steel mills	187.9	179.0	8.9	323.7	9.1	314.6	75.8	63.7	78.2	97.0	42.0	1	1
3313	Electrometallurgical products	(D)	(D)	(D)	4.8	-	4.8	.5	.6	3.3	.3	(D)	(X)	5
3315	Steel wire and related products	(D)	(D)	(D)	4.7	.7	4.0	.7	.7	1.2	1.3	(D)	(X)	14
3316	Cold finishing of steel shapes	(D)	(D)	(D)	7.1	.4	6.7	1.1	1.7	1.8	2.2	(D)	(X)	4
3317	Steel pipe and tubes	1.6	1.5	-	2.9	.6	2.3	.5	.2	.3	1.4	-	5	5

See footnotes at end of table.

Table 4A. Water Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	Primary metal industries--Continued													
332	Iron and steel foundries	7.8	7.5	.3	19.9	6.5	13.5	5.1	2.7	3.8	1.9	.9	11	3
3321	Gray iron foundries	6.7	6.6	.1	15.6	4.0	11.5	4.8	2.2	3.4	1.1	.9	13	4
3325	Steel foundries, n.e.c.	(S)	(S)	(S)	2.4	1.2	1.2	.1	.3	.2	.6	-	(X)	11
333	Primary nonferrous metals	11.3	11.2	.1	35.0	.6	34.4	5.1	7.8	17.0	4.4	7.7	3	6
3332	Primary lead	(D)	(D)	(D)	1.6	.1	1.5	(D)	(D)	.3	.4	-	(X)	9
3333	Primary zinc	3.1	3.1	-	4.0	.1	3.8	.9	1.0	1.2	.7	-	1	1
3334	Primary aluminum	5.1	5.1	-	9.4	.1	9.3	2.0	2.2	3.0	2.1	3.7	1	2
3339	Primary nonferrous metals, n.e.c.	(D)	(D)	(D)	9.5	.1	9.3	(D)	(D)	5.4	.3	2.4	(X)	5
3341	Secondary nonferrous metals	(D)	(D)	(D)	5.0	.3	4.6	.8	1.6	1.6	.6	.1	(X)	13
335	Nonferrous rolling and drawing	8.5	8.2	.4	32.0	3.7	28.3	4.2	11.4	6.7	6.0	.8	3	2
3351	Copper rolling and drawing	2.2	2.2	-	6.6	1.1	5.5	1.5	1.4	1.9	.7	.1	2	5
3353	Aluminum sheet, plate, and foil	3.0	3.0	-	8.7	.5	8.2	.9	3.4	1.5	2.4	.3	1	1
3354	Aluminum extruded products	(S)	(S)	(S)	3.3	.4	2.9	.7	1.1	.6	.5	.1	(X)	13
3356	Nonferrous rolling and drawing, n.e.c.	(D)	(D)	(D)	10.9	.6	10.2	.8	5.0	2.3	2.1	.1	(X)	4
3357	Nonferrous wiredrawing, insulating	(D)	(D)	(D)	2.1	1.0	1.1	.2	.3	.3	.3	.2	(X)	7
336	Nonferrous foundries	(D)	(D)	(D)	5.5	1.5	4.0	.8	1.2	1.2	.9	(D)	(X)	13
3361	Aluminum foundries	(D)	(D)	(D)	3.5	1.1	2.5	.7	1.0	.6	.2	(D)	(X)	4
34	Fabricated metal products	24.5	20.9	3.6	99.7	31.8	68.0	13.4	19.8	21.5	13.3	2.5	11	7
341	Metal cans, shipping containers	(D)	(D)	(D)	6.2	2.4	3.7	.5	1.1	1.4	.8	.2	(X)	12
3411	Metal cans	(D)	(D)	(D)	5.1	2.1	3.1	.4	.9	1.0	.7	.2	(X)	12
342	Cutlery, handtools, and hardware	2.3	2.0	.3	12.9	2.7	10.2	1.8	3.1	4.1	1.2	.2	13	7
3423	Hand and edge tools, n.e.c.	(S)	(S)	(S)	1.4	.3	1.0	.2	.2	.4	.3	-	(X)	17
3429	Hardware, n.e.c.	1.7	1.5	.3	11.0	2.3	8.7	1.4	2.8	3.6	.9	.1	16	8
343	Plumbing, heating, except electric	(S)	(S)	(S)	3.4	1.0	2.5	.6	.7	.9	.4	.2	(X)	17
344	Fabricated structural metal products	(D)	(D)	(D)	11.5	3.4	8.1	1.4	2.7	2.5	1.4	.2	(X)	8
3441	Fabricated structural metal	(D)	(D)	(D)	1.0	.5	.5	.1	.2	1.	.2	-	(X)	11
3443	Fabricated platework, boiler	(S)	(S)	(S)	4.7	1.1	3.6	.7	1.4	1.4	.1	-	(X)	8
345	Screw machine products, bolts, etc.	3.2	2.2	1.0	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
3452	Bolts, nuts, rivets, and washers	3.0	2.1	1.0	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
346	Metal forgings and stampings	2.2	1.6	.6	22.8	11.2	11.6	2.7	3.1	2.9	2.8	.8	15	9
3465	Automotive stampings	1.1	.9	.1	8.6	2.7	5.8	1.3	1.7	1.3	1.4	.4	11	7
3466	Crowns and closures	(S)	(S)	(S)	5.7	5.7	-	-	-	-	-	-	(X)	1
348	Ordnance and accessories, n.e.c.	2.7	2.3	.5	6.9	1.8	5.2	1.5	2.0	.8	.9	-	8	2
3482	Small arms ammunition	(D)	(D)	(D)	2.5	.8	1.7	.7	.5	.3	.1	-	(X)	1
3483	Ammunition, exclude small arms, n.e.c.	(S)	(S)	(S)	1.8	.4	1.4	.3	.9	.2	-	-	(X)	8
3484	Small arms	(S)	(S)	(S)	1.0	.2	.7	.2	.3	.2	.1	-	(X)	2
3489	Ordnance and accessories n.e.c.	(D)	(D)	(D)	1.7	.3	1.3	.2	.3	.1	.6	-	(X)	1
349	Miscellaneous fabricated metal products.	1.2	.9	.4	8.8	3.2	5.6	1.0	1.3	1.8	1.6	-	11	9
3494	Valves and pipe fittings	(S)	(S)	(S)	3.9	1.5	2.4	.5	.5	.6	.8	-	(X)	5
35	Machinery, except electrical	38.2	36.6	1.6	69.0	21.4	47.6	11.3	13.3	13.2	9.8	5.5	3	1
351	Engines and turbines	9.2	8.8	.4	11.6	2.7	8.9	2.7	2.1	2.6	1.5	(D)	7	4
3511	Turbines, turbine generator sets	(S)	(S)	(S)	2.0	.5	1.6	.3	.3	.2	.9	-	(X)	1
3519	Internal combustion engines, n.e.c.	8.8	8.5	.4	9.5	2.2	7.3	2.4	1.8	2.4	.6	(D)	7	5
352	Farm and garden machinery	.8	.7	.1	6.0	2.0	4.0	.8	1.2	1.0	.9	.3	9	1
353	Construction, related machinery	4.6	4.5	.1	11.7	3.0	8.7	2.2	2.3	2.3	1.9	.4	3	3
3531	Construction machinery	(D)	(D)	(D)	8.3	1.6	6.7	1.8	1.7	1.9	1.2	.4	(X)	2
3533	Oilfield machinery	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
354	Metalworking machinery	(S)	(S)	(S)	4.4	2.6	1.8	.3	.4	.4	.8	.2	(X)	10
3541	Machine tools, metal cutting	(S)	(S)	(S)	1.3	.7	.6	.1	.1	.2	.3	-	(X)	10
355	Special industry machinery	(S)	(S)	(S)	4.6	1.4	3.2	.6	.9	1.3	.4	.7	(X)	3
356	General industrial machinery	(S)	(S)	(S)	8.2	3.5	4.7	.9	1.5	1.2	1.1	.9	(X)	8
3562	Ball and roller bearings	(D)	(D)	(D)	3.3	.8	2.4	.5	1.0	.5	.4	.8	(X)	14
3568	Power transmission equipment, n.e.c.	(D)	(D)	(D)	1.5	.8	.8	.2	.2	.3	.1	.1	(X)	13
357	Office and computing machines	9.0	8.7	.2	9.0	1.9	7.1	1.5	2.2	1.8	1.6	.2	1	4
3573	Electronic computing equipment	8.2	8.2	-	5.3	1.2	4.0	.7	1.2	1.1	1.1	.2	1	1
3579	Office machines, typewriters, etc.	(S)	(S)	(S)	2.6	.4	2.2	.5	.8	.5	.4	-	(X)	14
358	Refrigeration and service machines	9.6	9.6	-	8.2	2.7	5.5	1.4	1.7	1.6	.8	.3	1	2
3585	Refrigeration, heating equipment	9.6	9.6	-	7.5	2.4	5.1	1.3	1.7	1.5	.7	.2	1	1
359	Miscellaneous machinery, except electric	1.0	1.0	-	5.4	1.7	3.6	.9	.9	.9	.8	.4	11	12
3592	Carburetors, pistons, rings, etc.	(S)	(S)	(S)	4.2	1.1	3.1	.8	.7	.9	.7	.3	(X)	11
36	Electric, electronic equipment	42.0	35.5	6.6	82.8	24.4	58.4	14.3	16.2	16.7	11.2	4.1	7	2
361	Electric distributing equipment	(S)	(S)	(S)	3.3	.8	2.6	.5	.9	.7	.4	-	(X)	5
3612	Transformers	(S)	(S)	(S)	1.0	.2	.8	.1	(D)	(D)	.2	-	(X)	3
3613	Switchgear, switchboard apparatus	(S)	(S)	(S)	2.4	.6	1.7	.4	(D)	(D)	.3	-	(X)	8
362	Electrical industrial apparatus	1.6	1.2	.4	6.9	2.4	4.5	1.4	.9	.8	1.4	.2	7	3
3621	Motors and generators	(D)	(D)	(D)	3.0	1.1	1.9	(D)	(D)	.3	.7	.1	(X)	5
3622	Industrial controls	(S)	(S)	(S)	1.5	.4	1.1	.3	.3	.3	.2	.1	(X)	10
3623	Welding apparatus, electric	(D)	(D)	(D)	1.1	.4	.7	(D)	(D)	.1	.3	-	(X)	2

See footnotes at end of table.

Table 4A. Water Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures			Total operating costs	Payment to government units for public sewage use	Other operating costs					Cost recovered	Standard error of estimates (percent)	
		Total	Abatement technique				Total	By kind of cost					PACE	GAC
			End of line	Changes in production process				Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost			
	Electric, electronic equipment--Continued													
363	Household appliances	2.2	2.0	.2	9.9	4.0	5.9	1.0	2.0	2.0	.9	.5	7	2
3631	Household cooking equipment	(S)	(S)	(S)	2.2	1.0	1.2	.3	.3	.3	.3	.1	(X)	6
3632	Household refrigerators, freezers	(D)	(D)	(D)	2.2	1.1	1.0	(D)	(D)	.3	.1	-	(X)	1
3633	Household laundry equipment	(S)	(S)	(S)	1.9	.6	1.3	(D)	(D)	.5	.2	.2	(X)	1
3634	Electric housewares and fans	(D)	(D)	(D)	1.6	.5	1.0	.1	.3	.4	.1	(D)	(X)	12
3639	Household appliances, n.e.c.	(S)	(S)	(S)	1.1	.5	.5	-	.2	.2	1	(D)	(X)	10
364	Electric lighting, wiring equipment	2.3	2.0	.3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	15	14
3644	Noncurrent-carrying wiring devices	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	13
3647	Vehicular lighting equipment	(S)	(S)	(S)	1.8	(D)	(D)	(D)	(D)	.3	.4	-	(X)	1
365	Radio, TV receiving equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
3651	Radio and TV receiving sets	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
366	Communication equipment	5.6	5.3	.3	16.0	5.0	11.0	2.6	3.8	3.0	1.6	(D)	1	1
3661	Telephone and telegraph apparatus	3.0	2.9	-	8.4	1.6	6.7	1.7	2.4	2.0	.6	(D)	1	1
3662	Radio and TV communication equipment	2.7	2.4	.3	7.6	3.4	4.2	.9	1.4	1.0	.9	-	1	3
367	Electronic components, accessories	18.3	15.0	3.3	25.3	5.0	20.3	4.9	5.5	4.9	4.9	.9	16	4
3672	Cathode ray TV picture tubes	(D)	(D)	(D)	1.6	.3	1.2	-	.6	.4	.2	(D)	(X)	6
3674	Semiconductors, related devices	7.7	6.5	1.3	12.5	2.4	10.1	3.0	2.8	2.7	1.6	.2	9	3
3678	Electronic connectors	(D)	(D)	(D)	1.0	.2	.9	.1	.1	.5	.1	-	(X)	19
3679	Electronic components, n.e.c.	(S)	(S)	(S)	8.3	1.4	6.9	1.5	1.6	1.0	2.8	.6	(X)	11
369	Miscellaneous electrical equipment, supplies	9.3	7.4	2.0	11.5	3.0	8.5	2.4	1.7	3.5	.8	1.3	12	4
3691	Storage batteries	7.2	(D)	(D)	5.8	1.0	4.8	1.3	1.0	2.2	.3	(D)	16	7
3694	Engine electrical equipment	1.6	(D)	(D)	4.1	1.5	2.6	1.0	.4	.9	.3	(D)	1	4
37	Transportation equipment	59.5	49.4	10.1	126.3	30.8	95.5	25.7	29.9	26.1	13.8	8.9	1	1
371	Motor vehicles and equipment	50.7	41.0	9.8	90.7	22.8	68.0	21.5	18.6	19.9	7.8	8.4	1	1
3711	Motor vehicles and car bodies	23.1	(D)	(D)	37.6	10.5	27.2	8.3	7.8	6.7	4.4	1.4	1	1
3714	Motor vehicle parts, accessories	27.1	(D)	(D)	52.2	11.8	40.5	13.1	10.7	13.2	3.4	7.0	2	1
372	Aircraft and parts	5.3	(D)	(D)	18.7	3.9	14.8	2.3	6.3	4.3	1.9	.2	3	1
3721	Aircraft	2.7	(D)	(D)	6.7	1.7	5.1	.7	2.3	1.3	.8	-	2	1
3724	Aircraft engines and engine parts	1.1	1.1	-	7.4	1.0	6.4	1.3	2.6	2.1	.3	.2	4	2
3728	Aircraft equipment, n.e.c.	1.5	1.5	-	4.6	1.2	3.4	.3	1.4	.9	.7	-	9	5
373	Ship, boat building, repairing	1.0	1.0	-	7.3	1.5	5.8	.8	1.5	.3	3.2	.2	13	6
3731	Ship building and repairing	1.0	1.0	-	7.2	1.4	5.8	.8	1.5	.3	3.1	.2	13	6
3743	Railroad equipment	(D)	(D)	(D)	2.7	.7	2.0	.5	.8	.4	.3	-	(X)	3
3751	Motorcycles, bicycles, and parts	(D)	(D)	(D)	1.1	.2	.9	.3	.3	.4	-	-	(X)	2
376	Guided missiles, space vehicles	1.4	1.3	.1	5.0	1.4	3.6	.3	2.1	.6	.5	.1	1	1
3761	Guided missiles, space vehicles	(D)	(D)	(D)	2.7	1.0	1.8	.2	1.0	.4	.1	.1	(X)	1
3764	Space propulsion units and parts	(D)	(D)	(D)	2.1	.3	1.8	.1	1.0	.2	.4	-	(X)	1
38	Instruments, related products	7.7	6.7	1.0	30.7	5.6	25.1	4.7	6.5	5.2	8.7	6.0	9	1
3811	Engineering, scientific instruments	(D)	(D)	(D)	1.0	.7	.3	-	-	.1	.1	-	(X)	10
382	Measuring, controlling devices	(S)	(S)	(S)	5.2	1.7	3.5	.6	1.4	1.2	.4	(D)	(X)	5
3825	Instruments to measure electricity	(S)	(S)	(S)	2.6	.6	2.0	.3	.7	.8	.2	-	(X)	1
384	Medical instruments, supplies	(D)	(D)	(D)	2.5	1.1	1.5	.4	.3	.6	.2	-	(X)	4
3842	Surgical appliances and supplies	(D)	(D)	(D)	1.7	.6	1.1	.3	.2	.5	.1	-	(X)	4
3861	Photographic equipment and supplies	4.2	4.0	.2	20.0	1.6	18.5	3.4	4.4	3.1	7.6	(D)	1	1
39	Miscellaneous manufacturing industries	(S)	(S)	(S)	7.2	2.9	4.3	.9	1.3	1.2	1.0	.2	(X)	10
391	Jewelry, silver, and plated ware	(S)	(S)	(S)	1.4	.2	1.1	.1	.2	.2	.6	.1	(X)	16
394	Toys and sporting goods	(S)	(S)	(S)	1.2	.7	.5	.1	.2	.2	.1	-	(X)	10
399	Miscellaneous manufactures	(S)	(S)	(S)	2.7	1.2	1.5	.3	.6	.4	.2	-	(X)	18
3999	Manufacturing industries, n.e.c.	(S)	(S)	(S)	1.4	.6	.9	.2	.4	.2	.1	-	(X)	13

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products, is excluded.

Table 4B. Water Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	United States[1]	1,245.7	1,080.9	164.8	3,015.6	485.7	2,529.9	568.3	544.5	848.7	568.3	396.9	1	1
	New England Division:													
	Maine	(D)	(D)	(D)	28.9	3.5	25.4	10.7	3.4	8.3	3.1	-	7	4
26	Paper and allied products	(D)	(D)	(D)	23.8	.9	22.8	10.0	3.0	7.4	2.4	-	(X)	4
	New Hampshire	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Vermont	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Massachusetts	(S)	(S)	(S)	32.2	7.1	25.1	5.4	5.6	6.9	7.1	1.3	(X)	9
33	Primary metal industries	(S)	(S)	(S)	1.2	.1	1.1	.1	.2	.2	.7	-	(X)	13
35	Machinery, except electrical	(S)	(S)	(S)	1.8	.5	1.3	.2	.3	.4	.4	-	(X)	6
36	Electric, electronic equipment	(S)	(S)	(S)	2.9	.4	2.5	.6	.7	.6	.5	.1	(X)	17
38	Instruments, related products	(S)	(S)	(S)	2.1	.1	2.0	.6	.7	.4	.3	-	(X)	4
	Rhode Island	(S)	(S)	(S)	4.5	1.4	3.1	.7	.8	1.0	.7	-	(X)	14
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Connecticut	(S)	5.8	(S)	30.8	3.9	26.9	5.3	6.2	8.9	6.5	2.2	(X)	4
26	Paper and allied products	(S)	(S)	(S)	4.6	.5	4.1	1.2	.4	2.1	.4	(D)	(X)	18
28	Chemicals and allied products	1.3	(D)	(D)	8.6	.8	7.7	(D)	1.5	1.6	(D)	(D)	1	5
33	Primary metal industries	(S)	(S)	(S)	2.1	.2	2.0	.3	.5	.8	.3	(D)	(X)	13
34	Fabricated metal products	(S)	(S)	(S)	4.2	.4	3.8	1.0	1.0	1.4	.5	.1	(X)	20
35	Machinery, except electrical	(S)	(S)	(S)	1.6	.1	1.5	.1	.4	.6	.4	(D)	(X)	7
36	Electric electronic equipment	(S)	(S)	(S)	1.0	.1	.9	.2	.2	.3	.1	(D)	(X)	14
37	Transportation equipment	(S)	(S)	(S)	4.8	.1	4.8	1.1	1.6	1.5	.5	-	(X)	4
	Middle Atlantic Division:													
	New York	60.6	52.3	8.2	140.1	24.1	116.0	29.9	25.2	33.1	27.8	15.7	2	2
20	Food and kindred products	2.0	1.3	.7	9.9	5.0	4.9	1.1	2.1	1.1	.7	(D)	13	9
26	Paper and allied products	(S)	(S)	(S)	18.7	2.8	16.0	5.7	2.3	6.1	1.9	(D)	(X)	13
28	Chemicals and allied products	18.9	17.5	1.3	42.1	6.4	35.8	9.0	5.8	10.8	10.2	1.7	10	5
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(S)	(S)	(S)	1.8	.7	1.2	.3	.3	.5	.1	(D)	(X)	6
33	Primary metal industries	11.7	11.4	.3	16.2	.7	15.5	4.7	3.8	5.0	2.0	.6	1	1
34	Fabricated metal products	(S)	(S)	(S)	2.6	.5	2.2	.3	.7	.6	.5	.1	(X)	14
35	Machinery, except electrical	4.8	4.8	-	7.7	1.6	6.1	1.2	1.7	1.4	1.8	.3	2	1
36	Electric, electronic equipment	6.4	4.8	1.6	12.7	1.6	11.0	3.0	3.3	1.8	2.9	.1	13	2
37	Transportation equipment	1.1	(D)	(D)	7.7	.9	6.8	1.8	1.8	2.4	.8	(D)	12	3
38	Instruments, related products	2.9	2.3	.6	15.4	1.5	13.9	2.4	2.8	(D)	(D)	(D)	19	1
	New Jersey	38.1	33.2	4.8	137.1	15.0	122.1	21.8	23.7	44.9	31.8	16.0	12	1
20	Food and kindred products	2.7	1.9	.9	10.9	2.6	8.3	1.1	1.9	1.4	3.9	(D)	3	10
28	Chemicals and allied products	24.3	22.7	1.6	80.3	5.0	75.3	15.1	12.6	35.0	12.6	1.9	19	1
29	Petroleum and coal products	(D)	(D)	(D)	21.0	.2	20.8	2.4	3.9	3.6	10.9	11.3	(X)	1
32	Stone, clay, glass products	(S)	.5	(D)	2.3	.4	1.9	.5	.6	.6	.2	(D)	(X)	19
33	Primary metal industries	(S)	.5	(D)	5.9	.7	5.1	.8	1.6	2.4	.4	(D)	(X)	8
35	Machinery, except electrical	(D)	(D)	(D)	1.3	.5	.7	-	.4	.1	.2	(D)	(X)	9
36	Electric, electronic equipment	1.4	1.4	.1	2.2	.5	1.7	.4	.3	.5	.4	-	12	8
37	Transportation equipment	-	-	-	1.9	-	1.9	.1	(D)	(D)	1.4	-	(X)	7
	Pennsylvania	109.7	99.1	10.7	172.5	26.0	146.5	31.4	30.2	55.5	29.4	16.3	2	1
20	Food and kindred products	(S)	(S)	(S)	12.5	6.6	5.9	1.2	1.4	1.9	1.4	1.3	(X)	5
22	Textile mill products	(D)	(D)	(D)	1.9	1.1	.8	(D)	(D)	.2	.2	-	(X)	17
26	Paper and allied products	5.6	5.5	-	13.7	4.1	9.6	1.5	2.0	5.2	.8	4.7	11	3
28	Chemicals and allied products	(S)	(S)	(S)	25.7	3.2	22.5	3.4	5.1	5.9	8.0	4.1	(X)	11
29	Petroleum and coal products	5.8	(D)	(D)	25.5	.7	24.7	3.4	4.0	11.2	6.0	.1	2	1
33	Primary metal industries	79.7	(D)	(D)	67.4	3.1	64.3	17.6	12.1	24.9	9.6	4.6	1	1
34	Fabricated metal products	1.5	1.3	.2	6.1	1.7	4.4	.7	1.4	1.8	.5	.1	13	5
35	Machinery, except electrical	(S)	.4	-	3.6	1.4	2.2	.9	.3	.3	.6	-	(X)	8
36	Electric, electronic equipment	2.0	(D)	(D)	5.9	1.2	4.8	1.0	1.4	1.5	.8	.7	7	3
37	Transportation equipment	(S)	.7	-	2.4	.7	1.7	.3	.7	.4	.3	-	(X)	1
38	Instruments, related products	(S)	.6	-	1.1	.3	.8	.1	.3	.3	.1	-	(X)	11
	East North Central Division:													
	Ohio	54.9	52.3	2.7	196.9	44.4	152.5	30.4	34.0	40.4	47.7	13.2	2	1
20	Food and kindred products	(D)	(D)	(D)	16.3	12.5	3.8	.9	.8	1.0	1.0	(D)	(X)	6
26	Paper and allied products	(D)	(D)	(D)	10.6	2.2	8.4	1.1	1.7	1.6	4.0	(D)	(X)	10
28	Chemicals and allied products	8.7	8.5	.2	30.2	6.0	24.2	4.6	5.0	7.1	7.5	2.4	12	7
29	Petroleum and coal products	1.5	1.5	-	7.1	.4	6.7	2.1	1.4	2.4	.8	(D)	5	1
30	Rubber, miscellaneous plastics products	1.1	1.1	-	4.3	1.9	2.5	.5	.9	.6	.5	-	5	3
32	Stone, clay glass products	1.4	(D)	(D)	6.0	1.3	4.6	1.1	1.2	2.0	.4	(D)	1	15
33	Primary metal industries	18.8	18.8	-	77.4	3.7	73.7	12.1	14.8	18.4	28.4	.6	1	1
34	Fabricated metal products	1.5	1.3	.2	13.6	4.5	9.1	2.1	2.7	2.8	1.6	.3	13	12
35	Machinery, except electrical	5.4	(D)	(D)	6.3	3.2	3.1	.7	1.0	.7	.8	(D)	2	11
36	Electric, electronic equipment	1.3	1.1	.2	5.5	2.2	3.2	.5	1.1	1.1	.5	(D)	6	6
37	Transportation equipment	9.4	9.3	.1	17.5	5.0	12.6	4.6	3.4	2.6	1.9	2.0	4	1
	Indiana	74.5	70.8	3.7	141.5	17.1	124.4	33.0	30.5	23.1	37.8	19.8	2	2
20	Food and kindred products	5.9	5.8	.1	6.4	3.0	3.4	.7	1.1	.9	.7	(D)	5	14
28	Chemicals and allied products	6.4	(D)	(D)	32.3	2.1	30.3	6.7	5.4	4.2	14.0	(D)	4	1
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(S)	(S)	(S)	1.3	.5	.8	.1	.2	.3	.2	-	(X)	13
33	Primary metal industries	47.2	47.2	-	61.7	1.7	60.0	18.3	14.5	9.4	17.9	(D)	1	1
35	Machinery, except electrical	1.0	1.0	-	2.8	1.1	1.7	.6	.3	.6	.3	-	4	19
36	Electric, electronic equipment	1.6	1.5	.1	9.0	3.2	5.8	1.4	1.4	1.8	1.2	.5	1	2
37	Transportation equipment	3.7	(D)	(D)	7.1	2.1	5.0	.9	2.6	1.2	.3	.8	1	1

See footnotes at end of table.

Table 4B. Water Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures			Total operating costs	Payment to government units for public sewage use	Other operating costs					Cost recovered	Standard error of estimates (percent)	
		Total	Abatement technique				Total	By kind of cost						
			End of line	Changes in production process				Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
	East North Central Division--Continued													
	Illinois	49.3	44.4	4.9	166.1	46.1	120.1	29.0	28.5	37.5	25.0	38.3	4	2
20	Food and kindred products	6.3	6.2	.1	38.9	25.0	13.9	2.7	3.3	3.3	4.6	1.5	13	2
26	Paper and allied products	1.0	.6	.4	4.5	1.8	2.6	.7	.4	.7	.8	-	8	12
28	Chemicals and allied products	21.4	18.4	3.0	29.4	6.1	23.3	5.5	5.2	7.0	5.5	3.2	4	4
29	Petroleum and coal products	4.0	(D)	(D)	21.4	.5	20.9	3.9	5.3	8.8	2.9	(D)	1	1
30	Rubber, miscellaneous plastics products	(S)	(S)	(S)	1.6	.4	1.2	.2	.1	.7	.3	-	(X)	4
32	Stone, clay, glass products	(S)	(S)	(S)	1.3	.3	1.0	.5	.2	.1	.2	-	(X)	10
33	Primary metal industries	4.5	4.5	.1	34.0	2.5	31.5	10.8	6.9	7.1	6.7	(D)	16	1
35	Machinery, except electrical	(D)	(D)	(D)	11.5	2.7	8.8	1.8	2.4	3.4	1.3	.6	(X)	3
36	Electric, electronic equipment	(D)	(D)	(D)	4.5	1.5	3.0	.4	1.1	1.1	.4	.2	(X)	2
37	Transportation equipment	(S)	(S)	(S)	3.1	.7	2.4	.4	1.0	.6	.5	-	(X)	2
38	Instruments, related products	(D)	(D)	(D)	1.6	.5	1.1	.3	.2	.4	.2	-	(X)	2
	Michigan	77.8	60.6	17.1	157.8	34.2	123.6	28.5	31.8	40.0	23.3	17.3	1	4
20	Food and kindred products	(S)	(S)	(S)	7.3	4.2	3.1	.7	.6	1.0	.7	-	(X)	16
24	Lumber and wood products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	13.7	(D)	(D)	28.1	1.2	26.9	4.3	8.3	5.4	8.9	(D)	(X)	3
29	Petroleum and coal products	(D)	(D)	(D)	1.2	(D)	(D)	(D)	.4	(D)	.1	-	(X)	11
32	Stone, clay, glass products	(S)	(S)	(S)	1.8	.6	1.3	.4	.3	.3	.3	-	(X)	14
33	Primary metal industries	(D)	(D)	(D)	24.3	4.4	19.9	3.0	5.8	7.4	3.8	(D)	(X)	2
35	Machinery, except electrical	4.2	4.0	.2	5.9	1.9	4.0	1.5	1.0	.7	.7	(D)	15	4
36	Electric, electronic equipment	1.1	(D)	(D)	1.6	.9	.7	(D)	(D)	.2	.1	-	1	3
37	Transportation equipment	31.8	(D)	(D)	46.5	11.6	34.9	11.9	9.1	11.6	2.3	4.5	1	1
	Wisconsin	17.2	12.7	4.5	(S)	(S)	54.5	12.9	14.1	15.0	12.5	7.1	8	(X)
20	Food and kindred products	2.2	1.5	.7	13.1	8.5	4.6	.9	1.3	1.2	1.1	.2	8	13
26	Paper and allied products	7.1	4.3	2.8	46.2	5.5	40.7	9.9	9.8	11.6	9.3	6.5	7	5
28	Chemicals and allied products	(S)	(S)	(S)	3.6	2.9	.7	.2	.3	.1	.1	-	(X)	18
33	Primary metal industries	(D)	(D)	(D)	1.8	.6	1.2	.2	.3	.2	.6	-	(X)	16
34	Fabricated metal products	(S)	(S)	(S)	2.3	1.0	1.3	.3	.5	.4	.1	.1	(X)	18
35	Machinery, except electrical	(S)	(S)	(S)	3.3	1.5	1.8	.3	.6	.5	.4	-	(X)	3
37	Transportation equipment	(S)	(S)	(S)	1.8	.7	1.1	(D)	(D)	.2	.2	-	(X)	1
	West North Central Division:													
	Minnesota	29.6	27.8	1.8	40.0	16.4	23.6	6.2	3.7	6.8	6.9	1.6	10	5
20	Food and kindred products	(D)	(D)	(D)	9.8	4.9	4.9	1.8	1.0	1.5	.6	.5	(X)	13
24	Lumber and wood products	4.0	3.1	.9	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
26	Paper and allied products	11.2	(D)	(D)	12.8	5.7	7.1	1.7	1.0	(D)	(D)	.4	12	2
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
31	Leather and leather products	(S)	(S)	(S)	1.3	.6	.7	-	-	-	.6	-	(X)	1
34	Fabricated metal products	(S)	(S)	(S)	2.0	1.3	.7	.4	.1	.1	.1	-	(X)	9
35	Machinery, except electrical	(D)	(D)	(D)	1.3	.7	.6	(D)	(D)	.2	.1	(D)	(X)	2
	Iowa	12.0	7.1	4.9	39.7	11.2	28.5	8.9	5.3	8.5	5.7	2.6	17	2
20	Food and kindred products	(S)	(S)	(S)	18.5	9.1	9.4	2.8	1.7	4.0	.9	1.3	(X)	3
28	Chemicals and allied products	(D)	(D)	(D)	11.8	.3	11.5	4.4	(D)	(D)	(D)	(D)	(X)	5
30	Rubber, miscellaneous plastics products	(D)	(D)	(D)	2.3	.1	2.3	.4	.4	(D)	(D)	-	(X)	8
33	Primary metal industries	(S)	(S)	(S)	1.2	.2	1.0	.2	(D)	.2	(D)	-	(X)	6
35	Machinery, except electrical	(D)	(D)	(D)	3.6	.5	3.1	.7	1.1	.7	.6	.2	(X)	6
36	Electric, electronic equipment	(D)	(D)	(D)	1.2	.3	.9	.3	.3	.2	(D)	(D)	(X)	1
	Missouri	14.7	12.7	2.0	29.1	8.0	21.0	5.3	5.2	4.6	5.9	2.2	3	9
20	Food and kindred products	2.3	(D)	(D)	6.0	4.0	2.0	.6	.8	.3	.3	.4	1	4
28	Chemicals and allied products	8.6	8.4	.2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	6	(X)
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
33	Primary metal industries	(S)	(S)	(S)	4.4	.4	4.1	.8	(D)	(D)	2.1	(D)	(X)	2
36	Electric, electronic equipment	1.2	1.2	-	1.6	.5	1.1	.3	.5	.2	.1	.4	13	13
37	Transportation equipment	(S)	(S)	(S)	1.6	.6	1.0	.1	.5	(D)	(D)	-	(X)	1
	North Dakota	-	-	-	1.1	.2	.9	.1	.2	.2	.4	-	(X)	8
	South Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Nebraska	2.7	2.7	-	7.2	3.4	3.8	1.2	1.1	1.0	.4	1.1	4	6
20	Food and kindred products	1.6	1.6	-	4.4	2.6	1.9	.7	.5	.5	.2	(D)	6	5
	Kansas	(S)	26.0	(S)	(S)	(S)	24.2	4.7	5.6	12.6	1.4	1.9	(X)	(X)
20	Food and kindred products	(S)	(S)	(S)	2.0	.8	1.3	.5	.3	.4	.1	.2	(X)	8
28	Chemicals and allied products	1.1	1.1	-	5.5	1.2	4.2	2.3	.5	.8	.5	.3	12	4
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
30	Rubber, miscellaneous plastics products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
32	Stone, clay, glass products	(D)	(D)	(D)	1.5	(D)	(D)	.1	(D)	(D)	.2	.8	(X)	10
37	Transportation equipment	(D)	(D)	(D)	1.2	.2	(D)	-	(D)	(D)	-	-	(X)	2
	South Atlantic Division:													
	Delaware	4.3	3.0	1.2	(S)	(S)	23.9	3.4	4.5	13.4	2.6	.1	2	(X)
20	Food and kindred products	(S)	(S)	(S)	1.9	.9	1.0	.1	.2	.6	.1	-	(X)	16
28	Chemicals and allied products	2.2	1.9	.3	22.8	2.3	20.5	2.9	3.3	12.0	2.4	-	3	4
29	Petroleum and coal products	1.2	.2	.9	1.4	-	1.4	.1	.6	.6	.1	-	1	1
37	Transportation equipment	(D)	(D)	(D)	1.2	.8	.4	(D)	(D)	-	-	-	(X)	13
	Maryland	(S)	(S)	(S)	50.6	8.7	41.9	9.5	6.9	14.0	11.5	1.6	(X)	2
	District of Columbia	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)

See footnotes at end of table.

Table 4B. Water Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	South Atlantic Division--Continued													
	Virginia	29.1	21.4	7.6	52.9	11.1	41.8	9.5	8.9	13.0	10.5	3.4	3	4
20	Food and kindred products	5.3	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	4	(X)
22	Textile mill products	(D)	(D)	(D)	4.8	1.9	2.9	.9	.8	1.0	.3	.4	(X)	9
26	Paper and allied products	3.9	(D)	(D)	11.3	.7	10.6	1.9	1.7	5.3	1.7	.2	5	8
28	Chemicals and allied products	9.7	(D)	(D)	17.6	3.1	14.5	3.2	3.7	2.7	4.9	.4	1	1
35	Machinery, except electrical	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
36	Electric, electronic equipment	(D)	(D)	(D)	2.1	.6	1.5	.6	.4	(D)	(D)	(D)	(X)	2
37	Transportation equipment	(D)	(D)	(D)	2.1	.6	1.5	.3	.2	(D)	(D)	(D)	(X)	13
	West Virginia	27.0	26.3	.7	96.0	4.0	91.9	13.6	26.0	27.3	25.1	4.0	11	1
28	Chemicals and allied products	12.1	(D)	(D)	59.4	3.0	56.3	8.0	15.0	21.1	12.2	2.4	17	1
29	Petroleum and coal products	-	-	-	(D)	(D)	(D)	(D)	.2	.1	(D)	(D)	(X)	(X)
33	Primary metal industries	9.9	(D)	(D)	31.9	.3	31.6	3.7	(D)	(D)	12.4	(D)	1	1
	North Carolina	(S)	23.2	(S)	65.2	18.9	46.3	13.3	8.8	15.6	8.5	8.7	(X)	7
20	Food and kindred products	2.0	(D)	(D)	5.4	3.4	2.1	.7	.4	.6	.3	-	14	12
22	Textile mill products	(S)	(S)	(S)	19.9	9.2	10.7	4.3	1.7	2.9	1.8	.5	(X)	10
26	Paper and allied products	4.3	(D)	(D)	10.6	.1	10.5	2.8	1.6	5.1	1.0	(D)	1	1
28	Chemicals and allied products	(S)	(S)	(S)	10.0	.9	9.1	2.4	2.0	2.9	1.7	4.9	(X)	6
35	Machinery, except electrical	(D)	(D)	(D)	2.3	.2	2.1	.4	(D)	(D)	.2	(D)	(X)	4
36	Electric, electronic equipment	(S)	(S)	(S)	2.1	.5	1.6	.6	.5	.4	.2	.3	(X)	5
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	South Carolina	13.3	11.4	1.9	53.8	4.6	49.2	10.6	13.2	20.2	5.1	9.7	10	10
20	Food and kindred products	(S)	(S)	(S)	1.1	.5	.7	.1	.3	.2	.1	.4	(X)	15
22	Textile mill products	1.2	(D)	(D)	10.1	2.4	7.7	3.7	1.1	1.5	1.4	5.1	(X)	15
26	Paper and allied products	2.3	2.3	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	17	(X)
28	Chemicals and allied products	4.6	4.4	.2	12.7	.4	12.4	2.0	5.8	3.0	1.6	(D)	11	2
30	Rubber, miscellaneous plastics products	(D)	(D)	(D)	1.3	.2	1.0	.2	.3	.2	.3	-	(X)	15
32	Stone, clay, glass products	(D)	(D)	(D)	1.7	.2	1.5	.6	.4	(D)	(D)	(D)	(X)	3
34	Fabricated metal products	(D)	(D)	(D)	1.2	.1	1.1	.2	.3	.4	.2	(D)	(X)	5
	Georgia	(S)	9.2	(S)	51.6	12.4	39.1	9.9	7.9	12.1	9.2	3.2	(X)	3
20	Food and kindred products	2.3	2.3	-	8.1	4.1	3.9	1.4	.7	1.5	.3	.4	16	6
22	Textile mill products	(S)	(S)	(S)	5.9	3.5	2.3	.7	.5	.3	.8	-	(X)	14
26	Paper and allied products	1.4	(D)	(D)	13.2	1.6	11.6	3.1	1.5	3.2	3.9	(D)	2	7
28	Chemicals and allied products	1.7	1.7	-	16.2	.9	15.2	3.3	3.2	5.2	3.5	.2	19	6
33	Primary metal industries	(S)	(S)	(S)	1.5	.4	1.1	.3	.4	.3	.1	-	(X)	13
37	Transportation equipment	(D)	(D)	(D)	2.5	.7	1.8	(D)	.9	.3	(D)	-	(X)	1
	Florida	29.7	26.9	2.8	68.3	11.6	56.8	13.9	9.0	24.8	9.1	20.3	3	2
20	Food and kindred products	6.2	5.9	.2	11.9	5.4	6.6	1.6	1.4	2.8	.7	(D)	2	4
26	Paper and allied products	6.1	(D)	(D)	31.4	3.6	27.8	5.5	(D)	(D)	4.4	(D)	1	1
28	Chemicals and allied products	10.5	(D)	(D)	17.6	.6	17.0	6.1	2.2	5.8	2.9	6.2	5	3
36	Electric, electronic equipment	4.2	(D)	(D)	2.2	.5	1.7	.4	.4	.5	.4	-	3	12
	East South Central Division:													
	Kentucky	(S)	8.5	(S)	46.9	9.7	37.2	8.0	9.9	13.0	6.2	12.9	(X)	2
28	Chemicals and allied products	2.7	2.5	.1	19.7	2.6	17.1	4.0	3.7	7.3	2.0	(D)	5	2
33	Primary metal industries	(D)	(D)	(D)	7.7	.2	7.6	(D)	(D)	1.9	2.2	(D)	(X)	1
35	Machinery, except electrical	(D)	(D)	(D)	2.6	.7	1.9	(D)	.6	(D)	.3	-	(X)	1
36	Electric, electronic equipment	(S)	(S)	(S)	2.0	1.3	.8	.1	.2	.2	.2	-	(X)	18
37	Transportation equipment	(S)	(S)	(S)	1.5	.4	1.1	.1	(D)	(D)	.2	-	(X)	3
	Tennessee	38.4	34.2	4.2	86.0	13.0	73.0	15.3	12.9	29.0	15.8	11.4	14	3
20	Food and kindred products	1.1	1.1	-	5.0	3.4	1.6	.3	.4	.7	.2	.1	9	8
22	Textile mill products	(D)	(D)	(D)	1.1	.7	.4	.1	.1	.1	.1	(D)	(X)	12
26	Paper and allied products	1.4	1.4	-	5.6	2.2	3.4	1.2	.6	1.1	.5	.5	15	7
28	Chemicals and allied products	31.8	28.1	3.8	59.2	2.3	57.0	10.1	9.2	24.2	13.4	10.4	17	4
30	Rubber, miscellaneous plastics products	(D)	(D)	(D)	1.0	.3	.6	.2	(D)	(D)	.1	-	(X)	3
33	Primary metal industries	(S)	(S)	(S)	2.3	.5	1.8	.5	.5	.5	.4	-	(X)	12
36	Electric, electronic equipment	(S)	(S)	(S)	1.4	.5	.9	.3	.3	.2	-	(D)	(X)	9
	Alabama	33.7	31.1	2.6	67.8	6.6	61.2	18.2	12.4	14.8	15.8	2.3	4	1
20	Food and kindred products	(D)	(D)	(D)	2.0	1.2	.9	.3	.1	.3	.1	-	(X)	18
26	Paper and allied products	14.9	(D)	(D)	12.6	(D)	(D)	4.7	(D)	(D)	3.0	(D)	1	1
28	Chemicals and allied products	9.7	(D)	(D)	26.1	.2	26.0	7.1	5.7	8.9	4.3	1.5	13	1
33	Primary metal industries	6.3	6.3	-	16.5	.6	15.9	4.1	2.5	2.4	7.0	(D)	1	1
	Mississippi	(S)	9.1	(S)	35.2	7.9	27.3	7.5	4.6	9.8	5.4	14.0	(X)	4
20	Food and kindred products	(S)	(S)	(S)	2.1	1.3	.7	.3	.2	.2	-	-	(X)	19
24	Lumber and wood products	(S)	(S)	(S)	6.7	-	6.6	1.3	.9	1.5	2.9	(D)	(X)	5
26	Paper and allied products	(D)	.6	(D)	3.3	-	3.3	.6	.9	1.2	.5	-	(X)	2
28	Chemicals and allied products	2.6	(D)	(D)	10.5	-	10.5	4.1	1.5	3.2	1.6	(D)	3	2
29	Petroleum and coal products	(S)	(S)	(S)	3.0	-	3.0	(D)	.3	(D)	.1	(D)	(X)	4
	West South Central Division:													
	Arkansas	(S)	18.7	(S)	(S)	(S)	28.8	8.5	5.6	7.1	7.6	2.0	(X)	(X)
20	Food and kindred products	(S)	(S)	(S)	4.2	2.1	2.1	.6	.5	.7	.3	.7	(X)	7
26	Paper and allied products	5.4	(D)	(D)	5.8	-	5.8	1.8	1.0	1.5	1.5	(D)	1	3
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
34	Fabricated metal products	(S)	(S)	(S)	1.5	.2	1.3	.6	.3	.3	.1	-	(X)	19
	Louisiana	96.8	86.4	10.4	184.3	1.4	182.9	36.0	30.1	66.6	50.3	29.1	4	1
26	Paper and allied products	6.2	(D)	(D)	8.0	.2	7.9	2.9	.9	2.7	1.3	(D)	1	3
28	Chemicals and allied products	73.6	70.4	3.1	112.7	-	112.7	25.5	22.2	36.2	28.9	11.3	4	2
29	Petroleum and coal products	9.0	(D)	(D)	57.0	(D)	(D)	(D)	(D)	26.0	19.3	16.6	1	1
33	Primary metal industries	(D)	(D)	(D)	1.4	-	1.4	(D)	.3	(D)	.2	-	(X)	7

See footnotes at end of table.

Table 4B. Water Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures: Total	Capital expenditures: Abatement technique: End of line	Capital expenditures: Abatement technique: Changes in production process	Total operating costs	Payment to government units for public sewage use	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Other operating costs: By kind of cost: Labor	Other operating costs: By kind of cost: Materials and supplies	Other operating costs: By kind of cost: Services, equipment leasing, and other cost	Other operating costs: Cost recovered	Standard error of estimates (percent): PACE	Standard error of estimates (percent): GAC
	West South Central Division--Continued													
	Oklahoma	(S)	4.7	(S)	(S)	(S)	12.1	2.3	3.4	5.2	1.2	.5	(X)	(X)
28	Chemicals and allied products	(S)	(S)	(S)	2.2	.1	2.1	.5	.4	(D)	(D)	-	(X)	18
29	Petroleum and coal products	1.5	1.5	-	6.2	-	6.2	.8	1.6	3.3	.5	.3	1	1
	Texas	105.2	85.3	19.8	317.5	16.6	300.9	59.2	66.8	121.5	53.4	65.3	1	1
20	Food and kindred products	5.8	3.2	2.6	14.4	7.6	6.8	2.9	1.7	1.5	.8	1.1	19	6
26	Paper and allied products	(S)	(S)	(S)	18.3	1.1	17.2	3.7	2.2	6.2	5.1	.4	(X)	2
28	Chemicals and allied products	40.9	34.4	6.4	134.6	2.3	132.3	24.6	23.6	56.8	27.3	7.3	2	1
29	Petroleum and coal products	47.0	37.4	9.6	121.7	.3	121.4	23.0	33.8	50.0	14.6	54.9	1	1
32	Stone, clay, glass products	1.1	1.1	-	1.6	.4	1.3	.4	.4	.5	.1	(D)	13	11
33	Primary metal industries	2.3	2.3	-	14.3	.1	14.1	3.2	3.1	4.7	3.2	(D)	7	2
35	Machinery, except electrical	2.1	(D)	(D)	2.3	.9	1.3	.3	.2	.2	.5	-	1	6
36	Electric, electronic equipment	(D)	(D)	(D)	3.0	1.2	1.9	.5	.4	.5	.5	-	(X)	6
	Mountain Division:													
	Montana	(S)	(S)	(S)	3.9	.5	3.4	.5	1.2	1.6	.2	.1	(X)	3
29	Petroleum and coal products	(S)	(S)	(S)	(D)	(D)	(D)	(D)	.9	(D)	(D)	(D)	(X)	(X)
	Idaho	7.5	7.0	.5	10.6	.5	10.2	3.3	2.6	2.6	1.7	.6	18	11
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	(D)	(D)	(D)	3.0	-	3.0	1.0	.6	(D)	(D)	(D)	(X)	1
	Wyoming	(S)	(S)	(S)	1.4	-	1.4	(D)	.4	(D)	.3	(D)	(X)	11
29	Petroleum and coal products	(S)	(S)	(S)	1.0	-	1.0	(D)	.4	(D)	.2	(D)	(X)	1
	Colorado	8.8	7.0	1.8	14.9	2.3	12.6	3.4	3.5	3.2	2.5	.3	4	4
20	Food and kindred products	(S)	(S)	(S)	4.3	1.1	3.2	1.0	(D)	(D)	.7	(D)	(X)	2
28	Chemicals and allied products	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
33	Primary metal industries	(D)	(D)	(D)	3.2	-	3.1	(D)	(D)	1.1	-	-	(X)	16
34	Fabricated metal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
38	Instruments, related products	(D)	(D)	(D)	1.9	.1	1.7	.5	.9	.2	.2	-	(X)	1
	New Mexico	(S)	(S)	(S)	(S)	(S)	1.2	.5	.1	.1	.6	.1	(X)	(X)
	Arizona	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Utah	(S)	(S)	(S)	4.7	.3	4.4	.8	.9	1.6	1.0	.9	(X)	18
29	Petroleum and coal products	(S)	(S)	(S)	1.2	.1	1.1	.2	(D)	.4	(D)	-	(X)	3
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	Nevada	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Pacific Division:													
	Washington	71.7	69.4	2.4	60.2	4.7	55.5	20.3	9.5	17.9	7.8	16.4	1	1
24	Lumber and wood products	(S)	(S)	(S)	2.3	.3	2.0	.5	.9	.2	.4	(D)	(X)	(X)
26	Paper and allied products	64.9	62.8	2.1	35.7	.2	35.5	16.2	3.8	12.7	2.8	11.2	1	1
29	Petroleum and coal products	(S)	(S)	(S)	7.6	-	7.6	1.4	(D)	(D)	2.6	(D)	(X)	1
33	Primary metal industries	(D)	(D)	(D)	3.7	.3	3.4	.4	1.1	1.6	.3	3.6	(X)	1
37	Transportation equipment	(S)	(S)	(S)	2.4	.8	1.6	-	(D)	(D)	(D)	-	(X)	1
	Oregon	(S)	8.1	(S)	37.0	3.9	33.1	8.6	8.2	14.2	2.1	9.2	(X)	5
24	Lumber and wood products	1.1	.9	.2	3.0	.3	2.7	.9	.9	.7	.3	.1	19	15
26	Paper and allied products	3.6	(D)	(D)	20.0	.6	19.4	5.8	3.5	9.4	.8	7.6	4	8
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	6.2	.8	2.2	3.1	.1	(D)	(X)	(X)
	California	44.1	41.0	3.2	160.4	40.4	120.0	19.4	25.9	38.9	35.8	14.4	4	1
20	Food and kindred products	4.5	4.1	.4	33.0	22.1	10.8	2.6	2.5	3.1	2.6	2.0	11	3
26	Paper and allied products	(S)	(S)	(S)	8.3	4.0	4.3	1.0	1.1	2.0	.3	.5	(X)	8
28	Chemicals and allied products	8.9	8.6	.3	17.1	2.5	14.6	3.4	3.3	4.2	3.6	.7	4	5
29	Petroleum and coal products	8.6	8.1	.5	54.7	2.1	52.6	6.1	10.6	19.6	16.4	9.7	1	3
32	Stone, clay, glass products	1.2	1.2	-	3.6	.6	3.0	.6	.9	.8	.6	.6	9	6
33	Primary metal industries	(S)	(S)	(S)	15.3	1.5	13.7	(D)	1.9	3.5	(D)	-	(X)	6
34	Fabricated metal products	1.8	1.2	.6	4.2	1.2	3.0	.7	.7	.8	.7	-	(X)	17
35	Machinery, except electrical	5.4	5.4	-	2.1	.6	1.5	.4	.4	.4	.3	-	2	6
36	Electric, electronic equipment	4.4	3.9	.5	7.6	2.1	5.5	1.3	1.0	1.8	1.3	.4	17	12
37	Transportation equipment	3.8	3.8	-	9.2	1.7	7.5	1.3	2.7	1.4	2.0	-	10	2
38	Instruments, related products	(S)	(S)	(S)	1.1	.5	.7	.1	.2	.1	.3	-	(X)	18
	Alaska	(S)	(S)	(S)	6.3	-	6.2	2.4	1.5	2.0	.3	4.4	(X)	4
	Hawaii	(S)	(S)	(S)	4.1	.5	3.6	.6	.7	1.2	1.1	.8	(X)	14

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than 1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the U.S. and State totals.

Table 4C. Water Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures			Total operating costs	Payment to government units for public sewage use	Other operating costs					Cost recovered	Standard error of estimates (percent)	
	Total	Abatement technique				Total	By kind of cost					PACE	GAC
		End of line	Changes in production process				Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost			
Akron, Ohio	(S)	(S)	(S)	5.0	2.1	2.9	.6	1.2	.5	.4	.4	(X)	3
Albany, Ga	(S)	(S)	(S)	2.8	.9	1.8	.4	.5	.8	.2	-	(X)	1
Albany-Schenectady-Troy, N.Y	(D)	(D)	.6	16.0	1.7	14.3	7.0	1.5	3.4	2.3	.9	(X)	14
Allentown-Bethlehem-Easton, Pa.-N.J	(D)	(D)	.5	17.5	1.4	16.1	4.7	4.1	6.3	1.0	3.7	(X)	9
Anaheim-Santa Ana-Garden Grove, Calif	(S)	(S)	(S)	4.0	2.1	1.9	.4	.5	.5	.4	.3	(X)	10
Anderson, Ind	(S)	(S)	(S)	3.3	1.1	2.1	.7	.3	.9	.3	.2	(X)	1
Ann Arbor, Mich	1.6	.9	.7	4.5	1.5	3.0	.6	1.1	.9	.4	.8	2	4
Appleton-Oshkosh, Wis	(S)	(S)	(S)	8.0	2.1	5.9	1.2	.9	2.7	1.1	1.0	(X)	9
Atlanta, Ga	(S)	(S)	(S)	7.1	3.5	3.5	.7	1.4	1.1	.3	.7	(X)	9
Augusta, Ga.-S.C	(D)	(D)	-	8.1	.7	7.5	1.0	3.9	2.1	.5	(D)	(X)	11
Baltimore, Md	6.1	5.8	.3	41.3	4.7	36.6	8.4	5.1	12.7	10.4	1.6	7	1
Baton Rouge, La	24.3	19.1	5.2	69.8	-	69.8	14.3	9.3	38.0	8.2	10.6	3	2
Battle Creek, Mich	(S)	(S)	(S)	3.5	1.8	1.7	.1	.2	.3	1.1	.3	(X)	9
Bay City, Mich	(S)	(S)	(S)	1.9	.4	1.5	.6	.1	.5	.3	.4	(X)	14
Beaumont-Port Arthur-Orange, Tex	14.7	13.0	1.7	77.0	.1	76.8	10.2	17.3	38.0	11.3	5.8	2	1
Billings, Mont	(S)	(S)	(S)	2.8	.5	2.4	.4	1.0	.9	.1	(D)	(X)	1
Binghamton, N.Y.-Pa	3.0	2.6	.4	5.2	.7	4.5	1.1	1.0	.7	1.8	(D)	1	1
Birmingham, Ala	4.5	3.7	.8	12.7	.5	12.2	3.8	1.2	1.9	5.3	-	9	1
Boston, Mass	(S)	(S)	(S)	8.2	2.3	5.9	1.4	1.9	.8	1.8	.3	(X)	19
Bridgeport, Conn	(S)	(S)	(S)	3.0	.1	2.9	.6	.5	1.4	.4	.1	(X)	3
Buffalo, N.Y	25.8	24.4	1.4	41.3	6.5	34.8	7.8	7.4	13.4	6.1	2.4	7	3
Burlington, N.C	(S)	(S)	(S)	1.0	.6	.4	.1	.2	.1	-	.1	(X)	17
Canton, Ohio	(D)	(D)	-	8.3	1.4	6.9	.9	3.2	1.7	1.2	(D)	(X)	2
Cedar Rapids, Iowa	(S)	(S)	(S)	3.8	2.9	.9	.4	.2	.2	.1	.2	(X)	1
Champaign-Urbana-Rantoul, Ill	(S)	(S)	(S)	1.4	.1	1.2	.1	.5	.4	.2	-	(X)	1
Charleston, S.C	(D)	(D)	(D)	3.7	.2	3.5	1.0	.4	1.1	1.0	.1	(X)	5
Charleston, W. Va	(S)	(S)	(S)	42.6	2.9	39.7	5.0	12.2	16.0	6.5	2.1	(X)	2
Chattanooga, Tenn.-Ga	(S)	(S)	(S)	7.8	3.7	4.0	.9	1.0	1.3	.9	.1	(X)	13
Chicago, Ill	22.3	19.5	2.8	99.9	33.3	66.6	14.9	14.9	18.5	18.2	33.9	8	2
Cincinnati, Ohio-Ky.-Ind	3.8	3.8	-	17.3	8.8	8.5	1.6	1.8	2.1	3.0	1.7	18	4
Cleveland, Ohio	5.5	5.3	.2	45.7	8.8	36.9	6.7	5.7	7.1	17.4	1.4	1	1
Columbia, S.C	(S)	(S)	(S)	2.6	.3	2.4	.6	1.0	.5	.2	.5	(X)	3
Columbus, Ohio	(S)	(S)	(S)	13.6	6.8	6.7	1.1	1.6	2.5	1.5	3.4	(X)	12
Corpus Christi, Tex	(D)	(D)	(D)	7.8	-	7.8	1.2	1.6	2.6	2.5	-	(X)	1
Dallas-Fort Worth, Tex	2.4	2.2	.2	12.3	6.3	6.1	1.2	1.9	2.0	1.0	.8	18	11
Davenport-Rock Island-Moline, Iowa-Ill	1.6	1.6	-	4.9	2.1	2.8	.8	.9	.7	.4	.3	5	2
Dayton, Ohio	(D)	(D)	(D)	7.4	1.7	5.7	1.9	.9	1.4	1.4	.2	(X)	1
Decatur, Ill	1.7	1.7	-	2.9	1.1	1.8	.4	.7	.6	-	.6	1	3
Denver-Boulder, Colo	(S)	(S)	(S)	9.7	1.7	7.9	1.5	1.9	2.2	2.3	.2	(X)	7
Des Moines, Iowa	(S)	(S)	(S)	1.2	.6	.6	.1	.2	.1	.2	.2	(X)	8
Detroit, Mich	38.8	37.9	.9	62.7	17.3	45.5	10.1	13.0	13.1	9.4	4.3	1	1
Dubuque, Iowa	(S)	(S)	(S)	1.0	.3	.7	.2	.3	.1	.1	.1	(X)	1
El Paso, Tex	(S)	(S)	(S)	1.2	.2	1.0	.2	.1	.3	.4	(D)	(X)	3
Erie, Pa	4.2	4.2	-	3.9	3.0	.9	.3	.3	.1	.2	.5	1	9
Eugene-Springfield, Oreg	(S)	(S)	(S)	2.1	.2	1.9	.8	.5	.6	-	(D)	(X)	3
Evansville, Ind.-Ky	(D)	(D)	(D)	15.6	.8	14.8	4.4	3.3	2.0	5.1	(D)	(X)	1
Fargo-Moorhead, N.D.-Minn	2.6	2.6	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Fayetteville-Springdale, Ark	(S)	(S)	(S)	1.9	1.2	.7	.3	.2	.2	-	.4	(X)	12
Fitchburg-Leominster, Mass	(S)	(S)	(S)	1.9	1.4	.5	.1	.2	.1	-	.3	(X)	17
Flint, Mich	11.6	3.8	7.8	7.2	1.2	6.1	1.7	2.3	1.7	.3	.7	1	1
Florence, Ala	1.1	1.1	-	2.6	.1	2.5	.5	1.0	.5	.5	.1	1	1
Fort Wayne, Ind	1.2	1.2	-	2.7	1.0	1.8	.3	.4	.6	.4	.1	14	7
Fresno, Calif	(S)	(S)	(S)	2.0	1.4	.6	.1	.2	.2	.1	-	(X)	14
Gadsden, Ala	2.7	2.7	-	2.5	-	2.5	.4	.5	.3	1.4	-	1	1
Gainesville, Fla	3.6	2.4	1.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Galveston-Texas City, Tex	11.4	10.3	1.1	19.2	1.6	17.6	3.5	3.1	3.5	7.5	(D)	1	1
Gary-Hammond-East Chicago, Ind	(D)	(D)	-	66.0	1.9	64.1	19.8	14.3	10.1	19.9	5.4	(X)	1
Green Bay, Wis	1.0	1.0	-	15.2	5.0	10.2	1.4	3.2	4.6	1.0	2.3	9	8
Greenville-Spartanburg, S.C	(S)	(S)	(S)	7.0	2.1	4.9	1.4	1.4	1.4	.7	4.2	(X)	8
Hamilton-Middletown, Ohio	1.5	1.1	.4	17.3	2.0	15.3	2.7	3.5	4.8	4.2	.1	16	1
Harrisburg, Pa	(S)	(S)	(S)	2.5	1.4	1.1	.4	.2	.2	.3	-	(X)	1
Honolulu, Hawaii	(S)	(S)	(S)	2.1	.5	1.6	.3	.3	.8	.2	.7	(X)	8
Houston, Tex	55.0	45.2	9.8	153.9	5.5	148.3	32.6	31.7	61.1	22.9	52.7	1	1
Huntington-Ashland, W. Va.-Ky.-Ohio	1.6	1.3	.3	19.3	.5	18.8	2.2	8.1	5.2	3.3	11.0	9	1
Huntsville, Ala	(S)	(S)	(S)	1.6	.6	.9	.2	.3	.2	.2	-	(X)	19
Indianapolis, Ind	3.6	2.4	1.2	9.6	3.7	5.9	1.0	2.6	1.6	.7	.8	19	5
Jacksonville, Fla	7.5	6.3	1.2	32.5	3.7	28.7	5.9	3.3	14.9	4.6	14.4	6	1
Jersey City, N.J	1.4	1.2	.2	6.0	1.0	4.9	.9	.7	1.5	1.8	(D)	14	3
Johnstown, Pa	(S)	(S)	(S)	5.2	.2	5.0	2.4	.1	2.4	-	-	(X)	1
Kalamazoo-Portage, Mich	(S)	(S)	(S)	5.2	1.2	4.0	.9	.6	1.6	1.0	1.0	(X)	8

See footnotes at end of table.

Table 4C. Water Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures			Total operating costs	Payment to government units for public sewage use	Other operating costs					Cost recovered	Standard error of estimates (percent)	
	Total	Abatement technique				Total	By kind of cost						
		End of line	Changes in production process				Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Kansas City, Mo.-Kans	7.1	3.9	3.2	12.2	4.2	8.0	2.4	2.6	1.5	1.6	1.3	1	1
Killeen-Temple, Tex	6.2	6.2	-	15.0	.9	14.1	2.0	1.4	3.5	7.2	.5	1	1
Knoxville, Tenn	(D)	(D)	(D)	4.8	1.0	3.8	.8	.6	2.0	.3	-	(X)	11
Lafayette-West Lafayette, Ind	3.7	3.6	-	9.2	.5	8.7	1.2	2.3	1.1	4.2	-	1	1
Lake Charles, La	21.2	20.1	1.1	19.9	-	19.9	4.7	4.6	7.7	2.8	12.2	1	1
Lakeland-Winter Haven, Fla	3.5	3.5	-	9.4	.1	9.2	4.0	.9	3.5	.9	2.8	13	5
Lancaster, Pa	1.5	1.5	-	3.6	1.2	2.4	.4	.7	.7	.7	.1	13	11
Lansing-East Lansing, Mich	3.8	2.7	1.1	5.6	2.0	3.7	1.2	.4	1.9	.1	.4	2	3
Lexington, Ky	(S)	(S)	(S)	2.2	.2	2.0	.6	.7	.5	.2	(D)	(X)	15
Lima, Ohio	(S)	(S)	(S)	6.2	.6	5.7	1.2	.8	.9	2.8	.4	(X)	1
Lincoln, Nebr	(S)	(S)	(S)	1.1	.7	.4	.1	.2	.1	.1	-	(X)	4
Little Rock-North Little Rock, Ark	(S)	(S)	(S)	2.9	.5	2.5	.6	.6	.7	.6	(D)	(X)	11
Long Branch-Asbury Park, N.J	2.5	1.6	.9	5.0	.4	4.6	.5	.5	.5	3.1	-	2	15
Lorain-Elyria, Ohio	9.5	9.4	.1	11.6	1.2	10.4	1.6	1.7	2.1	4.9	.2	1	1
Los Angeles-Long Beach, Calif	17.5	16.0	1.5	53.1	10.4	42.7	7.4	10.6	14.4	10.3	8.1	5	3
Louisville, Ky.-Ind	1.3	1.2	.1	16.6	7.8	8.8	1.1	2.4	3.6	1.6	.3	12	4
Macon, Ga	(S)	(S)	(S)	3.4	.7	2.7	.8	.3	1.0	.6	.1	(X)	5
Madison, Wis	(S)	(S)	(S)	1.1	.6	.5	.1	.2	.1	.2	-	(X)	6
Mansfield, Ohio	1.1	1.0	-	1.8	.2	1.6	.3	.1	.3	.9	-	1	1
Memphis, Tenn.-Ark.-Miss	4.2	4.0	.3	27.1	4.2	22.9	4.1	3.4	12.9	2.5	7.7	18	5
Milwaukee, Wis	4.6	3.7	.9	12.5	9.2	3.3	.7	1.2	.9	.6	.3	8	10
Minneapolis-St. Paul, Minn.-Wis	(S)	(S)	(S)	16.4	8.0	8.4	2.0	1.5	2.3	2.6	.7	(X)	7
Mobile, Ala	8.7	7.1	1.6	15.8	1.0	14.8	4.6	3.7	4.8	1.7	1.5	15	2
Modesto, Calif	(S)	(S)	(S)	2.3	1.7	.6	.1	.2	.2	.1	.1	(X)	11
Monroe, La	10.4	10.4	-	5.0	-	4.9	1.1	.6	.9	2.3	1.2	1	1
Muskegon-Muskegon Heights, Mich	(S)	(S)	(S)	4.5	2.0	2.5	.3	.3	.1	1.8	-	(X)	2
Nashville-Davidson, Tenn	2.9	.3	2.5	5.3	1.7	3.6	1.1	1.0	1.1	.4	.1	12	3
Nassau-Suffolk, N.Y	1.3	1.1	.2	5.2	1.0	4.2	.3	1.9	1.1	.8	.9	13	5
New Britain, Conn	.1	.1	-	.9	.1	.8	.2	.2	.2	.2	-	8	10
New Brunswick-Perth Amboy-Sayreville, N.J	3.2	2.7	.5	19.0	3.1	15.9	2.0	3.2	6.6	4.1	5.0	7	2
New Haven-West Haven, Conn	(S)	(S)	(S)	4.8	.3	4.5	.6	1.1	1.9	.9	.2	(X)	11
New London-Norwich, Conn.-R.I	4.3	1.0	3.3	7.9	.8	7.2	1.1	1.2	1.6	3.3	(D)	1	5
New Orleans, La	1.8	1.8	-	10.7	.9	9.9	2.0	1.9	2.0	4.0	.3	1	1
New York, N.Y.-N.J	(S)	(S)	(S)	17.3	7.2	10.1	2.2	2.2	1.9	3.9	.4	(X)	15
Newark, N.J	12.6	11.0	1.6	41.7	4.5	37.2	6.3	6.2	13.6	11.2	3.3	1	1
Newport News-Hampton, Va	4.6	2.8	1.8	5.3	1.6	3.7	.8	.8	.9	1.3	(D)	1	1
Norfolk-Virginia Beach-Portsmouth, Va.-N.C	1.9	1.9	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Northeast Pennsylvania	(S)	(S)	(S)	2.5	.9	1.6	.5	.4	.4	.3	.2	(X)	11
Odessa, Tex	(S)	(S)	(S)	1.4	-	1.4	.2	.5	.1	.7	-	(X)	1
Oklahoma,City, Okla	(S)	(S)	(S)	2.0	1.0	1.0	.3	.4	.2	.1	.1	(X)	10
Omaha, Nebr.-Iowa	(S)	(S)	(S)	3.3	1.9	1.4	.3	.5	.4	.3	.3	(X)	16
Orlando, Fla	(S)	(S)	(S)	1.9	1.1	.8	.3	.3	.1	.1	-	(X)	6
Parkersburg-Marietta, W. Va.-Ohio	(S)	(S)	(S)	20.8	.4	20.5	4.6	2.8	9.8	3.2	8.9	(X)	5
Pensacola, Fla	1.1	1.0	-	4.7	.1	4.6	1.1	1.1	.6	1.7	(D)	13	5
Peoria, Ill	5.8	5.8	-	9.4	1.1	8.3	2.9	1.7	2.9	.8	(D)	1	1
Petersburg-Colonial Heights-Hopewell, Va	(D)	(D)	(D)	6.4	2.8	3.5	1.2	.7	.3	1.3	(D)	(X)	1
Philadelphia, Pa.-N.J	28.7	19.3	9.4	63.1	10.4	52.6	6.9	11.0	20.8	13.9	8.2	16	2
Phoenix, Ariz	1.4	.9	.5	2.9	1.1	1.8	.4	.5	.4	.5	-	12	5
Pine Bluff, Ark	2.0	1.5	.5	3.3	-	3.3	.7	.5	.9	1.3	-	2	5
Pittsburgh, Pa	61.9	61.9	-	49.7	3.9	45.8	11.4	9.1	17.7	7.6	4.6	1	1
Pittsfield, Mass	1.7	1.7	.1	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5	(X)
Portland, Maine	(S)	(S)	(S)	4.0	.7	3.3	1.0	.5	1.7	.2	-	(X)	14
Portland, Oreg.-Wash	2.9	2.4	.5	13.4	2.5	10.9	3.9	1.9	4.3	.8	1.5	4	4
Poughkeepsie, N.Y	1.9	1.9	-	4.4	.1	4.2	.7	1.7	.6	1.2	(D)	13	1
Providence-Warwick-Pawtucket, R.I	1.3	1.2	.1	6.2	1.7	4.5	.7	1.1	1.2	1.5	-	15	9
Pueblo, Colo	1.6	.2	1.4	2.7	-	2.6	1.3	.7	.7	-	-	1	1
Racine, Wis	(S)	(S)	(S)	2.2	1.1	1.1	.1	.4	.2	.3	-	(X)	7
Raleigh-Durham, N.C	1.2	.7	.5	3.3	1.1	2.2	.4	.7	.7	.5	.4	10	11
Richmond, Va	(S)	(S)	(S)	8.7	.9	7.9	1.2	1.4	1.8	3.5	.7	(X)	12
Riverside-San Bernardino-Ontario, Calif	(S)	(S)	(S)	12.4	1.6	10.9	1.1	1.9	2.6	5.3	.4	(X)	2
Rochester, N.Y	4.2	3.9	.3	22.0	3.3	18.7	4.0	3.8	3.1	7.7	(D)	18	6
Rockford, Ill	(S)	(S)	(S)	4.1	1.7	2.4	.5	.5	.8	.5	1.1	(X)	12
Sacramento, Calif	(S)	(S)	(S)	3.9	2.0	1.9	.2	.9	.3	.4	-	(X)	1
Saginaw, Mich	3.3	3.3	-	6.1	1.8	4.3	1.3	.5	2.4	-	.8	1	1
St. Louis, Mo.-Ill	16.1	14.0	2.2	27.5	8.1	19.4	5.3	5.5	5.0	3.7	2.9	1	3
Salem, Oreg	(S)	(S)	(S)	2.5	.2	2.3	1.0	.3	.9	.1	2.1	(X)	5
Salt Lake City-Ogden, Utah	(S)	(S)	(S)	2.9	.3	2.6	.5	.5	1.2	.4	(D)	(X)	4
San Antonio, Tex	(S)	(S)	(S)	1.2	.4	.8	.1	.1	.3	.2	-	(X)	16
San Francisco-Oakland, Calif	10.1	9.3	.8	43.0	5.3	37.7	5.1	5.7	11.7	15.2	2.5	17	2
San Jose, Calif	8.8	8.2	.6	11.3	4.8	6.6	1.8	1.6	2.3	.9	.7	6	5

See footnotes at end of table.

Table 4C. Water Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures			Total operating costs	Payment to government units for public sewage use	Other operating costs					Cost recovered	Standard error of estimates (percent)	
	Total	Abatement technique				Total	By kind of cost						
		End of line	Changes in production process				Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Savannah, Ga.	(S)	(S)	(S)	12.2	.2	12.0	2.8	1.9	3.3	4.0	.2	(X)	8
Seattle-Everett, Wash.	20.3	20.2	.1	8.8	2.5	6.3	1.5	1.5	1.0	2.3	4.6	3	8
Sherman-Denison, Tex.	(S)	(S)	(S)	1.1	.2	.9	.2	.3	.3	.1	.5	(X)	15
Shreveport, La.	1.1	.7	.4	1.4	.3	1.1	.3	.3	.3	.2	-	17	10
South Bend, Ind.	(S)	(S)	(S)	1.5	.8	.7	.2	.3	.1	.1	-	(X)	14
Springfield-Chicopee-Holyoke, Mass.-Conn.	(S)	(S)	(S)	3.6	.9	2.7	.6	.5	.4	1.2	.1	(X)	13
Steubenville-Weirton, Ohio-W. Va.	(D)	(D)	(D)	26.3	.1	26.2	4.1	6.7	5.0	10.4	1.5	(X)	1
Stockton, Calif.	1.6	1.6	-	4.8	3.0	1.9	.6	.4	.3	.5	.5	15	10
Syracuse, N.Y.	1.3	1.1	.2	6.3	1.4	4.9	.9	1.2	1.3	1.6	.4	7	6
Tacoma, Wash.	(D)	(D)	(D)	3.9	.7	3.2	1.2	.4	1.2	.4	.1	(X)	4
Tampa-St. Petersburg, Fla.	(D)	(D)	.1	5.3	1.8	3.5	.4	.7	1.9	.5	.2	(X)	2
Toledo, Ohio-Mich.	3.2	3.2	.1	16.3	3.4	12.9	5.2	3.0	4.1	.6	.3	4	6
Topeka, Kans.	(S)	(S)	(S)	1.5	.1	1.4	.1	.2	.9	.2	-	(X)	2
Trenton, N.J.	(S)	(S)	(S)	1.6	.6	.9	.1	.2	.4	.2	-	(X)	5
Tucson, Ariz.	(S)	(S)	(S)	1.2	-	1.2	.1	.1	1.0	-	(D)	(X)	1
Tulsa, Okla.	1.1	1.1	-	6.1	.3	5.7	.8	1.4	3.3	.3	.2	15	3
Tuscaloosa, Ala.	(S)	(S)	(S)	1.4	-	1.3	.1	.5	.4	.3	-	(X)	1
Tyler, Tex.	1.9	1.9	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
Utica-Rome, N.Y.	(S)	(S)	(S)	1.7	.4	1.4	.2	.3	.1	.7	.1	(X)	7
Vallejo-Fairfield-Napa, Calif.	(S)	(S)	(S)	7.1	2.0	5.1	.4	.7	3.5	.4	.9	(X)	1
Vineland-Millville-Bridgeton, N.J.	(S)	(S)	(S)	3.8	.7	3.0	.4	.8	1.5	.4	(D)	(X)	7
Washington, D.C.-Md.-Va.	(S)	(S)	(S)	1.5	.8	.7	.2	.2	.1	.3	-	(X)	17
Waterbury, Conn.	(S)	(S)	(S)	2.8	.7	2.1	.7	.4	.8	.2	-	(X)	18
Waterloo-Cedar Falls, Iowa	(S)	(S)	(S)	1.6	.3	1.3	.2	.4	.3	.4	-	(X)	1
Wheeling, W. Va.	(D)	(D)	.1	6.3	.8	5.5	1.4	.8	1.5	1.7	.3	(X)	18
Wichita, Kans.	(D)	(D)	.3	16.5	.3	16.2	2.6	3.3	9.8	.5	.5	(X)	1
Williamsport, Pa.	(S)	(S)	(S)	1.1	.5	.6	-	.2	.2	.1	-	(X)	13
Wilmington, Del.-N.J.-Md.	5.9	4.6	1.2	52.7	3.7	49.0	8.3	9.6	22.5	8.5	1.2	1	1
Wilmington, N.C.	1.0	1.0	-	5.9	-	5.9	1.5	1.4	2.1	.9	3.7	3	1
Worcester, Mass.	(S)	(S)	(S)	1.4	.2	1.1	.3	.3	.5	.1	-	(X)	1
York, Pa.	(S)	(S)	(S)	6.2	1.1	5.1	1.3	1.0	1.7	1.0	.1	(X)	3
Youngstown-Warren, Ohio	2.5	2.5	-	10.9	1.8	9.1	2.1	2.8	2.0	2.2	.1	1	1

Note: Totals may not agree precisely with detail because of independent rounding. No major industry groups are shown. No SMSA totals are shown where PACE and GAC is less than $1.0 million or the standard error is 20 or greater. Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the SMSA totals.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because data did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

Table 5A. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by Indusry for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	Industry	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard error of estimates (percent): PACE	GAC
	All industries[1]	246.9	1,322.5	94.1	1,228.4	81.8	312.0	182.4	652.2	190.9	1	2
20	Food and kindred products	13.6	115.3	15.9	99.4	6.4	24.7	8.9	59.3	16.2	5	4
201	Meat products	2.4	16.8	3.2	13.5	.8	3.8	1.5	7.5	1.3	5	2
2011	Meatpacking plants	1.1	9.5	2.1	7.4	.4	2.2	(D)	4.1	(D)	2	1
2013	Sausages and other prepared meats	(S)	3.8	.6	3.1	.2	.7	(D)	2.1	(D)	(X)	6
2016	Poultry dressing plants	(S)	2.7	.4	2.3	.2	.8	.4	.9	.4	(X)	15
202	Dairy products	(S)	11.0	1.7	9.3	.5	1.7	.9	6.2	.6	(X)	14
2022	Cheese, natural and processed	(S)	2.2	.3	1.9	.2	.5	.2	1.0	.2	(X)	16
203	Preserved fruits and vegetables	(S)	27.1	3.9	23.3	2.2	5.8	2.1	13.3	6.5	(X)	9
2032	Canned specialties	(S)	2.7	.6	2.2	.3	.9	.1	.9	(D)	(X)	1
2033	Canned fruits and vegetables	(S)	9.2	1.3	7.8	.7	1.6	.6	5.0	1.8	(X)	6
2035	Pickles, sauces, salad dressings	(S)	1.6	.3	1.3	.1	.3	.1	.8	.1	(X)	12
204	Grain mill products	1.5	11.0	1.2	9.8	.4	2.9	.6	6.0	1.3	2	3
2041	Flour, other grain mill products	-	1.1	.2	.9	-	.3	-	.6	.1	(X)	13
2043	Cereal breakfast foods	(S)	1.6	.1	1.5	-	.6	-	.8	(D)	(X)	2
2045	Blended and prepared flour	-	1.3	.1	1.2	-	.4	.1	.7	.1	(X)	18
2046	Wet corn milling	(S)	2.5	.2	2.3	.1	.6	.1	1.6	.1	(X)	1
2047	Dog, cat, and other pet food	(S)	2.1	.2	1.9	.1	.3	.1	1.5	(D)	(X)	3
2048	Prepared feeds, n.e.c	-	1.7	.3	1.4	.1	.5	.1	.7	.2	(X)	12
205	Bakery products	(S)	5.7	1.2	4.5	-	.8	.3	3.3	3.5	(X)	7
2051	Bread, cake, and related products	(S)	3.8	1.2	2.7	-	.4	.2	2.1	.1	(X)	8
2052	Cookies and crackers	(S)	1.9	.1	1.8	-	.5	.1	1.2	3.4	(X)	12
206	Sugar, confectionery products	1.1	13.4	.6	12.8	1.1	4.2	1.6	5.8	.4	7	8
2061	Raw cane sugar	(S)	4.6	-	4.6	.3	1.3	.5	2.5	-	(X)	17
2062	Cane sugar refining	(S)	1.3	.2	1.1	-	.4	.1	.6	-	(X)	1
2065	Confectionery products	(S)	4.8	.3	4.5	.1	2.3	.2	1.9	.2	(X)	12
207	Fats and oils	(D)	6.1	.4	5.8	.3	1.0	.7	3.8	.3	(X)	5
2075	Soybean oil mills	(D)	1.7	.2	1.5	.1	.2	.2	1.1	-	(X)	6
2079	Shortening and cooking oils	-	2.9	.1	2.8	.1	.4	.4	1.8	-	(X)	6
208	Beverages	(S)	14.7	2.4	12.3	.7	2.7	.8	8.1	.9	(X)	4
2082	Malt beverages	(S)	5.2	.6	4.6	.4	1.1	.3	2.8	.2	(X)	2
2084	Wines, brandy, and brandy spirits	-	1.1	.1	1.0	(D)	(D)	.1	.6	-	(X)	17
2086	Bottled and canned soft drinks	(S)	6.2	1.4	4.8	(D)	(D)	.4	3.5	.6	(X)	8
209	Miscellaneous foods, kindred products	(S)	9.6	1.3	8.3	.4	1.8	.7	5.4	1.5	(X)	4
2095	Roasted coffee	(S)	2.1	.1	2.0	(D)	.3	(D)	1.2	1.1	(X)	1
2099	Food preparations, n.e.c	(S)	5.5	.8	4.7	(D)	1.1	(D)	3.1	.3	(X)	6
21	Tobacco products	(D)	3.0	.2	2.8	.3	1.0	.3	1.2	-	(X)	2
2111	Cigarettes	(D)	2.2	.1	2.1	.3	.8	.2	.9	-	(X)	1
22	Textile mill products	2.1	22.5	2.8	19.7	.8	6.6	1.7	10.5	2.4	10	4
2211	Weaving mills, cotton	(D)	1.5	.2	1.4	.1	.4	.3	.6	.4	(X)	6
2221	Weaving mills, manmade fiber, silk	(D)	2.2	.4	1.8	.1	.6	.2	1.0	-	(X)	7
226	Textile finishing, except wool	(S)	2.9	.5	2.5	.2	1.0	.3	1.0	-	(X)	18
2262	Finishing plants, manmade fiber, silk	(S)	1.5	.3	1.2	.1	.5	.3	.3	-	(X)	9
227	Floor covering mills	-	2.4	.3	2.1	.1	.6	.2	1.2	.6	(X)	12
2272	Tufted carpets and rugs	-	2.0	.3	1.7	(D)	(D)	(D)	.9	.6	(X)	14
228	Yarn and thread mills	-	2.2	.3	1.8	.1	.6	.2	1.0	.3	(X)	9
2281	Yarn mills, except wool	-	1.1	.2	.9	-	.3	.2	.5	-	(X)	15
229	Miscellaneous textile goods	(S)	5.9	.3	5.6	.2	1.8	.4	3.2	.5	(X)	9
2295	Coated fibrics, not rubberized	(S)	2.5	-	2.5	(D)	(D)	(D)	1.3	.4	(X)	9
24	Lumber and wood products	13.8	49.7	2.8	46.9	5.8	16.4	7.5	17.3	17.2	11	7
2411	Logging camps, log contractors	(S)	5.9	-	5.8	.6	1.9	1.1	2.3	(D)	(X)	13
242	Sawmills, planing mills	(S)	16.8	1.3	16.5	2.2	7.5	3.3	3.5	8.9	(X)	12
2421	Sawmills, planing mills, general	(S)	15.6	.2	15.4	2.0	7.3	3.2	2.9	8.8	(X)	12
243	Millwork, plywood, structual members	(S)	12.1	.9	11.2	1.4	3.2	1.6	5.0	3.7	(X)	11
2436	Softwood veneer and plywood	(S)	5.9	.1	5.8	.9	2.2	1.1	1.5	2.3	(X)	17
245	Wood buildings and mobile homes	(S)	5.0	.8	4.2	.1	.7	.2	3.1	-	(X)	13
2451	Mobile homes	(S)	3.9	.6	3.3	.1	.4	.1	2.7	-	(X)	14
2499	Wood products, n.e.c	1.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	16	(X)
25	Furniture and fixtures	3.5	12.9	3.0	9.9	.5	2.7	.6	6.1	.3	13	7
251	Household furniture	(S)	8.0	1.7	6.3	.3	1.7	.4	3.9	.3	(X)	9
2511	Wood household furniture	(S)	3.2	.6	2.6	.1	.8	.1	1.5	.2	(X)	14
2512	Upholstered household furniture	(S)	1.9	.4	1.4	.1	.4	.1	.9	.1	(X)	16
252	Office furniture	(S)	1.2	.2	1.0	-	.3	-	.6	-	(X)	17
26	Paper and allied products	38.8	121.1	10.4	110.6	11.3	29.3	22.7	47.3	39.9	1	3
2611	Pulpmills	4.4	11.5	.7	10.9	2.2	3.5	2.6	2.6	.8	6	4
2621	Papermills, except building paper	27.5	52.7	5.0	47.7	5.8	9.9	12.6	19.3	18.3	1	3
2631	Paperboard mills	5.0	23.8	.1	23.6	2.3	7.7	4.8	8.8	11.5	1	14

See footnotes at end of table.

Table 5A. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard error of estimates (percent): PACE	GAC
26	Paper and allied products--Continued											
264	Miscellaneous converted paper products..	1.2	21.8	3.2	18.6	0.6	6.0	2.0	10.0	5.0	17	6
2641	Paper coating and glazing.....	(S)	6.5	1.0	5.6	.1	1.5	.5	3.5	.3	(X)	7
2647	Sanitary paper products.....	(S)	5.0	.7	4.3	.2	2.8	.2	1.2	1.0	(X)	3
2649	Converted paper products, n.e.c.....	(S)	2.0	.6	1.4	-	.4	-	.9	.1	(X)	17
265	Paperboard containers and boxes.....	(S)	9.5	1.3	8.1	.4	1.8	.4	5.5	4.2	(X)	7
2651	Folding paperboard boxes.....	(S)	2.1	.4	1.7	-	.1	-	1.5	.3	(X)	12
2653	Corrugated and solid fiber boxes.....	(S)	4.6	.6	4.0	.3	.9	.3	2.5	3.9	(X)	11
2654	Sanitary food containers.....	(S)	1.4	.2	1.2	-	.2	.1	.9	-	(X)	13
27	Printing and publishing.....	2.5	30.6	3.4	27.1	.7	5.1	4.4	17.0	4.4	18	16
2711	Newspapers.....	(S)	5.2	1.1	4.1	-	1.0	.1	3.0	1.6	(X)	8
273	Books.....	-	1.9	.2	1.7	.1	.3	.1	1.2	-	(X)	12
2732	Book printing.....	-	1.3	.2	1.1	.1	.2	.1	.7	-	(X)	18
2751	Commercial printing, letterpress.....	(S)	2.3	.4	1.8	-	.2	.1	1.5	.1	(X)	16
2754	Commerical printing, gravure.....	(S)	1.3	.2	1.0	-	.3	.3	.5	.2	(X)	15
2761	Manifold business forms.....	-	1.7	.3	1.3	.1	.3	-	1.0	.3	(X)	13
28	Chemicals and allied products.....	95.6	287.0	8.5	278.4	25.2	55.7	60.8	136.7	24.6	3	5
281	Industrial inorganic chemicals.....	12.6	50.7	.7	50.0	4.9	9.3	13.5	22.3	3.8	5	6
2812	Alkalies and chlorine.....	5.3	11.0	.1	10.9	.9	1.4	1.7	6.9	.1	1	1
2816	Inorganic pigments.....	(S)	5.0	.1	4.9	.2	.6	1.4	2.7	-	(X)	10
2819	Industrial inorganic chemicals, n.e.c.	6.2	34.2	.5	33.7	3.7	7.3	10.1	12.6	3.6	6	10
282	Plastics materials, synthetics.....	4.9	38.7	.7	38.1	2.9	8.7	8.3	18.2	6.0	3	3
2821	Plastics materials and resins.....	3.8	23.9	.6	23.3	1.2	3.7	4.6	13.7	4.7	4	5
2822	Synthetic rubber.....	(S)	2.4	-	2.4	.2	.6	.4	1.2	-	(X)	6
2824	Organic fibers, noncellulosic.....	(S)	11.6	-	11.6	1.5	4.2	3.1	2.9	1.3	(X)	1
283	Drugs.....	(S)	20.9	3.0	18.0	1.6	3.6	3.8	9.0	1.8	(X)	2
2833	Medicinals and botanicals.....	(S)	7.2	.1	7.2	.7	1.3	2.2	3.1	.6	(X)	4
2834	Pharmaceutical preparations.....	1.2	12.8	2.9	9.9	.9	2.2	1.5	5.3	1.2	1	2
284	Soaps, cleaners, toilet goods.....	(S)	9.2	1.0	8.3	.3	1.5	.5	6.1	.3	(X)	4
2841	Soap and other detergents.....	(S)	2.8	.3	2.5	.1	.3	.2	1.8	.1	(X)	4
2842	Polishes and sanitation goods.....	-	1.4	.1	1.3	-	.4	-	.9	.2	(X)	16
2843	Surface active agents.....	(S)	1.8	.1	1.7	.1	.3	.1	1.2	-	(X)	15
2844	Toilet preparations.....	-	3.2	.4	2.8	.1	.5	.1	2.2	.1	(X)	5
2851	Paints and allied products.....	(S)	13.0	.8	12.2	.3	2.5	.9	8.5	1.8	(X)	10
286	Industrial organic chemicals.....	58.0	111.2	1.8	109.4	10.9	21.5	25.5	51.5	9.2	4	1
2865	Cyclic crudes and intermediates.....	(D)	22.0	.6	21.4	1.1	2.4	3.2	14.8	(D)	1	3
2869	Industrial organic chemicals, n.e.c...	(D)	89.0	1.2	87.7	9.8	19.1	22.2	36.5	(D)	10	2
287	Agricultural chemicals.....	13.6	30.0	.2	29.8	3.5	5.9	7.2	13.2	.7	1	5
2873	Nitrogenous fertilizers.....	(D)	5.3	.1	5.3	1.5	.9	1.2	1.6	(D)	1	9
2874	Phosphatic fertilizers.....	8.8	14.1	-	14.0	1.2	3.1	4.1	5.6	-	1	6
2879	Agricultural chemicals, n.e.c.....	(D)	10.2	.1	10.1	.8	1.9	1.8	5.7	(D)	2	13
289	Miscellaneous chemical products.....	(S)	13.3	.5	12.8	1.0	2.7	1.1	7.9	1.0	(X)	8
2892	Explosives.....	-	1.3	-	1.3	.1	1.0	.1	.2	-	(X)	8
2899	Chemical preparations, n.e.c.....	(S)	6.1	.3	5.8	.6	.7	.8	3.7	(D)	(X)	7
29	Petroleum and coal products.....	17.1	52.3	1.4	50.9	3.3	7.6	11.3	28.7	5.3	16	1
2911	Petroleum refining.....	12.5	42.7	.6	42.1	2.8	7.0	10.3	22.1	2.1	1	1
295	Paving and roofing materials.....	(S)	8.5	.7	7.8	.3	.5	.9	6.1	.7	(X)	10
2952	Asphalt felts and coatings.....	(S)	8.0	.7	7.4	.1	.4	.9	6.0	-	(X)	10
30	Rubber, miscellaneous plastics products...	2.9	49.9	6.5	43.3	1.7	11.2	3.9	26.5	4.3	7	4
3011	Tires and inner tubes.....	(S)	10.5	.8	9.7	.1	3.8	.3	5.4	.3	(X)	1
3069	Fabricated rubber products, n.e.c.....	(S)	6.8	1.2	5.7	.2	1.6	.2	3.7	.4	(X)	10
3079	Miscellaneous plastics products.....	1.8	29.2	4.0	25.2	1.4	5.1	3.2	15.5	3.4	11	7
31	Leather and leather products.....	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
32	Stone, clay, glass products.....	10.0	60.5	4.0	56.5	5.1	16.7	8.3	26.4	9.0	7	4
3211	Flat glass.....	-	3.1	.1	3.0	.2	1.2	.1	1.5	-	(X)	5
322	Glass, pressed or blown.....	(S)	8.5	.8	7.7	.6	2.0	.8	4.4	4.4	(X)	5
3221	Glass containers.....	(S)	4.4	.6	3.8	.2	.9	.3	2.5	(D)	(X)	5
3229	Pressed and blown glass, n.e.c.....	(S)	4.1	.2	3.9	.4	1.1	.5	1.9	(D)	(X)	9
3231	Products of purchased glass.....	-	1.9	-	1.9	-	.7	.2	1.0	-	(X)	13
3241	Cement, hydraulic.....	(S)	7.3	.1	7.2	.3	3.6	1.0	2.3	1.3	(X)	9
327	Concrete, gypsum, plaster products.....	(S)	10.5	.9	9.6	.7	2.6	1.1	5.1	.4	(X)	14
329	Miscellaneous nonmetallic mineral products.....	(S)	23.3	1.8	21.4	2.2	4.9	4.1	10.2	2.4	(X)	7
3291	Abrasive products.....	(D)	1.2	.5	.7	-	.1	.1	.5	-	(X)	10
3292	Asbestos products.....	(S)	4.1	.3	3.7	.3	1.0	.5	1.9	.4	(X)	17
3296	Mineral wool.....	(S)	11.5	.8	10.7	1.6	2.6	2.8	3.7	(D)	(X)	9
33	Primary metal industries.....	6.9	163.5	5.8	157.7	6.1	33.1	20.0	98.5	7.0	11	1
331	Blast furnace, basic steel products.....	1.7	105.3	1.6	103.7	1.6	18.5	12.6	71.0	(D)	1	1
3312	Blast furnaces and steel mills.....	1.4	98.1	1.3	96.8	.8	17.5	11.9	66.6	1.0	1	1
3313	Electrometallurgical products.....	-	1.0	-	1.0	.3	.3	.4	-	-	(X)	4
3316	Cold finishing of steel shapes.....	(D)	3.6	-	3.6	.4	.2	-	2.9	-	(X)	2

See footnotes at end of table.

Table 5A. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard error of estimates (percent): PACE	GAC
33	Primary metal industries--Continued											
332	Iron and steel foundries	(S)	26.2	2.4	23.8	2.0	5.3	2.3	14.1	3.0	(X)	6
3321	Gray iron foundries	(S)	17.2	1.4	15.8	1.3	3.6	1.6	9.3	3.0	(X)	7
3322	Malleable iron foundries	-	1.5	.1	1.4	(D)	.1	(D)	.9	-	(X)	14
3325	Steel foundries, n.e.c.	(S)	6.9	.8	6.1	(D)	1.4	(D)	3.6	-	(X)	15
333	Primary nonferrous metals	2.9	12.2	.1	12.1	1.4	3.4	3.4	3.9	(D)	11	8
3334	Primary aluminum	1.9	5.2	-	5.2	.9	1.4	1.2	1.7	(D)	16	8
3339	Primary nonferrous metals, n.e.c.	(D)	2.3	-	2.3	.3	.6	.9	.5	-	(X)	8
335	Nonferrous rolling and drawing	(S)	12.8	.7	12.1	.6	4.0	1.1	6.4	2.2	(X)	3
3351	Copper rolling and drawing	-	1.5	.1	1.3	.1	.5	.1	.6	-	(X)	5
3353	Aluminum sheet, plate, and foil	(S)	4.8	.1	4.7	.2	1.8	.4	2.2	1.9	(X)	2
3354	Aluminum extruded products	-	1.3	.2	1.2	.1	.2	.1	.8	-	(X)	9
3356	Nonferrous rolling and drawing, n.e.c.	(S)	2.4	-	2.4	.2	1.2	.3	.7	.1	(X)	15
3357	Nonferrous wiredrawing, insulating	(S)	2.6	.3	2.3	.1	.3	.2	1.8	.1	(X)	7
336	Nonferrous foundries	(S)	2.5	.4	2.1	.1	.5	.2	1.3	(D)	(X)	13
3361	Aluminum foundries	(S)	1.8	.3	1.6	.1	.5	.1	.9	(D)	(X)	16
34	Fabricated metal products	4.9	64.2	6.4	57.8	2.7	17.4	5.6	32.0	5.9	18	3
341	Metal cans, shipping containers	(S)	4.6	.6	4.0	.1	.3	.2	3.4	.3	(X)	6
3411	Metal cans	(S)	3.9	.4	3.5	.1	.2	.1	3.0	.3	(X)	6
342	Cutlery, handtools, and hardware	(S)	8.3	1.0	7.4	.4	3.1	.6	3.2	.5	(X)	6
3429	Hardware, n.e.c.	(S)	6.4	.7	5.7	.3	2.5	.5	2.3	(D)	(X)	6
343	Plumbing, heating, except electric	(S)	3.2	.3	2.8	.1	1.0	.4	1.3	-	(X)	14
3432	Plumbing fittings and brass goods	-	1.1	.2	1.0	.1	.2	.1	.5	-	(X)	18
344	Fabricated structural metal products	(S)	10.6	1.7	8.9	.3	2.2	.6	5.8	.5	(X)	6
3441	Fabricated structural metal	-	1.6	.3	1.2	-	.4	.1	.7	-	(X)	18
3343	Fabricated platework, boiler shop	(S)	3.5	.3	3.2	.1	.6	.3	2.1	.2	(X)	6
3444	Sheet metalwork	-	1.9	.5	1.4	-	.2	.1	1.2	.1	(X)	13
345	Screw machine products, bolts, etc.	(S)	3.8	.3	3.4	.1	.6	.3	2.4	.5	(X)	16
3452	Bolts, nuts, rivets, and washers	(S)	3.1	.3	2.9	.1	.5	.3	2.0	-	(X)	18
346	Metal forgings and stampings	(S)	12.3	.9	11.4	.2	4.0	.8	6.3	.7	(X)	8
3563	Nonferrous forgings	(D)	1.0	-	.9	-	(D)	(D)	.4	-	(X)	11
3565	Automotive stampings	(S)	6.5	.6	5.9	.1	2.4	.2	3.2	.6	(X)	12
3469	Metal stampings, n.e.c.	(S)	2.9	.2	2.7	-	(D)	(D)	1.5	.1	(X)	11
348	Ordnance and accessories, n.e.c.	(S)	5.9	.1	5.8	.7	2.3	1.1	1.7	.3	(X)	9
3483	Ammunition, except small arms, n.e.c.	(D)	1.6	-	1.5	.4	.8	.1	.2	-	(X)	8
3484	Small arms	-	1.4	.1	1.3	(D)	(D)	(D)	.3	.2	(X)	1
3489	Ordnance and accessories n.e.c.	(D)	1.3	-	1.3	-	(D)	(D)	.7	-	(X)	2
349	Miscellaneous fabricated metal products.	(S)	9.1	.9	8.2	.3	2.2	.7	4.9	2.2	(X)	9
3494	Valves and pipe fittings	(S)	3.8	.3	3.4	.2	1.0	.3	1.9	.2	(X)	8
35	Machinery, except electrical	7.8	81.1	6.3	74.8	3.2	23.2	8.3	40.1	12.1	3	1
351	Engines and turbines	(S)	8.0	.5	7.5	(D)	3.1	(D)	2.9	.1	(X)	2
3511	Turbines, turbine generator sets	(S)	1.3	.1	1.2	(D)	.2	(D)	.9	.1	(X)	5
3519	Internal combustion engines, n.e.c.	(S)	6.6	.4	6.3	.1	2.9	1.3	2.0	-	(X)	3
352	Farm and garden machinery	(S)	7.4	.4	7.0	.5	2.1	.9	3.4	.4	(X)	2
3523	Farm machinery and equipment	(S)	6.5	.3	6.1	.5	1.9	.9	2.8	.2	(X)	2
353	Construction, related machinery	2.3	14.4	1.0	13.4	.5	4.0	.9	8.0	(D)	2	2
3531	Construction machinery	2.0	9.7	.6	9.1	.4	3.1	.6	5.0	(D)	2	3
3533	Oilfield machinery	(S)	1.9	.2	1.7	-	.2	.2	1.3	-	(X)	6
354	Metalworking machinery	(S)	5.0	.8	4.2	.2	.9	.2	2.9	1.6	(X)	7
3541	Machine tools, metal cutting	-	1.5	.1	1.4	.1	.4	.2	.8	.4	(X)	16
3544	Special dies, tools, jigs, etc.	-	1.2	.2	1.0	-	-	-	.9	-	(X)	19
355	Special industry machinery	(S)	5.9	.5	5.4	.3	2.0	.4	2.7	.9	(X)	8
3559	Special industry machinery, n.e.c.	(S)	3.0	.2	2.8	.1	1.1	.3	1.2	.8	(X)	13
356	General industrial machinery	(S)	10.6	.9	9.7	(D)	3.0	(D)	5.6	2.1	(X)	7
3561	Pumps and pumping equipment	(S)	2.2	.4	1.9	.1	.5	.1	1.2	.1	(X)	10
3562	Ball and roller bearings	(S)	2.1	.1	2.0	(D)	(D)	(D)	.7	(D)	(X)	7
3563	Air and gas compressors	(D)	1.1	.1	1.0	(D)	(D)	(D)	.5	-	(X)	5
3568	Power transmission equipment, n.e.c.	(D)	1.4	-	1.4	-	.4	-	.9	-	(X)	8
357	Office and computing machines	(S)	9.4	.7	8.7	.2	1.8	.4	6.3	.3	(X)	5
3573	Electronic computing equipment	(S)	6.0	.5	5.5	-	1.2	.2	4.1	.2	(X)	7
3574	Calculating, accounting machines	(D)	(D)	(D)	1.5	.1	.3	-	1.1	-	(X)	3
3579	Office machines, typewriters, etc.	-	(D)	(D)	1.3	-	.3	.2	.8	-	(X)	13
358	Refrigeration and service machinery	(S)	16.4	1.1	15.3	1.0	5.8	2.8	5.7	6.2	(X)	3
3585	Refrigeration, heating equipment	(S)	15.0	.8	14.1	1.0	5.6	2.7	4.8	(D)	(X)	3
359	Miscellaneous machinery, except electrical	1.2	4.0	.4	3.6	.1	.5	.4	2.6	(D)	4	19
3592	Carburetors, pistons, rings, etc.	(D)	1.5	.1	1.4	.1	.2	.3	.9	(D)	1	13

See footnotes at end of table.

Table 5A. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	Industry	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs					Cost recovered	Standard error of estimates (percent)	
					Total	By kind of cost						
						Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs		PACE	GAC
36	Electric, electronic equipment	7.1	52.8	6.6	46.3	2.2	13.2	3.9	27.0	7.1	3	2
361	Electric distributing equipment	(S)	2.5	.3	2.2	.1	.5	.2	1.5	-	(X)	5
3612	Transformers	(D)	1.2	.1	1.1	-	.3	.1	.7	-	(X)	8
3613	Switchgear, switchboard apparatus	(S)	1.4	.2	1.1	.1	.2	-	.8	-	(X)	8
362	Electrical industrial apparatus	1.4	6.8	.5	6.2	.3	1.5	.4	4.0	.6	2	5
3621	Motors and generators	(D)	2.3	.2	2.0	.1	(D)	(D)	1.3	(D)	(X)	5
3622	Industrial controls	(S)	1.5	.1	1.4	-	.4	-	.9	-	(X)	18
3624	Carbon and graphite products	-	1.0	.1	1.0	.1	.3	.2	.4	(D)	(X)	6
3629	Electric industrial apparatus, n.e.c.	(D)	1.3	-	1.2	-	(D)	(D)	1.1	-	(X)	9
363	Household appliances	(S)	10.6	1.7	9.0	.7	3.2	1.1	4.0	.8	(X)	10
3632	Household refrigerators, freezers	(S)	2.5	.2	2.3	-	1.0	.7	.5	(D)	(X)	1
3633	Household laundry equipment	(S)	1.0	.1	.9	-	.5	.2	.2	(D)	(X)	1
3634	Electric housewares and fans	(S)	1.3	.1	1.2	-	.3	.1	.7	.1	(X)	9
3639	Household appliances, n.e.c.	(S)	1.1	.2	.9	-	.4	-	.4	-	(X)	7
304	Electric lighting, wiring equipment	2.4	6.8	.4	6.3	.3	2.5	.2	3.3	.8	1	5
3641	Electric lamps	(S)	1.4	.1	1.3	.1	.3	.1	.9	.1	(X)	9
3643	Current-carrying wiring devices	(S)	1.1	.1	1.1	-	.2	-	.8	.1	(X)	7
3644	Noncurrent-carrying wiring, devices	(D)	1.0	.1	.9	.1	(D)	.1	(D)	(D)	(X)	15
3647	Vehicular lighting equipment	(D)	1.6	-	1.6	-	(D)	-	(D)	(D)	1	3
365	Radio, TV receiving equipment	(S)	2.6	.5	2.2	.1	.5	.1	1.5	.2	(X)	13
3651	Radio and TV receiving sets	(S)	1.9	.4	1.5	.1	.4	.1	.9	.1	(X)	12
366	Communication equipment	(S)	8.0	1.2	6.8	.2	1.8	.3	4.5	.5	(X)	2
3661	Telephone and telegraph apparatus	(S)	2.7	.2	2.6	.1	.9	.1	1.5	.2	(X)	1
3662	Radio and TV communication equipment	(S)	5.3	1.0	4.3	.1	1.0	.2	3.1	.3	(X)	3
367	Electronic components, accessories	1.2	11.2	1.7	9.5	.5	2.3	1.0	5.8	3.6	17	6
3674	Semiconductors, related devices	(S)	5.5	.6	4.9	.3	.9	.4	3.2	2.8	(X)	8
3679	Electronic components, n.e.c.	(S)	2.6	.7	1.9	.1	.5	.2	1.2	.8	(X)	10
369	Miscellaneous electrical equipment, supplies	(S)	4.3	.4	4.0	.2	1.0	.6	2.2	.5	(X)	8
3691	Storage batteries	(S)	1.4	.1	1.3	.1	.4	.2	.7	.3	(X)	13
3694	Engine electrical equipment	(D)	1.3	.1	1.2	.1	.1	.2	.8	-	(X)	9
37	Transportation equipment	9.9	109.1	6.2	102.8	3.6	37.3	9.5	52.4	27.6	2	1
371	Motor vehicles and equipment	8.1	75.2	3.1	72.0	2.6	24.0	7.6	37.8	26.0	2	1
3711	Motor vehicles and car bodies	1.5	40.7	1.8	39.0	1.0	12.6	3.3	22.2	18.5	1	1
3713	Truck and bus bodies	-	1.6	.2	1.4	.1	.4	.1	.9	.1	(X)	15
3714	Motor vehicle parts, accessories	6.3	31.6	1.0	30.6	1.6	10.6	4.2	14.2	7.4	2	1
3715	Truck trailers	(S)	1.3	.2	1.1	-	.4	.1	.6	-	(X)	12
372	Aircraft and parts	(S)	13.3	1.1	12.2	.3	5.2	1.0	5.7	.6	(X)	2
3721	Aircraft	(D)	7.2	.6	6.6	.1	3.2	.7	2.5	.1	(X)	1
3724	Aircraft engines and engine parts	(S)	3.6	.1	3.4	.2	1.5	.2	1.5	.6	(X)	6
3728	Aircraft equipment, n.e.c.	-	2.5	.3	2.2	-	.6	-	1.6	-	(X)	6
373	Ship, boat building, repairing	(S)	12.1	.8	11.3	.5	5.2	.5	5.1	.2	(X)	5
3731	Ship building and repairing	(S)	10.5	.7	9.8	.5	4.9	.5	3.9	-	(X)	5
3743	Railroad equipment	-	2.3	.3	2.0	.1	.7	.1	1.2	-	(X)	4
376	Guided missiles, space vehicles	(S)	3.3	.6	2.7	.1	(D)	(D)	(D)	.8	(X)	1
3761	Guided missiles, space vehicles	(D)	2.3	.5	1.8	-	1.2	.1	.5	.7	(X)	1
379	Miscellaneous transportation equipment	(S)	2.6	.2	2.4	-	(D)	(D)	(D)	.1	(X)	7
3792	Travel trailers and campers	(S)	1.1	.1	1.0	-	(D)	(D)	(D)	-	(X)	15
3795	Tanks and tank components	(D)	1.1	-	1.1	-	-	-	1.1	-	(X)	1
38	Instruments, related products	2.5	27.9	1.4	26.5	1.7	7.7	3.0	14.0	7.2	5	1
382	Measuring, controlling devices	(S)	4.3	.3	4.0	-	1.2	.1	2.6	.2	(X)	7
3823	Process control instruments	-	1.2	.1	1.1	-	(D)	(D)	(D)	-	(X)	8
3825	Instruments to measure electricity	(S)	1.8	.2	1.6	-	(D)	(D)	(D)	.2	(X)	14
384	Medical instruments, supplies	(S)	3.6	.3	3.3	(D)	.7	(D)	2.1	.1	(X)	8
3841	Surgical and medical instruments	(S)	1.4	.1	1.3	.1	.3	.1	.8	.1	(X)	19
3842	Surgical appliances and supplies	-	1.9	.2	1.7	-	.4	.3	1.0	-	(X)	8
386	Photographic equipment and supplies	1.7	17.8	.4	17.5	(D)	5.4	(D)	8.2	(D)	2	1
39	Miscellaneous manufacturing industries	(S)	12.6	1.7	10.9	.4	2.1	.8	7.6	.3	(X)	6
394	Toys and sporting goods	(S)	3.8	.5	3.4	.1	(D)	(D)	2.4	.3	(X)	11
3944	Games, toys, children's vehicles	(D)	1.9	.2	1.6	.1	.4	.1	1.1	-	(X)	15
3949	Sporting and athletic goods, n.e.c.	(S)	1.8	.2	1.6	-	.3	.1	1.1	.2	(X)	17
399	Miscellaneous manufactures	(S)	4.8	.9	3.9	.1	(D)	(D)	3.0	-	(X)	11
3996	Hard surface floor coverings	(D)	1.4	.4	1.1	.1	(D)	(D)	.5	-	(X)	5
3999	Manufacturing industries, n.e.c.	(S)	1.5	.1	1.3	.1	.1	-	1.2	-	(X)	18

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry Group 23, Apparel and Other Textile Products, is excluded.

Table 5B. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard errors of estimates (percent): PACE	GAC
	United States	246.9	1,322.5	94.1	1,228.4	81.8	312.0	182.4	652.2	190.9	1	2
	New England Division:											
	Maine	(D)	7.8	.7	7.1	.5	1.9	1.6	3.0	4.1	3	7
26	Paper and allied products	(D)	5.1	.2	4.9	.4	1.0	1.3	2.3	3.8	1	4
	New Hampshire	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Vermont	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Massachusetts	(S)	22.8	1.6	21.2	.7	5.9	1.3	13.2	1.6	(X)	5
20	Food and kindred products	(S)	1.0	.1	.8	.1	.1	-	.7	.1	(X)	17
28	Chemicals and allied products	-	2.0	.1	1.9	-	.4	.1	1.4	.4	(X)	16
30	Rubber, miscellaneous plastics products	-	1.6	.1	1.5	-	.4	.1	1.0	(D)	(X)	15
35	Machinery, except electrical	(S)	1.9	.1	1.8	-	.4	.1	1.2	.1	(X)	8
36	Electric, electronic equipment	-	1.6	.1	1.6	-	.2	.1	1.2	.1	(X)	12
38	Instruments, related products	(S)	4.1	-	4.1	-	2.5	.1	1.4	-	(X)	2
	Rhode Island	-	2.7	.2	2.5	-	.4	.1	2.0	-	(X)	10
	Connecticut	(S)	12.7	.9	11.8	.4	2.6	1.3	7.5	4.5	(X)	5
28	Chemicals and allied products	(S)	2.2	.1	2.1	.1	.4	.1	1.5	.3	(X)	3
34	Fabricated metal products	-	1.6	.2	1.4	-	.2	.2	1.0	-	(X)	14
35	Machinery, except electrical	(X)	1.1	-	1.0	-	.3	.3	.4	-	(X)	8
	Middle Atlantic Division:											
	New York	46.1	84.1	4.3	79.8	5.9	19.8	11.7	42.4	20.1	7	2
20	Food and kindred products	(S)	5.5	.3	5.2	.2	1.2	.2	3.5	.4	(X)	7
26	Paper and allied products	(S)	7.5	1.1	6.4	1.6	1.4	1.6	1.8	(D)	(X)	13
28	Chemicals and allied products	(D)	14.4	.5	13.9	1.6	2.0	2.3	8.0	1.0	(X)	5
30	Rubber, miscellaneous plastics products	-	1.9	.2	1.7	-	(D)	(D)	1.3	-	(X)	16
32	Stone, clay, glass products	(S)	2.9	.4	2.5	.1	.8	.5	1.1	(D)	(X)	16
33	Primary metal industries	(S)	5.7	.1	5.7	.1	1.1	1.0	3.5	(D)	(X)	6
34	Fabricated metal products	(S)	4.5	.1	4.4	.3	2.0	.6	1.4	(D)	(X)	5
35	Machinery, except electrical	1.4	12.5	.3	12.2	.2	(D)	(D)	4.7	(D)	4	2
36	Electric, electronic equipment	(D)	6.6	.2	6.4	.2	1.1	.4	4.8	(D)	(X)	5
37	Transportation equipment	(S)	4.0	.2	3.8	(D)	(D)	(D)	2.1	(D)	(X)	4
38	Instruments, related products	(D)	11.5	.4	11.0	(D)	2.5	(D)	5.5	(D)	(X)	1
	New Jersey	4.7	49.8	3.1	46.7	3.2	7.6	7.6	28.3	4.8	3	3
20	Food and kindred products	(S)	3.7	.2	3.6	.2	.5	.5	2.4	1.0	(X)	8
26	Paper and allied products	-	2.1	-	2.1	.1	.3	.2	1.4	1.3	(X)	20
28	Chemicals and allied products	3.7	19.3	.9	18.4	1.1	2.7	4.9	9.7	.6	1	3
29	Petroleum and coal products	-	3.0	-	3.0	(D)	(D)	(D)	1.9	-	(X)	1
32	Stone, clay, glass products	(S)	4.0	.2	3.8	.2	.6	.3	2.8	.7	(X)	19
33	Primary metal industries	(S)	1.4	.2	1.2	-	.4	.3	.5	.3	(X)	10
34	Fabricated metal products	-	2.1	(D)	(D)	-	.3	(D)	1.3	.4	(X)	15
35	Machinery, except electrical	(S)	2.1	.1	2.0	-	.9	.1	1.1	.2	(X)	11
36	Electric, electronic equipment	(S)	1.7	.2	1.5	.1	.3	.1	1.1	(D)	(X)	8
37	Transportation equipment	-	2.2	-	2.1	-	.3	.2	1.6	-	(X)	7
38	Instruments, related products	-	1.7	.1	1.7	-	.3	.2	1.1	-	(X)	16
	Pennsylvania	8.9	87.7	5.4	82.3	3.4	15.5	10.4	53.0	9.9	8	2
20	Food and kindred products	(S)	5.1	1.0	4.0	.1	.8	.6	2.5	.8	(X)	6
22	Textile mill products	(S)	1.3	.1	1.3	.1	.3	.1	.8	(D)	(X)	17
26	Paper and allied products	(S)	8.6	.6	8.0	.6	1.8	2.6	2.9	(D)	(X)	4
27	Printing and publishing	(S)	1.5	.2	1.3	-	.3	.1	.9	.1	(X)	16
28	Chemicals and allied products	(S)	7.7	.2	7.5	.4	1.4	1.2	4.6	(D)	(X)	9
29	Petroleum and coal products	(D)	2.0	.3	1.7	(D)	.3	(D)	1.0	-	(X)	7
30	Rubber, miscellaneous plastics products	(D)	3.3	.2	3.0	.1	.4	.2	2.3	-	(X)	18
32	Stone, clay, glass products	(S)	5.4	.5	4.9	.2	1.4	.5	2.8	.2	(X)	19
33	Primary metal industries	1.0	31.9	.4	31.4	.3	2.7	3.0	25.4	2.7	2	1
34	Fabricated metal products	(S)	4.9	.2	4.7	.1	1.2	.3	3.0	(D)	(X)	11
35	Machinery, except electrical	(S)	3.6	.3	3.3	.1	1.0	.4	1.8	.1	(X)	8
36	Electric, electronic equipment	(S)	3.6	.2	3.4	.2	.9	.3	2.0	.4	(X)	12
37	Transportation equipment	(S)	2.9	.4	2.5	.2	1.0	.2	1.2	-	(X)	5
38	Instruments, related products	-	1.4	.1	1.3	(D)	(D)	(D)	.4	-	(X)	3
39	Miscellaneous manufacturing industries	(D)	1.9	.3	1.6	(D)	(D)	.2	.8	-	(X)	12
	East North Central Division:											
	Ohio	9.0	95.4	5.8	89.6	4.6	27.7	8.4	48.9	10.8	13	2
20	Food and kindred products	(D)	5.1	1.0	4.2	.2	.8	.4	2.8	.6	(X)	5
26	Paper and allied products	(S)	3.9	.3	3.7	.1	1.1	.2	2.4	1.8	(X)	14
27	Printing and publishing	(S)	1.6	.1	1.5	-	.2	.2	1.0	.2	(X)	14
28	Chemicals and allied products	2.1	11.6	.2	11.3	.6	1.8	.9	8.0	1.6	9	8
29	Petroleum and coal products	-	2.0	-	2.0	.3	(D)	(D)	1.0	2.6	(X)	11
30	Rubber, miscellaneous plastics products	(S)	7.3	.7	6.6	.2	(D)	(D)	3.2	.7	(X)	9
32	Stone, clay, glass products	(S)	8.0	.2	7.9	1.1	2.6	2.4	1.7	(D)	(X)	9
33	Primary metal industries	(S)	18.5	1.5	17.1	.6	3.9	.9	11.7	-	(X)	3
34	Fabricated metal products	(S)	10.7	.6	10.2	.3	3.8	.7	5.3	.5	(X)	10
35	Machinery, except electrical	(S)	7.0	.5	6.5	.5	1.9	.3	3.8	.1	(X)	11
36	Electric, electronic equipment	1.0	2.8	.3	2.5	.1	.8	.2	1.3	(D)	4	5
37	Transportation equipment	(S)	14.2	.1	14.0	.4	7.6	.9	5.2	1.0	(X)	2

See footnotes at end of table.

Table 5B. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard errors of estimates (percent): PACE	GAC
	East North Central Division--Continued											
	Indiana	5.7	52.3	2.4	50.0	1.8	11.6	5.2	31.3	2.9	12	2
20	Food and kindred products	(S)	3.5	.6	2.9	.1	.7	.2	1.9	.1	(X)	14
28	Chemicals and allied products	(S)	7.0	(D)	(D)	(D)	.9	.6	4.8	(D)	(X)	15
30	Rubber, miscellaneous plastics products	(S)	1.9	.1	1.8	-	.3	.1	1.5	.1	(X)	9
33	Primary metal industries	.3	17.8	.3	17.5	(D)	3.7	(D)	10.9	(D)	1	1
34	Fabricated metal products	(S)	2.2	.1	2.0	.1	.7	.2	1.1	.6	(X)	11
35	Machinery, except electrical	(S)	2.3	.1	2.3	.1	.8	.2	1.1	(D)	(X)	10
36	Electric, electronic equipment	(D)	4.5	.5	4.1	.1	2.0	.6	1.4	(D)	(X)	8
37	Transportation equipment	(S)	5.9	.2	5.8	.2	1.4	.5	3.7	(D)	(X)	2
	Illinois	11.4	88.7	6.4	82.2	4.3	18.3	7.9	51.7	8.5	4	2
20	Food and kindred products	1.3	12.6	.9	11.7	.8	2.6	.9	7.4	2.0	11	4
26	Paper and allied products	(D)	4.2	.8	3.5	.1	.6	.3	2.5	(D)	(X)	11
27	Printing and publishing	.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
28	Chemicals and allied products	5.0	14.8	.3	14.5	.9	2.1	1.8	9.8	.9	7	6
29	Petroleum and coal products	(S)	3.5	(D)	3.3	.2	.5	.3	2.3	-	1	6
30	Rubber, miscellaneous plastics products	(S)	3.2	.4	2.7	.1	.9	.4	1.3	.7	1	19
33	Primary metal industries	(S)	11.9	.6	11.2	1.3	2.4	1.2	6.4	1.1	(X)	6
34	Fabricated metal products	(S)	6.0	.5	5.5	.1	1.1	.3	4.0	(D)	(X)	8
35	Machinery, except electrical	2.2	12.2	.9	11.3	.3	4.1	1.6	5.4	1.0	1	3
36	Electric, electronic equipment	.4	4.2	.3	3.9	.1	1.1	.2	2.5	.1	1	4
37	Transportation equipment	(S)	3.6	.3	3.3	.1	1.3	.4	1.5	-	(X)	6
38	Instruments, related products	(S)	1.6	-	1.6	-	.3	.1	1.1	-	(X)	12
	Michigan	9.8	88.9	5.9	83.0	3.9	19.8	7.6	51.8	10.0	4	1
20	Food and kindred products	(S)	3.5	.4	3.1	.1	1.0	.3	1.7	.4	(X)	7
25	Furniture and fixtures	(D)	1.3	.7	.6	-	.1	-	.4	-	(X)	12
26	Paper and allied products	.5	6.4	1.1	5.2	.5	1.8	1.1	1.9	.7	9	7
28	Chemicals and allied products	(S)	13.3	.6	12.7	1.6	4.1	1.0	6.0	1.5	(X)	4
32	Stone, clay, glass products	(S)	2.5	.1	2.4	-	.2	.1	2.1	.1	(X)	18
33	Primary metal industries	.2	15.3	.6	14.7	.2	.8	.5	13.2	-	3	2
34	Fabricated metal products	(S)	4.7	.8	4.0	.2	.7	.2	2.9	.1	(X)	7
35	Machinery, except electrical	.2	5.9	.3	5.6	.2	1.7	.2	3.5	.5	3	5
37	Transportation equipment	5.1	29.8	.9	28.9	1.0	8.5	3.2	16.2	6.4	1	1
	Wisconsin	2.8	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	9	(X)
20	Food and kindred products	.4	3.1	.4	2.7	.2	.7	.1	1.7	.3	18	7
26	Paper and allied products	1.4	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1	(X)
28	Chemicals and allied products	(S)	1.4	.2	1.3	-	.4	-	.8	-	(X)	18
33	Primary metal industries	(S)	2.9	.2	2.6	.2	.4	.3	1.8	-	(X)	15
34	Fabricated metal products	.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	18	(X)
35	Machinery, except electrical	.2	3.5	.3	3.2	.1	.9	.3	2.0	.2	2	6
36	Electric, electronic equipment	(S)	1.6	.1	1.5	-	.4	.2	1.0	.1	(X)	15
37	Transportation equipment	(D)	1.5	-	1.5	-	1.0	.1	.4	(D)	(X)	5
	West North Central Division:											
	Minnesota	1.6	16.4	1.9	14.5	1.3	3.5	1.5	8.1	3.0	9	5
20	Food and kindred products	.1	3.5	.4	3.1	.7	.5	.4	1.5	.7	8	15
26	Paper and allied products	(S)	1.8	.4	1.4	(D)	.3	(D)	.9	(D)	(X)	2
27	Printing and publishing	(S)	1.0	.1	.9	.1	.4	.1	.3	(D)	(X)	13
28	Chemicals and allied products	(D)	2.1	-	2.1	(D)	.1	(D)	1.5	-	(D)	6
35	Machinery, except electrical	(D)	2.1	.3	1.8	-	.7	.1	.9	-	(X)	8
	Iowa	3.3	15.1	2.1	13.0	1.1	3.1	1.8	6.9	.7	9	2
20	Food and kindred products	1.3	4.3	1.0	3.3	.1	.8	.1	2.4	-	14	5
28	Chemicals and allied products	(D)	1.6	.1	1.5	(D)	.2	(D)	1.0	-	(X)	6
30	Rubber, miscellaneous plastics products	(D)	1.3	.3	1.0	(D)	.1	(D)	.3	(D)	1	4
35	Machinery, except electrical	(S)	4.6	.2	4.4	.7	1.2	.8	1.8	.2	(X)	4
	Missouri	1.8	21.7	1.9	19.8	.8	4.9	2.7	11.4	1.5	13	3
20	Food and kindred products	-	3.0	.3	2.7	.1	.9	.1	1.6	.1	(X)	6
28	Chemicals and allied products	(S)	3.0	(D)	(D)	(D)	.6	.1	2.2	.3	(X)	10
32	Stone, clay, glass products	(D)	2.1	-	2.1	.3	.8	.4	.7	-	(X)	14
33	Primary metal industries	-	1.4	-	1.4	.1	(D)	(D)	1.0	-	(X)	9
36	Electric, electronic equipment	(S)	1.0	.1	.9	.1	.3	-	.5	-	(X)	15
37	Transportation equipment	(D)	4.3	(D)	(D)	(D)	.6	(D)	2.1	(D)	(X)	1
	North Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	South Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Nebraska	(S)	5.0	.7	4.4	.2	1.7	.1	2.4	(D)	(X)	9
20	Food and kindred products	.1	2.2	.5	1.7	-	1.1	.1	.6	(D)	1	18
	Kansas	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	South Atlantic Division:											
	Delaware	.6	(S)	(S)	8.1	.2	3.0	1.1	3.8	.3	8	(X)
28	Chemicals and allied products	.5	1.9	-	1.9	.1	.2	.4	1.1	-	9	4
	Maryland	(S)	16.7	1.2	15.5	1.1	2.8	2.2	9.4	1.0	(X)	6
20	Food and kindred products	-	1.8	.3	1.5	-	.5	.1	.9	-	(X)	17
28	Chemicals and allied products	(S)	4.1	-	4.1	-	(D)	(D)	3.6	-	(X)	2
36	Electric, electronic equipment	(D)	1.2	.1	1.2	(D)	(D)	-	.4	-	(X)	6
37	Transportation equipment	-	1.7	(D)	(D)	(D)	-	.1	1.1	-	(X)	6

See footnotes at end of table.

Table 5B. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard errors of estimates (percent): PACE	GAC
	South Atlantic Division--Continued											
	District of Columbia	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Virginia	2.0	22.0	.8	21.2	2.1	8.2	3.1	7.8	5.9	19	14
22	Textile mill products	(S)	1.2	.1	1.1	.1	.3	(D)	(D)	(D)	(X)	5
26	Paper and allied products	(D)	2.4	-	2.4	(D)	1.0	(D)	.6	(D)	(X)	3
28	Chemicals and allied products	(S)	6.7	-	6.7	.7	2.6	1.2	2.2	(D)	(X)	1
33	Primary metal industries	-	1.1	-	1.0	-	.4	.2	.4	-	(X)	11
37	Transportation equipment	(S)	2.6	-	2.6	.2	1.5	.3	.6	-	(X)	3
	West Virginia	(S)	26.5	.5	26.0	1.1	9.2	4.9	10.7	1.2	(X)	1
28	Chemicals and allied products	5.3	9.6	.1	9.5	.9	3.2	2.3	3.1	(D)	6	2
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	North Carolina	(S)	27.2	2.6	24.6	1.9	7.3	5.7	9.7	5.9	(X)	4
20	Food and kindred products	(D)	1.1	.2	.8	-	.3	.1	.4	.1	(X)	11
21	Tobacco products	1.3	1.1	.1	1.0	(D)	.3	(D)	.3	-	1	4
22	Textile mill products	(S)	4.9	.8	4.1	.3	1.4	.6	1.9	1.1	(X)	9
25	Furniture and fixtures	(D)	1.5	.4	1.1	.1	.3	-	.7	.1	(X)	19
26	Paper and allied products	(D)	3.4	-	3.4	(D)	.5	(D)	.7	-	(X)	1
28	Chemicals and allied products	(S)	5.6	.1	5.5	.5	1.5	1.3	2.2	1.8	(X)	9
35	Machinery, except electrical	(D)	1.3	-	1.2	.1	.3	(D)	(D)	(D)	(X)	3
36	Electric, electronic equipment	(S)	1.1	.2	1.0	.1	.3	.2	.4	.3	(X)	10
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
	South Carolina	3.5	18.5	1.6	17.0	1.0	6.1	2.9	6.9	2.3	1	3
22	Textile mill products	-	2.4	.7	1.7	-	.6	.1	1.0	-	(X)	5
26	Paper and allied products	(S)	2.6	-	2.6	.1	.6	.3	1.6	(D)	(X)	5
28	Chemicals and allied products	(D)	7.2	.1	7.1	.3	3.3	1.4	2.1	(D)	(X)	1
32	Stone, clay, glass products	(S)	1.2	-	1.2	(D)	.4	(D)	.1	-	(X)	6
	Georgia	(S)	17.6	1.6	15.9	1.3	5.0	2.1	7.6	2.4	(X)	4
20	Food and kindred products	(S)	2.3	.3	2.0	.1	.5	.3	1.1	(D)	(X)	7
22	Textile mill products	-	2.6	.2	2.4	.1	.9	.3	1.2	.5	(X)	10
26	Paper and allied products	(S)	4.2	.5	3.7	.6	1.3	.5	1.3	-	(X)	8
28	Chemicals and allied products	(S)	1.4	.1	1.3	.1	.3	.2	.7	-	(X)	10
37	Transportation equipment	(D)	1.5	-	1.5	.1	.9	.1	.5	-	(X)	1
	Florida	3.6	21.3	2.0	19.4	1.5	4.4	3.0	10.5	1.6	19	4
20	Food and kindred products	(S)	3.4	.6	2.8	.5	.7	.4	1.2	.4	(X)	8
26	Paper and allied products	(S)	2.1	.1	2.0	.1	1.0	.2	.8	-	(X)	3
28	Chemicals and allied products	(D)	8.4	.1	8.3	.6	.8	1.9	5.1	.3	(X)	1
37	Transportation equipment	(S)	1.9	.2	1.7	(D)	.8	(D)	.8	-	(X)	15
	East South Central Division:											
	Kentucky	(S)	27.9	1.1	26.8	1.5	10.3	5.0	9.9	2.3	(X)	13
21	Tobacco products	-	1.0	-	1.0	-	(D)	-	(D)	-	(X)	1
28	Chemicals and allied products	(S)	2.9	.1	2.9	.1	.7	.6	1.5	.3	(X)	8
30	Rubber, miscellaneous plastics products	-	1.9	.1	1.9	-	(D)	-	(D)	-	(X)	4
35	Machinery, except electrical	(S)	1.7	.1	1.6	.1	.4	.1	1.0	.4	(X)	8
36	Electric, electronic equipment	(S)	2.0	.1	1.9	.1	.9	.1	.8	.2	(X)	2
37	Transportation equipment	(S)	1.7	-	1.6	.1	.7	-	.8	-	(X)	6
	Tennessee	8.0	30.2	2.0	28.2	2.8	8.1	4.5	12.8	3.5	14	4
20	Food and kindred products	(S)	1.6	.3	1.3	-	.5	.1	.6	-	(X)	12
22	Textile mill products	(S)	1.1	.1	1.0	-	.6	.1	.2	-	(X)	19
26	Paper and allied products	-	2.4	.2	2.2	.3	.6	.2	1.1	.2	(X)	9
28	Chemicals and allied products	4.8	13.9	.2	13.7	1.6	2.5	3.2	6.4	2.7	7	4
30	Rubber, miscellaneous plastics products	-	1.9	.2	1.7	-	(D)	-	(D)	-	(X)	5
35	Machinery, except electrical	(D)	1.2	.2	1.0	-	.5	.1	.3	.2	(X)	18
36	Electric, electronic equipment	(S)	1.1	.2	.9	-	.3	.1	.4	-	(X)	10
	Alabama	12.5	25.6	1.0	24.6	3.3	6.9	4.5	9.9	2.2	5	8
26	Paper and allied products	(D)	3.4	-	3.4	.4	1.0	.4	1.6	(D)	(X)	1
28	Chemicals and allied products	(S)	8.7	.1	8.6	1.4	1.7	3.2	2.3	(D)	(X)	1
33	Primary metal industries	(D)	4.3	.1	4.3	.3	1.1	.3	2.6	-	(X)	8
	Mississippi	(S)	12.3	.6	11.7	2.4	4.8	1.2	3.3	1.4	(X)	5
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	(X)
28	Chemicals and allied products	(S)	1.5	.1	1.4	(D)	.4	(D)	.4	-	(X)	1
	West South Central Division:											
	Arkansas	(S)	(S)	(S)	13.3	1.4	3.6	2.1	6.3	1.4	(X)	(X)
26	Paper and allied products	(D)	2.3	-	2.3	.3	.6	.5	1.0	(D)	(X)	3
	Louisiana	14.8	47.1	.4	46.8	6.5	11.1	7.7	21.5	4.8	2	2
20	Food and kindred products	(S)	2.0	.1	1.9	.2	.3	.2	1.2	(D)	(X)	13
26	Paper and allied products	(D)	3.1	-	3.1	.2	.8	.3	1.8	(D)	(X)	4
28	Chemicals and allied products	11.8	33.7	(D)	(D)	5.6	7.8	(D)	14.0	2.0	1	3
29	Petroleum and coal products	(D)	3.2	(D)	(D)	.1	.2	(D)	2.8	-	(X)	1
	Oklahoma	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)

See footnotes at end of table.

Table 5B. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

SIC code	State and major industry group	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs: Total	Other operating costs: By kind of cost: Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other costs	Cost recovered	Standard errors of estimates (percent): PACE	GAC
	West South Central Division--Continued											
	Texas	22.3	116.1	5.5	110.6	6.7	20.9	30.2	52.8	7.6	5	3
20	Food and kindred products	(S)	8.0	.6	7.4	.8	1.5	1.1	3.9	.9	(X)	4
24	Lumber and wood products	(S)	1.9	.2	1.7	.1	.3	.1	1.2	-	(X)	19
26	Paper and allied products	(D)	7.5	(D)	(D)	(D)	.7	.2	4.2	-	(X)	8
28	Chemicals and allied products	9.3	49.2	.3	48.8	3.3	7.4	17.8	20.3	3.1	1	1
29	Petroleum and coal products	8.2	20.8	.2	20.6	1.1	3.7	7.6	8.2	(D)	1	1
32	Stone, clay, glass products	(S)	2.6	.1	2.5	.1	.3	.5	1.6	1.1	(X)	17
33	Primary metal industries	(S)	9.2	-	9.2	.8	2.8	2.2	3.5	-	(X)	8
34	Fabricated metal products	(S)	2.9	.4	2.5	.1	.7	.2	1.4	-	(X)	13
35	Machinery, except electrical	(S)	4.6	.5	4.1	.1	.4	.2	3.4	-	(X)	16
36	Electric, electronic equipment	-	2.7	.5	2.2	-	.6	-	1.5	.1	(X)	15
37	Transportation equipment	(D)	3.1	.1	2.9	-	2.1	.1	.7	.1	(X)	6
	Mountain Division:											
	Montana	(S)	1.5	-	1.4	.1	.4	.3	.6	.1	(X)	7
	Idaho	3.0	5.2	.2	4.9	.6	2.3	1.1	.9	1.8	9	7
28	Chemicals and allied products	-	1.4	-	1.4	(D)	(D)	(D)	(D)	(D)	(X)	1
	Wyoming	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Colorado	(S)	7.0	.8	6.2	.1	1.3	.5	4.2	1.0	(X)	11
20	Food and kindred products	(S)	1.2	.2	1.0	-	.5	-	.4	.1	(X)	17
	New Mexico	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Arizona	(S)	(S)	(S)	4.6	.3	1.6	1.0	1.6	.1	(X)	(X)
	Utah	(S)	3.0	.4	2.6	.1	.7	.4	1.4	.2	(X)	14
	Nevada	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(X)	(X)
	Pacific Division:											
	Washington	9.9	20.1	2.8	17.3	1.1	5.2	2.9	8.1	4.7	(X)	7
20	Food and kindred products	(S)	1.8	.7	1.1	.1	.4	.1	.6	1.0	(X)	11
24	Lumber and wood products	(S)	6.7	.3	6.4	.5	2.0	.8	3.1	2.2	(X)	17
26	Paper and allied products	1.7	3.7	.1	3.5	.2	.5	1.0	1.8	(D)	1	4
	Oregon	(S)	25.9	1.5	24.4	3.8	7.4	5.7	7.5	24.3	(X)	7
24	Lumber and wood products	(S)	9.2	.2	9.0	1.5	3.7	1.7	2.1	5.8	(X)	14
26	Paper and allied products	(D)	8.3	.3	8.0	1.9	1.8	3.1	1.3	14.1	1	1
33	Primary metal industries	(D)	2.6	.2	2.4	.3	.9	.6	.6	-	(X)	14
	California	5.4	100.2	18.1	82.7	4.4	20.2	9.2	48.8	26.3	11	3
20	Food and kindred products	(S)	15.0	3.1	11.8	.8	2.2	.7	8.1	1.3	(X)	3
26	Paper and allied products	(S)	4.4	1.2	3.2	.3	.7	.3	1.9	3.3	(X)	16
28	Chemicals and allied products	1.4	14.9	3.1	11.8	.8	2.4	2.1	6.5	(D)	19	6
29	Petroleum and coal products	(D)	7.9	.5	7.4	.1	.6	.7	6.0	-	(X)	7
30	Rubber, miscellaneous plastics products	(S)	4.1	1.2	2.9	-	1.0	.2	1.6	(D)	(X)	14
32	Stone, clay, glass products	-	7.0	.9	6.2	.5	2.9	.8	2.0	-	(X)	12
33	Primary metal industries	-	5.6	.7	4.9	.2	.7	.7	3.3	.3	(X)	8
34	Fabricated metal products	(S)	5.8	.8	5.0	.7	.9	.7	2.6	.3	(X)	19
35	Machinery, except electrical	(S)	4.0	.8	3.2	.1	1.0	.1	2.0	.2	(X)	10
37	Transportation equipment	(S)	11.6	1.4	10.2	.3	2.9	.5	6.6	16.4	(X)	3
38	Instruments, related products	(S)	1.5	.4	1.1	-	.4	-	.7	.1	(X)	9
	Alaska	(S)	1.6	.1	1.5	.1	.7	.5	.1	.2	(X)	7
	Hawaii	(S)	4.7	.1	4.6	.2	1.2	.3	3.0	-	(X)	17

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the U.S. and State totals.

Table 5C. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs					Cost recovered	Standard error of estimates (percent)	
				Total	By kind of cost						
					Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Akron, Ohio	1.1	2.9	.3	2.6	-	.9	-	1.6	.3	3	13
Albany-Schenectady-Troy, N.Y.	(D)	5.4	.1	5.3	1.1	.9	.5	2.8	.9	1	3
Allentown-Bethlehem-Easton, Pa.-N.J.	(D)	7.0	.1	6.9	.7	1.6	.9	3.6	.1	1	5
Anaheim-Santa Ana-Garden Grove, Calif.	(S)	5.0	1.2	3.8	.2	.8	.1	2.6	.2	(X)	14
Anderson, Ind.	1.5	1.4	-	1.4	-	1.1	.1	.2	.1	1	1
Ann Arbor, Mich.	1.4	2.4	.3	2.2	.2	.9	.3	.9	.4	1	2
Appleton-Oshkosh, Wis.	(S)	3.8	.8	2.9	.2	.6	.9	1.2	.8	(X)	7
Atlanta, Ga.	(S)	4.9	.4	4.5	.3	1.4	.3	2.5	1.5	(X)	7
Augusta, Ga-S.C.	(D)	5.0	.3	4.7	.1	2.8	1.0	.8	(D)	(X)	6
Baltimore, Md.	(S)	13.7	1.0	12.7	.8	1.8	2.1	8.1	.9	(X)	7
Baton Rouge, La.	1.1	11.9	-	11.9	.8	1.9	.9	8.4	3.1	16	5
Battle Creek, Mich.	-	1.0	.1	.8	-	.1	-	.7	.2	(X)	6
Beaumont-Port Arthur-Orange, Tex.	1.1	14.7	.1	14.6	.5	2.9	5.8	5.4	-	5	1
Binghamton, N.Y.-Pa.	(S)	1.0	.2	.8	-	.3	-	.5	(D)	(X)	7
Birmingham, Ala.	(S)	2.7	.1	2.6	.1	.7	.2	1.6	-	(X)	12
Boston, Mass.	(S)	11.4	.9	10.5	.2	3.5	.4	6.3	.8	(X)	6
Bridgeport, Conn.	-	2.0	.2	1.8	-	.3	.2	1.3	-	(X)	14
Buffalo, N.Y.	31.3	21.9	.5	21.4	.2	6.2	5.1	9.8	7.8	1	2
Canton, Ohio	(D)	2.5	.1	2.4	-	.8	.3	1.3	(D)	(X)	19
Cedar Rapids, Iowa	1.0	1.4	.7	.7	-	.2	-	.5	-	9	14
Charleston, S.C.	(D)	2.2	.1	2.1	-	.3	.2	1.5	-	(X)	7
Charleston, W. Va.	(D)	4.3	.1	4.2	.1	1.8	.9	1.5	.1	12	6
Chattanooga, Tenn.-Ga.	(S)	3.8	.1	3.7	.2	.7	.4	2.5	.4	(X)	18
Chicago, Ill.	5.7	56.5	4.2	52.3	2.2	10.8	3.4	35.9	5.6	7	3
Cincinnati, Ohio-Ky.-Ind.	(S)	10.6	.5	10.1	.3	3.5	1.1	5.2	1.0	(X)	9
Cleveland, Ohio	(S)	21.5	1.1	20.4	.5	3.8	1.0	15.1	.7	(X)	3
Columbia, S.C.	1.1	2.2	.1	2.2	.1	.2	.1	1.7	.9	1	8
Columbus, Ohio	(S)	5.4	.4	5.0	.1	1.7	.4	2.8	2.0	(X)	14
Corpus Christi, Tex.	(D)	3.1	.1	3.0	.3	.1	.4	2.1	.1	(X)	1
Dallas-Fort Worth, Tex.	(S)	11.6	1.3	10.3	.3	2.8	.9	6.4	.2	(X)	6
Davenport-Rock Island-Moline, Iowa-Ill.	(S)	3.3	.2	3.1	.4	.7	.4	1.6	-	(X)	3
Dayton, Ohio	(D)	6.4	.6	5.8	.7	1.6	.2	3.3	.1	1	7
Decatur, Ill.	(S)	1.4	.1	1.3	-	.2	.3	.8	.1	(X)	2
Denver-Boulder, Colo.	(S)	5.6	.7	4.9	.1	1.1	.5	3.3	.9	(X)	13
Des Moines, Iowa	(S)	1.5	.4	1.1	.1	.3	.1	.6	-	(X)	12
Detroit, Mich.	1.4	48.1	2.7	45.4	.6	10.1	3.2	31.7	3.5	13	2
Erie, Pa.	(S)	2.0	.1	1.9	-	.2	.1	1.6	-	(X)	8
Eugene-Springfield, Oreg.	(S)	1.2	-	1.2	.2	.5	.3	.1	(D)	(X)	6
Evansville, Ind.-Ky.	(D)	3.1	.1	3.0	.2	.9	.4	1.6	(D)	(X)	5
Flint, Mich.	(S)	4.5	.2	4.3	.2	.4	.2	3.5	4.0	(X)	2
Fort Wayne, Ind.	(S)	3.1	.2	2.9	.1	.4	.2	2.2	.2	(X)	7
Gadsden, Ala.	-	1.7	-	1.7	-	.4	.1	1.2	-	(X)	1
Galveston-Texas City, Tex.	(D)	6.4	.3	6.1	.2	.8	.2	4.9	(D)	1	3
Gary-Hammond-East Chicago, Ind.	(D)	19.4	.2	19.2	.3	3.4	2.8	12.7	-	(X)	5
Grand Rapids, Mich.	(S)	4.5	.9	3.5	.2	.6	.4	2.3	-	(X)	14
Green Bay, Wis.	(S)	2.0	.1	1.9	.1	.8	.2	.7	.1	(X)	7
Greensboro-Winston-Salem-High Point, N.C.	(D)	3.6	.6	3.0	.4	1.0	.3	1.3	.3	4	10
Greenville-Spartanburg, S.C.	(S)	3.3	.7	2.6	.1	.6	.3	1.6	.2	(X)	10
Hamilton-Middletown, Ohio	(S)	1.6	.2	1.4	.1	.2	.1	1.0	-	(X)	10
Harrisburg, Pa.	(S)	1.2	.2	1.0	.1	.2	.1	.6	.3	(X)	4
Hartford, Conn.	-	1.8	.1	1.8	-	.3	.3	1.1	.2	(X)	16
Houston, Tex.	12.5	57.3	2.5	54.8	3.2	8.0	19.0	24.6	4.4	1	1
Huntington-Ashland, W. Va.-Ky.-Ohio	(S)	3.3	.1	3.2	.2	1.4	.7	.9	.4	(X)	4
Indianapolis, Ind.	(S)	6.6	.4	6.2	.4	1.1	.5	4.2	.3	(X)	6
Jacksonville, Fla.	(S)	3.3	.2	3.1	.3	1.4	.3	1.1	.4	(X)	8
Jersey City, N.J.	(S)	3.4	.4	3.0	.1	.3	.4	2.2	(D)	(X)	8
Johnstown, Pa.	-	1.3	.1	1.2	-	-	.9	.3	.1	(X)	4
Kalamazoo-Portage, Mich.	(S)	4.6	.6	3.9	.4	.9	.7	2.0	-	(X)	6
Killeen-Temple, Tex.	3.4	5.6	.1	5.5	.7	1.5	.4	2.9	.6	2	3
Lafayette-West Lafayette, Ind.	(S)	2.6	.1	2.5	.1	.6	.2	1.6	.1	(X)	14
Lake Charles, La.	4.5	6.8	-	6.8	1.5	1.3	2.0	2.0	.5	6	1
Lakeland-Winter Haven, Fla.	(S)	2.4	.1	2.3	.3	.1	.5	1.4	-	(X)	1
Lancaster, Pa.	(S)	3.6	.6	2.9	.1	.6	.3	1.9	.1	(X)	14
Lansing-East Lansing, Mich.	-	2.3	.1	2.3	.1	.2	.1	1.9	-	(X)	4
Lawrence-Haverhill, Mass.-N.H.	-	2.0	.2	1.8	-	.3	.4	1.1	.1	(X)	19
Lexington, Ky.	(S)	1.6	.2	1.4	-	.2	.1	1.0	.3	(X)	18
Lima, Ohio	-	2.8	.2	2.6	.1	1.3	.1	1.1	(D)	(X)	10
Long Branch-Asbury Park, N.J.	(S)	1.9	.6	1.3	-	.1	.1	1.0	-	(X)	7
Lorain-Elyria, Ohio	(S)	5.0	.1	4.9	.1	2.2	.6	2.0	.3	(X)	9
Los Angeles-Long Beach, Calif.	(S)	35.0	6.8	28.3	1.4	6.3	3.4	17.1	18.6	(X)	8

See footnotes at end of table.

Table 5C. Solid Waste Pollution Abatement Capital Expenditures and Operating Costs, by SMSA for Establishments With 20 or More Employees: 1979—Continued

(Millions of dollars)

Standard metropolitan statistical area	Capital expenditures total	Total operating costs	Payment to government units for municipal solid waste	Other operating costs					Cost recovered	Standard error of estimates (percent)	
				Total	By kind of cost						
					Depreciation	Labor	Materials and supplies	Services, equipment leasing, and other cost		PACE	GAC
Louisville, Ky.-Ind.	(S)	10.1	0.3	9.8	0.3	3.2	0.7	5.7	1.0	(X)	12
Lowell, Mass.-N.H.	(S)	1.4	.1	1.3	-	.4	.1	.7	.1	(X)	19
Lubbock, Tex.	(S)	1.3	.1	1.1	.1	.1	-	.9	-	(X)	4
Memphis, Tenn.-Ark.-Miss.	(S)	5.6	.4	5.2	.2	1.1	1.5	2.3	.5	(X)	10
Minneapolis-St. Paul, Minn.-Wis.	(S)	10.3	.9	9.4	.5	2.2	.9	5.8	1.3	(X)	5
Mobile, Ala.	(S)	3.5	.1	3.5	.2	.6	1.6	1.1	.1	(X)	7
Modesto, Calif.	(S)	1.5	.3	1.2	.1	.2	-	.9	.4	(X)	10
Monroe, La.	(S)	1.2	-	1.2	-	.4	-	.8	-	(X)	3
Nashville-Davidson, Tenn.	(S)	5.8	.6	5.2	.6	1.8	.8	2.0	-	(X)	2
New Brunswick-Perth Amboy-Sayreville, N.J.	(S)	8.2	.2	8.0	.3	1.2	2.0	4.5	.1	(X)	4
New London-Norwich, Conn.-R.I.	(S)	1.7	-	1.7	.1	.6	-	.9	(D)	(X)	6
New Orleans, La.	(S)	3.5	.1	3.4	.1	.4	.3	2.5	.2	(X)	6
New York, N.Y.-N.J.	1.3	18.1	1.5	16.6	.5	3.1	.9	12.0	1.9	19	6
Newark, N.J.	(S)	12.9	.6	12.4	.5	2.3	1.6	8.0	1.3	(X)	5
Newport News-Hampton, Va.	-	2.0	-	2.0	.1	1.0	.2	.6	(D)	(X)	4
Norfolk-Virginia Beach-Portsmouth, Va.-N.C.	-	1.3	.1	1.2	.1	.4	-	.6	.1	(X)	7
Oklahoma City, Okla.	(S)	1.7	.2	1.5	.4	.2	.1	.8	.1	(X)	9
Omaha, Nebr.-Iowa	(S)	2.6	.5	2.2	-	.7	-	1.3	.1	(X)	9
Parkersburg-Marietta, W.Va.-Ohio	(D)	6.8	.1	6.8	.8	3.3	1.4	1.3	.3	(X)	3
Paterson-Clifton-Passaic, N.J.	(S)	2.5	.2	2.2	.1	.2	.1	1.8	.1	(X)	18
Pensacola, Fla.	(S)	1.1	.1	1.0	-	.3	.1	.6	(D)	(X)	5
Peoria, Ill.	(D)	4.2	.1	4.1	.4	.5	.6	2.6	(D)	(X)	4
Petersburg-Colonial Heights-Hopewell, Va.	(D)	1.7	-	1.6	.1	.2	.1	1.2	(D)	(X)	1
Philadelphia, Pa.-N.J.	4.8	25.9	1.6	24.3	2.2	5.9	2.9	13.3	3.0	10	5
Phoenix, Ariz.	(S)	1.6	.1	1.5	.2	.4	.2	.7	.1	(X)	10
Pittsburgh, Pa.	(S)	29.3	.7	28.7	.2	2.4	2.0	24.1	.2	(X)	1
Portland, Maine	-	1.5	.4	1.1	.1	.3	.6	.2	.2	(X)	14
Portland, Oreg.-Wash.	(S)	7.9	.6	7.3	.8	2.0	1.3	3.2	8.4	(X)	16
Poughkeepsie, N.J.	(S)	2.9	-	2.9	.1	.4	.1	2.4	(D)	(X)	4
Providence-Warwick-Pawtucket, R.I.	(S)	3.2	.2	3.0	.1	.4	.2	2.2	-	(X)	8
Racine, Wis.	(S)	1.1	-	1.1	-	.2	.2	.6	.1	(X)	7
Raleigh-Durham, N.C.	(S)	1.4	.1	1.3	.1	.2	.4	.7	.4	(X)	19
Reading, Pa.	(S)	2.3	.2	2.1	.1	.3	.1	1.6	.2	(X)	14
Richmond, Va.	(D)	4.8	.2	4.6	.4	1.5	.9	1.8	.6	(X)	3
Riverside-San Bernardino-Ontario, Calif.	(S)	8.3	1.7	6.6	.4	2.0	1.2	3.0	.3	(X)	5
Rochester, N.Y.	3.0	13.8	.5	13.3	1.5	2.7	2.0	7.0	(D)	1	3
Rockford, Ill.	(S)	2.5	.2	2.3	.1	.6	.3	1.3	.3	(X)	15
Sacramento, Calif.	(S)	2.0	.4	1.5	.1	.7	.1	.6	.2	(X)	14
Saginaw, Mich.	3.0	2.7	.1	2.6	.4	.1	.2	1.9	-	1	2
St. Louis, Mo.-Ill.	3.9	16.1	1.4	14.8	.7	4.3	.9	8.9	2.4	4	5
San Diego, Calif.	(S)	4.6	.3	4.3	.1	.8	.1	3.3	.2	(X)	3
San Francisco-Oakland, Calif.	1.2	21.4	3.6	17.8	.6	3.5	2.0	11.7	4.3	(X)	6
San Jose, Calif.	(S)	6.7	1.6	5.1	.3	1.6	.4	2.8	1.3	(X)	11
Savannah, Ga.	-	1.4	.1	1.3	.1	.3	.3	.7	-	(X)	14
Seattle-Everett, Wash.	(S)	7.6	1.6	6.0	.2	2.0	.9	2.9	3.1	(X)	16
South Bend, Ind.	-	1.5	.1	1.4	.1	.4	.2	.7	-	(X)	12
Springfield-Chicopee-Holyoke, Mass.-Conn.	(S)	2.1	.1	2.1	.1	.4	.1	1.5	.4	(X)	16
Steubenville-Weirton, Ohio-W.Va.	(D)	13.0	-	13.0	.1	4.3	2.2	6.4	.2	(X)	1
Stockton, Calif.	(S)	2.0	.2	1.8	.1	.4	.1	1.2	.2	(X)	12
Syracuse, N.Y.	(S)	5.0	.1	4.9	.3	2.3	.6	1.7	-	(X)	3
Tacoma, Wash.	(D)	1.9	.3	1.6	.1	.7	.2	.6	.1	(X)	4
Tampa-St. Petersburg, Fla.	(D)	7.2	.4	6.8	.3	.8	1.2	4.5	-	(X)	6
Terre Haute, Ind.	(S)	1.9	.1	1.8	.2	.3	-	1.3	.1	(X)	5
Texarkana, Tex.-Ark.	(D)	1.0	.2	.9	.1	.4	.2	.1	.9	(X)	19
Toledo, Ohio-Mich.	(S)	10.5	.3	10.2	.3	4.4	.9	4.6	.8	(X)	6
Trenton, N.J.	(S)	1.6	.5	1.0	-	.2	.2	.6	-	(X)	16
Tulsa, Okla.	(S)	1.6	-	1.6	.1	.4	.3	.8	-	(X)	10
Utica-Rome, N.Y.	(S)	7.2	5.6	1.6	.2	.5	.3	.6	.2	(X)	7
Vallejo-Fairfield-Napa, Calif.	-	2.0	.2	1.8	.1	.1	-	1.6	-	(X)	4
Washington, D.C.-Md.-Va.	-	1.1	.2	.9	.1	.2	.1	.5	.3	(X)	14
Waterloo-Cedar Falls, Iowa	.1	2.0	.1	2.0	.3	.6	.5	.6	.1	1	1
Wilmington, Del.-N.J.-Md.	1.9	8.4	.2	8.2	.4	1.3	1.6	5.0	.3	2	2
Wilmington, N.C.	(S)	3.5	-	3.5	.5	1.2	1.1	.7	1.1	(X)	1
York, Pa.	(S)	3.1	.5	2.6	.1	.8	.2	1.5	.2	(X)	10
Youngstown-Warren, Ohio	(S)	5.1	.8	4.2	.2	1.8	.4	1.9	.2	(X)	15

Note: Totals may not agree precisely with detail because of independent rounding. No major industry groups are shown. No SMSA totals are shown where PACE and GAC is less than $1.0 million or the standard error is 20 or greater. Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the SMSA totals.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

Table 6A. Quantities of Pollutants Removed and Related Statistics, by Industry for Establishments With 20 or More Employees: 1979

(Values in millions of dollars; quantities in thousands of short tons)

SIC code	Industry	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	All industries[2]	3,061.8	40,422.2	9,037.5	13,577.2	1,408.4	2,529.9	17,077.9	4,756.1	5,560.0	8,440.4	1,322.5	163,678.1
	Food and kindred products	91.0	1,121.6	82.3	250.2	12.9	136.9	2,244.7	803.4	982.2	375.6	115.3	13,971.4
	Meat products	3.6	23.1	2.2	.6	.4	26.7	200.4	156.2	145.3	94.9	16.8	1,790.5
11	Meatpacking plants	2.2	21.9	2.2	(D)	(D)	11.4	121.4	110.7	115.4	70.6	9.5	1,492.2
13	Sausages and other prepared meats	(S)	.2	-	(D)	-	2.4	24.9	6.0	.9	4.0	3.8	119.0
16	Poultry dressing plants	(S)	.9	-	-	(D)	11.3	49.3	31.9	25.1	15.7	2.7	114.5
17	Poultry and egg processing	(S)	.2	-	-	-	1.6	4.7	7.6	3.8	4.6	(S)	64.8
2	Dairy products	1.7	10.3	-	-	.6	10.8	245.0	23.3	14.4	3.1	11.0	895.5
22	Cheese, natural and processed	(S)	.8	-	-	-	6.2	9.6	9.0	5.7	1.3	2.2	221.8
23	Condensed and evaporated milk	(S)	6.1	-	-	-	1.2	5.5	5.9	.4	.5	(S)	162.3
26	Fluid milk	(S)	3.0	-	-	.6	3.0	229.5	7.5	7.9	1.1	(S)	478.4
3	Preserved fruits and vegetables	6.5	37.3	1.2	1.1	.4	27.9	411.1	251.9	326.1	62.0	27.1	3,782.5
32	Canned specialties	1.4	5.1	.4	.7	(D)	3.2	20.9	10.5	(D)	.6	2.7	149.4
33	Canned fruits and vegetables	(S)	3.5	.5	-	-	8.2	142.6	141.4	66.5	30.3	9.2	1,562.4
35	Pickles, sauces, salad dressings	(S)	(D)	(D)	(D)	-	3.2	6.0	5.5	6.8	6.8	1.6	56.8
37	Frozen fruits and vegetables	2.0	18.4	(D)	(D)	(D)	7.5	158.1	59.2	174.6	15.5	(S)	1,103.5
38	Frozen specialties	1.5	1.5	-	-	-	2.9	3.6	3.6	3.9	8.3	(S)	667.1
4	Grain mill products	28.4	491.6	18.4	-	5.3	19.4	88.5	73.4	134.7	16.2	11.0	889.3
41	Flour, other grain mill products	5.5	151.2	(D)	-	1.0	.5	7.7	.2	-	(D)	1.1	40.9
43	Cereal breakfast foods	2.3	26.8	-	-	-	.4	(D)	(D)	(D)	(D)	1.6	110.4
45	Blended and prepared flour	(S)	2.3	-	-	-	(S)	(D)	(D)	(D)	.1	1.3	28.1
46	Wet corn milling	14.8	93.4	(D)	-	.3	12.6	44.2	56.6	43.8	-	2.5	214.2
47	Dog, cat, and other pet food	(S)	12.0	-	-	-	(S)	7.0	2.7	1.7	3.1	2.1	199.4
48	Prepared feeds, n.e.c.	(S)	133.1	-	-	(D)	(S)	17.1	12.0	89.1	11.5	1.7	72.8
5	Bakery products	(S)	34.7	.2	-	-	1.3	7.0	2.1	3.2	2.2	5.7	512.2
51	Bread, cake, and related products	(S)	.2	(D)	-	-	1.0	(D)	(D)	(D)	(D)	3.8	420.3
52	Cookies and crackers	(S)	34.5	-	-	-	.3	(D)	(D)	(D)	(D)	1.9	91.9
6	Sugar, confectionery products	8.7	229.2	43.1	.2	.9	12.8	1,065.9	138.1	141.6	155.0	13.4	4,043.6
61	Raw cane sugar	2.9	127.2	.4	(D)	-	(S)	1.5	6.9	(D)	152.9	4.6	2,745.0
62	Cane sugar refining	1.4	(D)	(D)	-	-	2.5	8.0	7.4	(D)	-	1.3	106.2
63	Beet sugar	2.2	84.1	(D)	-	-	4.7	988.6	119.2	130.1	-	(S)	1,021.8
65	Confectionery products	(S)	6.9	22.0	(D)	(D)	(D)	5.9	2.9	(D)	1.7	4.8	104.3
66	Chocolate and cocoa products	(S)	(D)	-	-	-	(D)	(D)	(D)	(D)	(D)	(S)	39.4
7	Fats and oils	14.1	230.1	7.4	244.7	(D)	12.2	16.3	26.2	36.3	17.8	6.1	274.3
75	Soybean oil mills	8.0	204.1	-	196.3	(D)	3.1	2.5	2.3	8.9	1.0	1.7	83.8
79	Shortening and cooking oils	(S)	2.8	(D)	(D)	-	6.3	11.3	21.7	24.1	12.4	2.9	121.9
8	Beverages	21.0	56.3	9.8	2.6	(D)	17.9	193.6	126.1	171.8	2.3	14.7	952.9
82	Malt beverages	16.4	25.9	.3	2.5	(D)	14.6	170.6	115.9	157.9	-	5.2	302.2
83	Malt	(S)	18.7	-	-	-	.3	2.4	(D)	(D)	-	(S)	9.9
84	Wines, brandy, and brandy spirits	(S)	-	-	-	-	.6	3.2	2.0	(D)	-	1.1	61.9
86	Bottled and canned soft drinks	(S)	-	-	-	-	1.5	7.1	1.3	2.6	2.3	6.2	442.3
9	Miscellaneous foods, kindred products	6.8	9.1	-	.9	4.5	7.9	17.1	6.0	8.9	22.0	9.6	830.5
91	Canned and cured seafoods	(S)	-	-	-	-	.9	2.6	(D)	(D)	(D)	(S)	21.5
95	Roasted coffee	4.4	3.8	-	(D)	(D)	3.6	.6	(D)	(D)	(D)	2.1	48.0
99	Food preparations, n.e.c.	2.1	4.3	-	.1	4.2	2.3	8.9	4.1	6.6	(D)	5.5	661.5
11	Tobacco products	7.0	35.9	(D)	(D)	.8	(D)	7.1	2.2	5.2	-	3.0	147.6
111	Cigarettes	3.9	28.9	(D)	(D)	-	(D)	(D)	-	-	-	2.2	108.7
141	Tobacco stemming and redrying	2.8	6.4	-	-	.8	(S)	2.6	2.1	5.2	-	(S)	29.6
22	Textile mill products	19.0	92.4	2.6	26.0	1.9	30.2	41.9	66.9	133.6	9.0	22.5	1,101.0
221	Weaving mills, cotton	3.9	10.9	(D)	(D)	(D)	4.4	4.6	11.8	19.4	(D)	1.5	163.5
222	Weaving mills, manmade fiber, silk	(S)	12.5	(D)	(D)	(D)	4.0	6.0	20.9	39.2	.3	2.2	103.1
225	Knitting mills	2.0	3.3	(D)	(D)	.4	4.2	3.0	3.4	9.3	.3	(S)	253.7
253	Knit outerwear mills	(S)	-	-	-	-	.3	-	-	(D)	(D)	(S)	16.1
258	Warp knit fabric mills	1.0	.2	(D)	(D)	-	(S)	.2	2.1	4.8	.1	(S)	13.0
226	Textile finishing, except wool	(S)	36.4	-	2.0	.1	11.0	12.6	20.8	44.2	5.5	2.9	159.9
2262	Finishing plants, manmade fiber, silk	1.2	17.2	-	1.9	.1	7.6	5.3	15.2	25.6	.6	1.5	76.7
2269	Finishing plants, n.e.c.	(S)	1.1	-	.1	-	1.0	2.9	-	.1	(D)	(S)	5.3
227	Floor covering mills	(S)	.6	1.7	.2	.2	1.7	8.4	5.4	12.9	2.0	2.4	113.5
2272	Tufted carpets and rugs	(S)	.6	(D)	(D)	(D)	1.5	2.2	2.9	6.4	1.9	2.0	101.1
228	Yarn and thread mills	(S)	13.0	.2	-	.2	2.0	.8	2.6	5.3	.2	2.2	81.0
2281	Yarn mills, except wool	(S)	.3	-	-	-	.5	.2	.3	.5	.1	1.1	32.4
2282	Throwing and winding mills	(S)	(D)	-	-	.2	1.2	(D)	(D)	(D)	.1	(S)	45.2
229	Miscellaneous textile goods	3.7	15.6	-	6.4	.1	(S)	6.3	1.5	2.5	.5	5.9	168.8
2295	Coated fabrics, not rubberized	1.9	1.2	-	6.2	.1	(S)	1.0	(D)	(D)	(D)	2.5	83.5

See footnotes at end of table.

Table 6A. Quantities of Pollutants Removed and Related Statistics, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Values in millions of dollars; quantities in thousands of short tons)

SIC code	Industry	Air pollution abatement					Water pollution abatement					Solid waste collection/ disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removd
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
24	Lumber and wood products	40.2	1,578.6	8.1	5.3	3.6	23.7	162.3	169.0	64.3	8.8	49.7	6,506.0
2411	Logging camps, log contractors	(S)	5.6	-	-	(D)	3.1	11.6	-	-	(D)	5.9	878.9
242	Sawmills and planing mills	(S)	793.9	-	1.3	.7	2.8	28.0	7.5	9.4	1.0	16.8	3,040.9
2421	Sawmills, planing mills, general	(S)	532.7	-	1.3	(D)	2.8	28.0	7.5	9.4	1.0	15.6	2,918.7
243	Millwork, plywood, structural members	9.8	559.7	8.1	2.5	1.7	3.9	9.8	6.9	20.4	2.6	12.1	1,460.9
2436	Softwood veneer and plywood	6.8	439.9	8.1	1.5	1.1	3.7	9.5	6.9	20.4	2.1	5.9	1,116.0
245	Wood buildings and mobile homes	(S)	5.7	-	-	-	(S)	-	-	-	-	5.0	384.5
2451	Mobile homes	(S)	5.7	-	-	-	(S)	-	-	-	-	3.9	115.7
249	Miscellaneous wood products	(S)	196.3	-	1.5	1.1	13.8	112.9	154.7	34.6	.8	(S)	581.1
2499	Wood products, n.e.c.	(S)	157.1	-	.4	-	11.2	70.2	72.0	30.3	.1	(S)	522.5
25	Furniture and fixtures	11.9	309.8	.1	4.8	4.3	1.8	1.8	.1	.2	.6	12.9	735.5
251	Household furniture	9.6	281.8	-	2.0	.9	.7	.8	-	.1	.2	8.0	503.3
2511	Wood household furniture	7.4	261.6	-	1.6	(D)	(S)	-	-	.1	.1	3.2	305.3
2512	Upholstered household furniture	1.0	13.2	-	-	-	(S)	.1	-	-	-	1.9	108.2
252	Office furniture	1.0	22.5	-	1.2	.8	(S)	.1	-	-	-	1.2	42.3
26	Paper and allied products	176.6	5,868.4	533.2	145.0	143.0	348.1	2,841.9	1,752.2	1,576.9	244.3	121.1	13,253.2
2611	Pulpmills	15.3	988.1	139.8	.2	12.4	66.0	308.9	291.0	209.6	(D)	11.5	769.1
2621	Papermills, except building paper	67.3	1,920.1	244.5	12.5	54.4	170.5	1,562.4	828.1	667.7	(D)	52.7	5,163.9
2631	Paperboard mills	72.0	2,631.8	133.7	60.2	67.1	95.9	785.8	558.2	520.8	20.0	23.8	3,647.1
264	Miscellaneous converted paper products	9.6	126.2	12.0	67.1	9.1	7.9	89.1	26.8	112.7	50.8	21.8	3,033.6
2641	Paper coating and glazing	5.9	20.6	10.9	64.0	-	.8	(D)	(D)	(D)	-	6.5	231.2
2643	Bags, except textile bags	(S)	.3	(D)	1.4	-	.5	1.7	.1	.7	.5	(S)	128.1
2645	Die-cut paper and board	1.4	(D)	-	-	(D)	2.5	(D)	(D)	(D)	.1	(S)	130.6
2647	Sanitary paper products	1.0	10.6	(D)	.3	8.0	(S)	1.7	.8	(D)	49.5	5.0	(D)
2649	Converted paper products, n.e.c.	(S)	2.7	.2	1.4	-	(S)	37.8	2.2	-	.7	2.0	116.5
265	Paperboard containers and boxes	(S)	3.8	3.1	5.0	.1	3.8	40.1	32.8	40.6	19.3	9.5	407.1
2651	Folding paperboard boxes	(S)	.2	1.7	3.5	-	(S)	14.5	(D)	-	.7	2.1	101.8
2653	Corrugated and solid fiber boxes	(S)	1.7	1.4	-	-	2.8	25.4	24.9	40.6	18.1	4.6	199.8
2654	Sanitary food containers	(S)	-	-	.2	-	(S)	.1	(D)	-	.5	1.4	50.7
27	Printing and publishing	9.5	6.2	-	48.7	4.5	3.7	3.5	.5	.6	61.3	30.6	1,147.7
2711	Newspapers	(S)	.1	-	-	-	.2	(D)	-	-	1.0	5.2	201.6
273	Books	(S)	3.9	-	5.0	-	(S)	.1	.2	.1	.2	1.9	255.5
2732	Book printing	(S)	3.7	-	-	-	(S)	.1	.2	.1	(D)	1.3	68.8
275	Commercial printing	8.2	1.7	-	43.5	4.5	(S)	2.3	.1	.2	4.1	(S)	426.3
2751	Commercial printing, letterpress	2.9	1.3	-	(D)	(D)	(S)	.1	(D)	-	-	2.3	204.9
2752	Commercial printing, lithographic	2.4	.3	-	(D)	.1	.5	2.1	(D)	-	1.4	(S)	163.3
2754	Commercial printing, gravure	2.9	.2	-	21.7	(D)	(S)	.1	.1	.1	2.6	1.3	54.7
2761	Manifold business forms	(S)	-	-	-	-	(S)	.2	-	.3	47.1	1.7	89.0
28	Chemicals and allied products	485.3	4,385.6	1,059.5	2,209.5	538.9	835.3	4,452.9	1,279.3	1,735.2	4,042.5	287.0	45,406.7
281	Industrial inorganic chemicals	105.0	1,650.5	564.5	153.3	145.4	147.7	2,490.3	31.8	68.1	407.7	50.7	9,017.9
2812	Alkalies and chlorine	(D)	186.3	(D)	25.9	(D)	29.6	(D)	(D)	(D)	20.1	11.0	1,132.6
2813	Industrial gases	(D)	-	-	(D)	-	1.8	(D)	(D)	(D)	(D)	(S)	6.2
2816	Inorganic pigments	17.7	117.8	(D)	(D)	(D)	40.1	172.8	(D)	5.3	(D)	5.0	463.2
2819	Industrial inorganic chemicals, n.e.c.	73.2	1,346.4	445.2	123.2	88.0	76.2	1,909.7	28.4	(D)	195.6	34.2	7,415.9
282	Plastics materials, synthetics	65.5	791.7	18.6	258.6	28.1	115.2	127.8	117.0	395.2	94.5	38.7	2,092.7
2821	Plastics materials and resins	44.5	473.1	14.7	205.5	19.9	67.7	95.6	38.6	111.0	70.2	23.9	726.4
2822	Synthetic rubber	5.3	2.9	(D)	28.8	.1	9.9	11.6	(D)	(D)	(D)	2.4	131.6
2823	Cellulosic manmade fibers	1.7	129.5	(D)	(D)	(D)	9.7	6.8	(D)	(D)	(D)	(S)	329.8
2824	Organic fibers, noncellulosic	14.0	186.2	(D)	(D)	(D)	27.9	13.7	35.4	51.6	.8	11.6	905.0
283	Drugs	15.8	45.5	22.3	19.2	4.6	33.4	24.4	109.8	154.0	3.7	20.9	672.2
2833	Medicinals and botanicals	7.4	23.8	16.1	1.7	1.1	19.5	10.7	89.2	125.0	(D)	7.2	231.9
2834	Pharmaceutical preparations	8.3	21.8	6.2	17.5	3.5	13.5	13.6	20.6	29.0	(D)	12.8	427.1
284	Soaps, cleaners, toilet goods	10.5	26.5	1.4	3.3	2.7	11.6	23.7	40.7	80.7	19.0	9.2	302.8
2841	Soap and other detergents	7.3	22.6	.3	-	.2	4.3	7.9	7.8	13.0	4.7	2.8	136.0
2842	Polishes and sanitation goods	(S)	(D)	(D)	-	.1	1.1	(D)	(D)	(D)	3.9	1.4	37.4
2843	Surface active agents	2.6	(D)	(D)	3.2	(D)	4.5	.6	5.4	12.9	2.5	1.8	42.5
2844	Toilet preparations	(S)	2.0	-	-	(D)	1.7	(D)	.4	(D)	7.9	3.2	87.0
2851	Paints and allied products	3.5	2.7	.1	1.8	1.1	4.1	7.6	2.6	.7	5.8	13.0	215.9
286	Industrial organic chemicals	187.5	584.0	191.5	1,260.6	211.4	414.1	411.5	936.8	954.9	3,265.2	111.2	4,015.4
2861	Gum and wood chemicals	(S)	14.4	(D)	.1	(D)	2.4	(D)	5.7	11.0	(D)	(S)	50.1
2865	Cyclic crudes and intermediates	24.7	72.6	(D)	106.9	(D)	78.4	(D)	76.5	136.0	33.9	22.0	742.4
2869	Industrial organic chemicals, n.e.c.	161.1	497.0	178.8	1,153.7	179.4	333.4	329.8	854.6	807.9	(D)	89.0	3,222.9
287	Agricultural chemicals	70.6	1,036.2	254.9	85.1	141.4	93.1	1,326.9	23.4	39.0	176.6	30.0	28,613.1
2873	Nitrogenous fertilizers	16.9	134.5	(D)	56.7	12.5	30.5	(D)	(D)	6.8	42.2	5.3	(D)
2874	Phosphatic fertilizers	29.9	825.0	236.1	9.2	104.1	21.8	448.6	(D)	-	104.2	14.1	25,674.2
2879	Agricultural chemicals, n.e.c.	21.0	30.1	14.6	19.2	15.2	40.5	(D)	18.7	32.3	29.3	10.2	360.2
289	Miscellaneous chemical products	26.8	248.7	6.2	427.6	4.2	15.9	40.8	17.1	42.5	69.9	13.3	476.7
2892	Explosives	(S)	16.7	(D)	9.6	-	2.3	(D)	.2	(D)	(D)	1.3	78.0
2899	Chemical preparations, n.e.c.	(S)	171.6	(D)	.3	.1	10.7	24.9	16.8	40.5	68.0	6.1	288.7

See footnotes at end of table.

Table 6A. Quantities of Pollutants Removed and Related Statistics, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Values in millions of dollars; quantities in thousands of short tons)

SIC code	Industry	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
29	Petroleum and coal products	750.7	1,165.1	4,159.0	9,096.5	16.6	365.1	695.5	464.6	831.0	1,080.1	52.3	3,074.7
2911	Petroleum refining	731.1	673.8	4,157.9	9,023.0	(D)	360.4	501.1	459.8	519.3	1,076.1	42.7	1,571.5
295	Paving and roofing materials	14.6	348.7	1.1	5.8	-	3.0	193.8	4.6	311.6	.1	8.5	1,469.7
2952	Asphalt felts and coatings	10.6	44.5	1.1	5.8	-	2.7	193.0	4.6	311.6	.1	8.0	1,311.3
299	Miscellaneous petroleum, coal products	5.0	142.6	-	67.6	.3	1.7	.5	.2	.2	3.9	(S)	33.4
2992	Lubricating oils and greases	(S)	1.3	-	1.9	.3	1.3	.5	.2	.2	3.9	(S)	24.2
2999	Petroleum and coal products, n.e.c.	4.3	141.3	-	65.7	-	(S)	-	-	-	-	(S)	9.2
30	Rubber, miscellaneous plastics products	32.2	135.2	8.4	40.8	17.5	21.4	25.8	4.3	7.7	538.4	49.9	2,872.8
3011	Tires and inner tubes	11.1	81.2	6.1	5.7	(D)	3.7	4.6	(D)	(D)	1.1	10.5	422.9
3041	Rubber, plastics hose and belting	1.5	3.3	(D)	(D)	.9	(S)	.5	-	-	.9	(S)	135.0
3069	Fabricated rubber products, n.e.c.	3.8	7.9	(D)	(D)	.3	(S)	2.0	.5	.8	.4	6.8	311.7
3079	Miscellaneous plastics products	15.7	42.6	1.8	24.2	14.5	14.4	18.8	3.3	6.5	536.0	29.2	1,958.9
31	Leather and leather products	1.3	5.9	(D)	(D)	.1	8.9	20.5	24.2	12.1	53.4	(S)	360.1
32	Stone, clay, glass products	188.0	16,094.8	140.9	24.2	47.2	36.4	760.6	39.2	44.3	199.3	60.5	14,142.5
3211	Flat glass	3.3	26.5	2.7	-	-	3.3	4.2	1.3	1.3	.9	3.1	201.7
322	Glass, pressed or blown	10.6	43.2	1.6	4.1	1.6	7.3	19.0	2.0	9.6	9.2	8.5	481.3
3221	Glass containers	3.5	16.9	1.5	(D)	.9	1.5	1.4	-	-	6.3	4.4	203.7
3229	Pressed and blown glass, n.e.c.	7.1	26.3	.1	(D)	.7	5.8	17.6	2.0	9.5	2.9	4.1	277.5
3231	Products of purchased glass	(S)	.2	-	-	-	(S)	1.0	.3	-	1.0	1.9	196.2
3241	Cement, hydraulic	80.4	12,579.6	59.9	5.5	.8	2.6	361.5	2.7	4.0	110.6	7.3	4,588.5
326	Pottery and related products	2.1	18.5	-	.3	-	2.1	19.3	.1	.2	-	(S)	329.7
327	Concrete, gypsum, plaster products	22.3	2,260.9	61.0	-	.2	(S)	268.9	1.2	2.1	40.6	10.5	3,126.4
329	Miscellaneous nonmetallic mineral products	55.6	1,001.5	5.7	14.3	39.7	13.2	75.6	16.1	27.0	36.6	23.3	4,665.8
3291	Abrasive products	(S)	47.7	-	(D)	.4	1.3	6.6	(D)	(D)	(D)	1.2	91.6
3292	Asbestos products	7.5	103.8	.1	(D)	16.4	1.5	6.4	(D)	(D)	.2	4.1	183.3
3296	Mineral wool	25.9	175.8	4.3	2.8	.8	6.1	23.1	15.5	25.0	.3	11.5	573.0
3297	Nonclay refractories	3.2	51.8	-	.1	-	(S)	1.9	-	-	-	(S)	165.8
33	Primary metal industries	981.7	8,829.6	2,936.6	1,532.0	669.1	417.9	4,786.3	18.1	84.9	838.4	163.5	47,782.6
331	Blast furnace, basic steel products	552.6	5,252.3	595.9	487.6	46.5	332.3	3,834.1	15.1	75.7	596.5	105.3	28,315.3
3312	Blast furnaces and steel mills	528.7	4,821.7	592.4	487.0	12.6	314.6	3,660.5	14.9	(D)	506.0	98.1	27,362.7
3313	Electrometallurgical products	22.1	418.1	-	(D)	32.7	4.8	(D)	(D)	-	(D)	1.0	538.3
3315	Steel wire and related products	(S)	.5	2.4	.5	.1	4.0	8.9	-	-	(D)	(S)	104.8
3316	Cold finishing of steel shapes	(S)	11.6	(D)	(D)	1.1	6.7	46.1	-	(D)	50.9	3.6	282.3
3317	Steel pipe and tubes	(S)	.4	(D)	-	-	2.3	4.5	(D)	-	(D)	(S)	27.2
332	Iron and steel foundries	126.9	1,600.0	168.1	976.4	200.6	13.5	767.4	.3	1.3	79.4	26.2	8,923.4
3321	Gray iron foundries	105.3	1,221.3	(D)	975.5	169.3	11.5	621.3	(D)	1.3	7.4	17.2	7,426.0
3322	Malleable iron foundries	(S)	104.7	.1	(D)	-	(S)	(D)	(D)	-	-	1.5	331.1
3325	Steel foundries, n.e.c.	12.1	262.6	.1	.4	30.5	1.2	39.4	-	-	(D)	6.9	1,140.8
333	Primary nonferrous metals	254.3	1,222.1	2,170.6	15.2	173.1	34.4	161.0	.6	1.3	52.1	12.2	9,266.4
3331	Primary copper	101.3	538.3	1,507.2	-	55.1	(S)	.6	-	-	(D)	(S)	7,747.5
3332	Primary lead	16.9	84.3	203.9	-	33.1	1.5	(D)	(D)	(D)	(D)	(S)	(D)
3333	Primary zinc	10.7	(D)	368.4	-	(D)	3.8	2.8	-	-	(D)	(S)	607.4
3334	Primary aluminum	92.0	402.9	13.7	15.1	71.1	9.3	117.7	.3	-	7.2	5.2	514.4
3339	Primary nonferrous metals, n.e.c.	33.4	105.6	(D)	-	12.6	9.3	33.8	(D)	(D)	14.1	2.3	162.2
3341	Secondary nonferrous metals	15.5	278.6	-	(D)	21.0	4.6	1.5	-	-	8.9	(S)	457.9
335	Nonferrous rolling and drawing	26.4	42.4	2.0	34.9	18.1	28.3	20.2	1.6	6.2	94.3	12.8	607.1
3351	Copper rolling and drawing	4.7	9.2	(D)	(D)	(D)	5.5	4.0	(D)	(D)	4.6	1.5	95.0
3353	Aluminum sheet, plate, and foil	7.8	18.5	(D)	1.8	(D)	8.2	3.8	.9	3.0	(D)	4.8	180.0
3354	Aluminum extruded products	(S)	2.8	-	.7	(D)	2.9	8.9	(D)	(D)	(D)	1.3	56.7
3356	Nonferrous rolling and drawing, n.e.c.	7.0	(D)	(D)	.9	(D)	10.2	2.6	.3	(D)	(D)	2.4	70.4
3357	Nonferrous wiredrawing insulating	5.5	(D)	.4	31.4	1.7	1.1	(D)	-	(D)	5.6	2.6	87.2
336	Nonferrous foundries	(S)	10.8	-	.1	1.2	4.0	1.3	.4	(D)	2.2	2.5	151.1
3361	Aluminum foundries	(S)	6.8	-	.1	1.1	2.5	.7	.4	(D)	1.3	1.8	104.4
34	Fabricated metal products	57.0	174.7	6.3	60.2	15.2	68.0	95.9	2.5	9.2	110.5	64.2	2,030.7
341	Metal cans, shipping containers	11.2	1.5	-	27.2	.6	3.7	1.9	1.1	5.8	7.7	4.6	140.6
3411	Metal cans	8.6	.4	-	25.6	.6	3.1	1.4	1.1	4.4	6.1	3.9	127.5
342	Cutlery, handtools, and hardware	6.4	10.7	2.4	.6	.7	10.2	15.8	.6	.3	3.6	8.3	161.7
3423	Hand and edge tools, n.e.c.	(S)	2.6	-	-	.5	1.0	9.9	(D)	-	1.0	(S)	35.9
3429	Hardware, n.e.c.	4.9	7.7	1.7	.4	.2	8.7	4.9	(D)	.2	2.6	6.4	115.5
343	Plumbing, heating, except electric	2.9	36.7	-	4.5	.2	2.5	5.6	-	.4	.4	3.2	330.3
3432	Plumbing fittings and brass goods	1.2	11.5	-	-	.2	(S)	3.4	-	-	.3	1.1	44.6
344	Fabricated structural metal products	8.5	28.7	.3	11.9	.6	8.1	8.9	.1	.1	18.8	10.6	346.4
3441	Fabricated structural metal	(S)	.6	-	-	-	.5	.1	-	-	8.3	1.6	26.9
3443	Fabricated platework, boiler shop	4.9	(D)	.3	-	(D)	3.6	2.7	-	-	1.9	3.5	130.5
3444	Sheet metalwork	1.6	(D)	-	6.2	(D)	(S)	1.1	-	-	(D)	1.9	46.7
345	Screw machine product, bolts, etc.	1.0	4.4	.7	.2	7.9	(S)	2.7	.2	.9	5.6	3.8	108.2
3452	Bolts, nuts, rivets, and washers	(S)	4.4	.7	.2	5.5	(S)	2.7	(D)	(D)	4.8	3.1	101.6

See footnotes at end of table.

Table 6A. Quantities of Pollutants Removed and Related Statistics, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Values in millions of dollars; quantities in thousands of short tons)

SIC code	Industry	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	Fabricated metal products--Continued												
346	Metal forgings and stampings	10.0	16.8	1.9	3.2	2.5	11.6	24.8	.2	.6	47.7	12.3	345.6
3462	Iron and steel forgings	2.9	3.2	.3	(D)	(D)	(S)	3.4	.1	.3	3.6	(S)	77.3
3463	Nonferrous forgings	1.7	(D)	-	(D)	-	(S)	.5	-	(D)	(D)	1.0	19.6
3465	Automotive stampings	2.8	8.0	1.6	1.0	(D)	5.8	14.2	-	-	41.4	6.5	158.5
3466	Crowns and closures	(S)	.1	-	.8	-	-	-	-	-	-	(S)	23.6
3469	Metal stampings, n.e.c.	1.7	(D)	-	1.0	-	(S)	6.8	-	(D)	(D)	2.9	66.5
348	Ordnance and accessories, n.e.c.	3.2	2.9	.7	.6	-	5.2	4.4	.1	1.1	.8	5.9	78.7
3482	Small arms ammunition	(S)	(D)	.6	-	-	1.7	3.5	(D)	(D)	(D)	(S)	17.0
3483	Ammunition, except small arms, n.e.c.	1.2	.6	-	(D)	-	1.4	.8	(D)	(D)	.2	1.6	18.8
3484	Small arms	1.3	1.1	-	-	-	.7	.1	-	(D)	(D)	1.4	16.4
3489	Ordnance and accessories, n.e.c.	(S)	(D)	-	(D)	-	1.3	-	-	-	.1	(S)	26.5
349	Miscellaneous fabricated metal products	6.6	59.5	.3	6.1	2.4	5.6	12.8	.2	-	10.5	9.1	410.1
3494	Valves and pipe fittings	4.5	51.4	.3	(D)	.5	2.4	(D)	.1	(D)	2.0	3.8	244.1
35	Machinery, except electrical	50.1	268.2	41.9	14.8	4.7	47.6	110.0	18.0	32.0	233.3	81.1	3,524.2
351	Engines and turbines	11.1	35.8	11.2	1.3	.2	8.9	44.9	10.5	26.6	23.3	8.0	321.1
3511	Turbines, turbine generator sets	5.3	10.9	(D)	(D)	-	1.6	(D)	(D)	(D)	7.3	1.3	66.7
3519	Internal combustion engines, n.e.c.	5.9	24.9	(D)	(D)	.2	7.3	(D)	(D)	(D)	16.0	6.6	254.3
352	Farm and garden machinery	7.9	52.8	4.0	3.1	.9	4.0	16.3	(D)	(D)	7.4	7.4	552.4
3523	Farm machinery and equipment	7.8	52.6	(D)	(D)	(D)	(S)	15.9	(D)	(D)	5.5	6.5	526.9
353	Construction, related machinery	10.2	46.6	(D)	.2	.2	8.7	8.6	3.6	(D)	114.1	14.4	722.6
3531	Construction machinery	7.4	39.0	(D)	.1	.1	6.7	4.1	(D)	(D)	8.4	9.7	538.1
354	Metalworking machinery	2.9	32.9	(D)	-	.5	1.8	4.6	.1	.2	12.4	5.0	335.9
3541	Machine tools, metal cutting	1.0	17.5	(D)	-	-	.6	(D)	(D)	(D)	4.4	1.5	127.4
3544	Special dies, tools, jigs, etc.	(S)	.4	-	-	.1	(S)	3.0	-	-	.2	1.2	28.5
355	Special industry machinery	4.2	5.1	.3	.9	.7	3.2	1.7	-	-	38.5	5.9	162.3
3559	Special industry machinery, n.e.c.	2.9	2.4	-	(D)	.2	(S)	-	-	-	37.0	3.0	73.5
356	General industrial machinery	5.2	57.9	1.8	.3	1.0	4.7	23.6	3.2	.3	16.5	10.6	553.8
3561	Pumps and pumping equipment	(S)	(D)	-	-	-	(S)	(D)	(D)	-	7.2	2.2	83.8
3562	Ball and roller bearings	1.3	1.9	1.8	(D)	-	2.4	3.5	.1	(D)	7.7	2.1	116.4
3563	Air and gas compressors	(S)	9.0	(D)	(D)	1.0	(S)	(D)	-	(D)	.7	1.1	93.1
3568	Power transmission equipment, n.e.c.	1.1	29.3	-	(D)	-	.8	1.5	(D)	-	.6	1.4	41.1
357	Office and computing machines	3.3	.6	.1	4.3	.6	7.1	.6	-	-	11.8	9.4	352.4
3573	Electronic computing equipment	(S)	.2	-	.8	-	4.0	.5	(D)	(D)	(D)	6.0	287.0
3574	Calculating, accounting machines	(S)	(D)	(D)	(D)	(D)	(S)	(D)	-	(D)	(D)	(D)	21.6
3579	Office machines, typewriters, etc.	1.4	.4	(D)	(D)	(D)	2.2	(D)	-	-	(D)	(D)	29.6
358	Refrigeration and service machines	3.6	13.5	4.4	4.5	.5	5.5	5.0	.6	.6	4.2	16.4	423.1
3585	Refrigeration, heating equipment	3.3	13.3	4.4	4.4	.4	5.1	4.8	.6	.6	3.0	15.0	400.2
359	Miscellaneous machinery, except electrical	1.6	22.9	-	.2	-	3.6	4.8	-	-	5.2	4.0	100.8
3592	Carburetors, pistons, rings, etc.	1.2	9.6	-	(D)	-	3.1	4.7	-	-	4.8	1.5	48.2
36	Electric, electronic equipment	46.7	203.8	12.7	42.4	18.8	58.4	201.7	66.4	2.6	405.6	52.8	2,319.2
361	Electric distributing equipment	1.5	9.9	.2	1.0	.7	2.6	89.3	64.1	.2	5.9	2.5	103.1
3612	Transformers	(S)	9.7	(D)	(D)	(D)	.8	(D)	(D)	.1	5.7	1.2	81.3
3613	Switchgear, switchboard apparatus	1.0	.2	(D)	(D)	(D)	1.7	(D)	(D)	-	.3	1.4	21.7
362	Electrical industrial apparatus	9.7	82.1	.4	9.5	2.5	4.5	9.8	.1	.1	1.1	6.8	236.6
3621	Motors and generators	(S)	(D)	-	.2	-	1.9	(D)	-	-	.3	2.3	63.6
3622	Industrial controls	(S)	.3	-	.2	-	1.1	.1	(D)	-	.1	1.5	27.0
3623	Welding apparatus, electric	(S)	(D)	(D)	-	.7	.7	.3	(D)	(D)	(D)	(S)	37.6
3624	Carbon and graphite products	7.4	66.6	.1	9.1	1.7	(S)	.2	(D)	(D)	(D)	1.0	100.5
3629	Electrical industrial apparatus, n.e.c.	(S)	-	(D)	-	(D)	(S)	(D)	(D)	(D)	-	1.3	7.9
363	Household appliances	5.3	32.1	3.5	13.2	.3	5.9	12.6	.9	1.6	129.4	10.6	213.2
3631	Household cooking equipment	(S)	1.7	(D)	.2	-	1.2	2.0	-	-	.2	(S)	29.3
3632	Household refrigerators, freezers	1.1	7.9	(D)	3.8	-	1.0	3.0	(D)	(D)	(D)	2.5	56.3
3633	Household laundry equipment	1.6	17.3	(D)	8.9	-	1.3	5.2	-	1.6	.9	1.0	36.0
3634	Electric housewares and fans	(S)	1.3	-	-	-	1.0	.3	-	-	-	1.3	45.7
3639	Household appliances, n.e.c.	1.2	3.8	(D)	.3	(D)	.5	1.9	(D)	(D)	.7	1.1	26.9
364	Electric lighting, wiring equipment	4.4	25.5	-	1.4	1.0	(D)	2.2	.1	-	3.3	6.8	422.5
3641	Electric lamps	(S)	4.2	-	(D)	(D)	(S)	-	-	-	-	1.4	74.7
3643	Current-carrying wiring devices	(S)	(D)	-	-	(D)	(S)	.4	-	-	1.0	1.1	27.7
3644	Noncurrent-carrying wiring devices	(S)	11.6	-	-	-	(D)	.5	.1	-	(D)	1.0	246.9
3647	Vehicular lighting equipment	(D)	(D)	-	-	-	(D)	(D)	-	-	(D)	1.6	36.9
365	Radio, TV receiving equipment	(S)	3.0	-	3.6	-	(D)	.9	-	-	-	2.6	81.3
3651	Radio and TV receiving sets	(S)	(D)	-	(D)	(D)	(D)	(D)	-	-	-	1.9	72.0

See footnotes at end of table.

Table 6A. Quantities of Pollutants Removed and Related Statistics, by Industry for Establishments With 20 or More Employees: 1979—Continued

(Values in millions of dollars; quantities in thousands of short tons)

SIC code	Industry	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	Electric, electronic equipment--Con.												
366	Communication equipment	6.3	5.7	1.6	3.6	2.2	11.0	68.5	0.2	0.2	3.7	8.0	273.8
3661	Telephone and telegraph apparatus	4.3	5.1	(D)	3.3	(D)	6.7	(D)	(D)	.1	2.7	2.7	106.4
3662	Radio and TV communication equip.	2.1	.6	(D)	.3	(D)	4.2	(D)	(D)	.1	1.0	5.3	167.4
367	Electronic components, accessories	8.9	4.1	.1	9.8	.9	20.3	5.5	1.1	.5	249.4	11.2	739.0
3672	Cathode ray TV picture tubes	(S)	.1	-	(D)	.1	1.2	(D)	.3	-	1.4	(S)	32.0
3674	Semiconductors, related devices	3.7	2.0	-	1.4	.4	10.1	1.3	(D)	(D)	(D)	5.5	590.4
3678	Electronic connectors	(S)	-	-	(D)	-	.9	.2	(D)	(D)	.8	(S)	9.2
3679	Electronic components, n.e.c.	4.3	.3	-	7.7	.1	6.9	.9	.1	.1	2.7	2.6	74.3
369	Miscellaneous electrical equipment, supplies	9.4	41.4	6.8	.2	11.3	8.5	12.9	-	-	12.8	4.3	249.8
3691	Storage batteries	7.3	33.5	6.2	-	(D)	4.8	11.0	(D)	-	5.4	1.4	97.4
3694	Engine electrical equipment	1.1	(D)	(D)	.1	(D)	2.6	(D)	-	-	(D)	1.3	117.0
37	Transportation equipment	96.4	484.6	42.5	49.4	114.7	95.5	594.5	24.6	12.6	217.9	109.1	4,252.8
371	Motor vehicles and equipment	79.2	445.7	30.8	45.1	111.8	68.0	422.9	6.7	4.7	161.9	75.2	2,898.3
3711	Motor vehicles and car bodies	57.7	323.8	14.9	24.5	2.8	27.2	43.1	2.8	1.3	24.9	40.7	1,389.8
3713	Truck and bus bodies	(S)	2.9	-	1.6	(D)	(S)	(D)	-	-	.1	1.6	61.6
3714	Motor vehicle parts, accessories	20.7	118.1	15.9	19.0	108.5	40.5	(D)	3.9	3.4	136.8	31.6	1,425.6
3715	Truck trailers	(S)	.9	-	-	(D)	(S)	-	-	-	.1	1.3	21.3
372	Aircraft and parts	8.0	8.7	3.8	2.8	.6	14.8	19.4	16.8	6.8	20.3	13.3	382.1
3721	Aircraft	2.5	1.3	(D)	.2	-	5.1	1.1	.3	.6	8.1	7.2	143.7
3724	Aircraft engines and engine parts	3.9	6.4	2.7	(D)	.1	6.4	(D)	(D)	(D)	2.8	3.6	121.6
3728	Aircraft equipment, n.e.c.	1.6	1.0	(D)	(D)	.5	3.4	(D)	(D)	(D)	9.4	2.5	116.7
373	Ship, boat building, repairing	4.3	17.3	5.4	1.1	.5	5.8	149.8	.5	.7	14.9	12.1	574.9
3731	Ship building and repairing	4.1	16.4	(D)	(D)	-	5.8	149.8	.5	(D)	14.9	10.5	505.7
3743	Railroad equipment	2.5	8.7	(D)	.1	(D)	2.0	1.2	(D)	-	1.7	2.3	203.8
3751	Motorcycles, bicycles, and parts	(S)	1.0	-	-	-	.9	(D)	-	-	(D)	(S)	12.9
376	Guided missiles, space vehicles	1.4	.9	-	.1	1.4	3.6	.4	.2	.2	14.1	3.3	77.8
3761	Guided missiles, space vehicles	(S)	.5	-	-	(D)	1.8	(D)	.1	(D)	(D)	2.3	51.5
3764	Space propulsion units and parts	(S)	.4	-	.1	(D)	1.8	(D)	(D)	(D)	(D)	(S)	19.5
379	Miscellaneous transportation equipment	(S)	2.3	.3	.1	.1	(S)	.1	.1	-	4.9	2.6	102.9
3792	Travel trailers and campers	(S)	.6	-	(D)	.1	(S)	-	-	-	-	1.1	31.6
3795	Tanks and tank components	(S)	(D)	(D)	-	-	(S)	(D)	-	-	(D)	1.1	(D)
38	Instruments, related products	10.6	28.7	1.7	19.8	2.2	25.1	26.3	16.6	24.9	19.0	27.9	427.1
3811	Engineering, scientific instruments	(S)	.4	.2	.1	-	.3	-	-	-	-	(S)	19.1
382	Measuring, controlling devices	(S)	.6	.1	.1	.1	3.5	1.0	-	-	2.3	4.3	69.9
3823	Process control instruments	(S)	(D)	-	-	-	(S)	-	-	-	-	1.2	14.1
3825	Instruments to measure electricity	(S)	(D)	-	-	-	2.0	(D)	-	-	.2	1.8	22.7
384	Medical instruments, supplies	1.6	1.5	.6	1.5	.1	1.5	.5	.4	-	.3	3.6	97.5
3841	Surgical and medical instruments	(S)	.1	.6	(D)	(D)	(S)	(D)	(D)	(D)	-	1.4	20.1
3842	Surgical appliances and supplies	(S)	1.4	-	(D)	(D)	1.1	(D)	(D)	(D)	.3	1.9	68.8
3861	Photographic equipment and supplies	7.4	(D)	(D)	18.1	(D)	18.5	23.3	(D)	(D)	(D)	17.8	210.9
39	Miscellaneous manufacturing industries	6.5	33.9	.2	6.8	.9	4.3	4.6	4.0	.3	2.5	12.6	597.3
391	Jewelry, silver, and plated ware	(S)	.9	-	-	-	1.1	-	-	-	.1	(S)	8.4
394	Toys and sporting goods	(S)	11.6	-	.2	.1	.5	.7	3.7	-	.1	3.8	317.7
3944	Games, toys, children's vehicles	(S)	-	-	(D)	-	(S)	.4	-	-	(D)	1.9	40.3
3949	Sporting and athletic goods, n.e.c.	(S)	11.5	-	(D)	.1	(S)	.3	-	-	(D)	1.8	49.4
399	Miscellaneous manufactures	4.1	4.7	.2	4.8	.8	1.5	2.8	.2	.3	.6	4.8	147.0
3996	Hard surface floor coverings	2.9	(D)	(D)	(D)	(D)	(S)	(D)	(D)	-	-	1.4	68.4
3999	Manufacturing industries, n.e.c.	(S)	(D)	(D)	(D)	(D)	(S)	(D)	(D)	.3	.6	1.5	35.7

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater. (X) Not applicable.

[1]The operating cost for solid waste includes payment to governmental units (solid waste collection/disposal) and operating cost as reported in table 5.
[2]Major industry group 23, Apparel and Other Textile Products is excluded.

Table 6B. Quantities of Pollutants Removed and Related Statistics, by State and Major Industry Group for Establishments With 20 or More Employees: 1979

(Value in millions of dollars; quantities in thousands of short tons)

SIC code	State and major industry group	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	United States[2]	3,061.8	40,422.2	9,037.5	13,577.2	1,408.4	2,529.9	17,077.9	4,756.1	5,560.0	8,440.4	1,322.5	163,678.1
	New England Division:												
	Maine	7.1	405.1	(D)	(D)	(D)	25.4	192.8	95.9	(D)	586.0	7.8	1,689.8
26	Paper and allied products	5.9	247.0	(D)	(D)	(D)	22.8	171.4	87.5	(D)	49.6	5.1	490.8
	New Hampshire	2.8	14.3	(D)	(D)	10.4	(S)	(S)	(S)	(S)	(S)	(S)	(S)
26	Paper and allied products	1.1	(D)	(D)	(D)	(D)	(S)	(S)	(D)	(D)	(S)	(S)	(D)
	Vermont	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Massachusetts	23.5	230.0	17.6	16.3	2.2	25.1	148.8	28.4	52.5	11.9	22.8	1,394.9
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	46.3
28	Chemicals and allied products	2.3	5.0	.8	(D)	.5	(S)	(S)	(S)	(S)	(S)	2.0	78.0
30	Rubber, misc. plastics products	1.3	.8	-	1.2	.1	(S)	(S)	(S)	(S)	(D)	1.6	89.8
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	1.1	.2	-	-	.1	(S)	(S)
35	Machinery, except electrical	1.1	1.8	-	(D)	.1	1.3	(D)	(D)	(D)	5.2	1.9	43.4
36	Electric, electronic equipment	1.7	.2	(D)	1.7	.1	2.5	.2	.1	-	2.0	1.6	47.1
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	(S)	(D)	(S)	(S)	(S)	(S)	(S)
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	2.0	(D)	(D)	(D)	(D)	4.1	26.0
	Rhode Island	1.7	.4	.1	(D)	-	3.1	3.1	(D)	4.5	.8	2.7	133.3
28	Chemicals and allied products	(S)	(S)	(S)	(D)	(S)	(D)	(D)	(D)	(D)	(D)	(S)	(D)
	Connecticut	20.6	29.3	10.6	6.8	8.4	26.9	46.2	88.0	112.6	6.8	12.7	578.6
26	Paper and allied products	(S)	(S)	(S)	(S)	(D)	4.1	11.5	(D)	(D)	-	(S)	(S)
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	7.7	12.5	(D)	(D)	(D)	2.2	101.0
32	Stone, clay, glass products	1.2	.9	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
33	Primary metal industries	(S)	(S)	(S)	(S)	(D)	2.0	12.3	-	-	1.2	(S)	(S)
34	Fabricated metal products	2.1	3.4	.1	.9	-	3.8	3.7	.5	.1	.8	1.6	45.4
35	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	1.5	1.2	-	-	.9	1.1	58.0
36	Electric, electronic equipment	(S)	(D)	(D)	(S)	(S)	.9	.6	-	-	.3	(S)	(S)
37	Transportation equipment	1.5	1.5	1.1	(D)	-	4.8	.9	.7	.2	.2	(S)	(S)
	Middle Atlantic Division:												
	New York	89.7	1,694.7	77.9	154.5	109.3	116.0	1,279.7	102.6	111.2	228.4	84.1	5,841.9
20	Food and kindred products	1.7	32.1	(D)	-	(D)	4.9	(D)	11.0	11.6	.8	5.5	436.9
26	Paper and allied products	3.0	(D)	(D)	5.6	(D)	16.0	83.7	42.2	(D)	-	7.5	263.5
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	35.8	(D)	15.7	28.4	73.1	14.4	880.3
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
30	Rubber, misc. plastics products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	51.8
32	Stone, clay, glass products	4.9	856.6	-	(D)	.2	1.2	4.4	(D)	(D)	1.2	2.9	622.9
33	Primary metal industries	25.5	333.4	7.8	2.6	9.9	15.5	(D)	.2	(D)	(D)	5.7	1,524.7
34	Fabricated metal products	1.9	7.2	-	(D)	.5	2.2	8.9	-	-	1.9	4.5	74.9
35	Machinery, except electrical	3.4	30.1	.1	(D)	.1	6.1	2.9	-	-	3.2	12.5	209.4
36	Electric, electronic equipment	5.5	22.6	(D)	11.0	(D)	11.0	(D)	.4	(D)	1.0	6.6	717.1
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	6.8	(D)	.1	(D)	13.3	4.0	363.9
38	Instruments, related products	4.2	(D)	(D)	(D)	.1	13.9	21.7	(D)	(D)	1.0	11.5	126.0
	New Jersey	135.2	279.5	315.2	310.0	55.3	122.1	178.5	141.7	293.9	77.6	49.8	4,823.5
20	Food and kindred products	5.4	9.5	(D)	.3	.7	8.3	13.2	6.2	8.2	1.2	3.7	195.4
26	Paper and allied products	(S)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.1	(D)
28	Chemicals and allied products	42.2	63.6	46.6	42.1	33.6	75.3	61.8	68.8	115.1	13.2	19.3	684.1
29	Petroleum and coal products	51.2	18.5	262.1	185.4	-	20.8	(D)	(D)	(D)	(D)	3.0	61.7
32	Stone, clay, glass products	7.5	127.9	3.7	(D)	-	1.9	4.6	(D)	(D)	.4	4.0	666.4
33	Primary metal industries	14.9	45.4	.9	(D)	16.5	5.1	3.8	-	.8	.9	1.4	161.6
34	Fabricated metal products	2.8	2.8	-	7.7	2.4	(S)	(D)	(S)	(S)	(S)	2.1	44.2
35	Machinery, except electrical	1.8	(D)	(D)	-	-	.7	(D)	-	(D)	2.2	2.1	42.3
36	Electric, electronic equipment	1.9	.6	.1	.2	.4	1.7	(D)	-	-	.3	1.7	39.7
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	1.9	(D)	(D)	(D)	-	2.2	109.9
38	Instruments, related products	(S)	(D)	(S)	(D)	(S)	(S)	(D)	(D)	(D)	(S)	1.7	27.7
	Pennsylvania	255.2	2,610.5	512.9	460.0	38.1	146.5	678.6	157.7	92.0	284.9	87.7	11,324.6
20	Food and kindred products	3.6	38.5	22.9	(D)	(D)	5.9	19.7	17.2	14.7	16.4	5.1	326.5
22	Textile mill products	(S)	(S)	(S)	(S)	(S)	.8	.3	.8	(D)	-	1.3	22.4
26	Paper and allied products	7.0	99.5	(D)	9.0	(D)	9.6	90.1	98.6	(D)	.6	8.6	521.9
27	Printing and publishing	(S)	(D)	(S)	(S)	(D)	(S)	(S)	(S)	(D)	(S)	1.5	58.9
28	Chemicals and allied products	18.6	76.3	80.9	36.6	13.4	22.5	38.1	34.9	40.4	30.9	7.7	313.9
29	Petroleum and coal products	40.5	34.9	121.3	(D)	1.6	24.7	7.7	3.9	13.3	4.8	2.0	172.3
30	Rubber, misc. plastics products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	3.3	114.4
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	5.4	571.8
33	Primary metal industries	137.6	1,615.0	260.1	42.9	3.2	64.3	412.4	(D)	.1	206.8	31.9	7,995.9
34	Fabricated metal products	7.2	24.8	.3	7.8	.7	4.4	1.2	.1	(D)	6.4	4.9	178.8
35	Machinery, except electrical	6.0	52.2	(D)	(D)	1.1	2.2	1.0	-	-	(D)	3.6	222.7
36	Electric, electronic equipment	4.8	31.4	(D)	1.9	2.0	4.8	2.0	.1	.1	1.7	3.6	233.1
37	Transportation equipment	2.5	3.3	(D)	-	(D)	1.7	(D)	-	.1	2.1	2.9	121.2
38	Instruments, related products	(S)	(S)	(S)	(S)	(D)	.8	.2	-	-	(D)	1.4	22.6
39	Misc. manufacturing industries	2.3	(D)	-	(D)	(D)	(S)	(D)	(S)	(S)	(S)	1.9	81.1

See footnotes at end of table.

Table 6B. Quantities of Pollutants Removed and Related Statistics, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Value in millions of dollars; quantities in thousands of short tons)

SIC code	State and major industry group	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	East North Central Division:												
	Ohio	198.0	2,680.5	89.8	789.9	33.1	152.5	1,137.1	110.8	182.8	286.0	95.4	7,856.0
20	Food and kindred products	3.3	11.2	(D)	.3	-	3.8	59.2	25.3	28.1	.9	5.1	300.1
26	Paper and allied products	3.1	101.7	3.1	9.5	-	8.4	57.4	62.3	104.0	-	3.9	530.1
27	Printing and publishing	(S)	(D)	(S)	(D)	(S)	(S)	(S)	(D)	(S)	(D)	1.6	38.6
28	Chemicals and allied products	14.5	78.1	4.3	9.3	19.9	24.2	51.4	8.0	32.0	15.2	11.6	435.7
29	Petroleum and coal products	13.6	89.5	61.0	462.9	-	6.7	7.5	7.8	6.1	18.0	2.0	119.6
30	Rubber, misc. plastics products	11.1	61.5	1.7	18.8	.5	2.5	8.4	.1	(D)	1.1	7.3	284.7
32	Stone, clay, glass products	13.4	700.0	(D)	(D)	(D)	4.6	17.1	5.3	9.6	.5	8.0	761.7
33	Primary metal industries	107.5	1,523.5	7.3	(D)	4.0	73.7	903.4	.1	.2	166.1	18.5	4,211.7
34	Fabricated metal products	9.3	27.0	2.2	3.2	4.9	9.1	9.0	.1	-	38.1	10.7	241.8
35	Machinery, except electrical	4.7	23.1	5.2	(D)	.8	3.1	4.2	(D)	(D)	12.5	7.0	274.4
36	Electric, electronic equipment	3.0	26.4	(D)	8.7	.1	3.2	3.3	(D)	(D)	8.3	2.8	263.0
37	Transportation equipment	13.3	33.5	2.8	3.3	(D)	12.6	14.4	(D)	(D)	25.0	14.2	325.9
	Indiana	177.3	2,803.6	176.7	334.2	12.4	124.4	1,816.1	72.6	89.9	195.1	52.3	8,168.6
20	Food and kindred products	(S)	(S)	(D)	(S)	(D)	3.4	4.1	6.3	4.7	.6	3.5	111.1
27	Printing and publishing	(D)	(D)	(D)	(D)	(D)	(S)	(D)	(D)	(D)	(D)	(S)	(S)
28	Chemicals and allied products	5.2	28.2	(D)	(D)	-	30.3	12.0	21.6	33.6	.3	7.0	324.6
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
30	Rubber, misc. plastics products	(S)	(S)	(S)	(S)	(D)	(S)	(S)	(D)	(D)	(D)	1.9	145.0
32	Stone, clay, glass products	5.8	1,629.0	35.5	-	-	.8	149.7	-	-	.2	(S)	(S)
33	Primary metal industries	118.0	941.6	7.5	(D)	10.5	60.0	1,607.1	(D)	(D)	95.9	17.8	5,612.8
34	Fabricated metal products	1.9	3.4	.5	.8	-	(S)	(S)	(S)	(D)	(S)	2.2	133.2
35	Machinery, except electrical	1.5	12.0	-	(D)	-	1.7	1.9	-	-	46.2	2.3	116.7
36	Electric, electronic equipment	5.2	30.6	.9	2.8	.7	5.8	3.8	-	(D)	(D)	4.5	139.3
37	Transportation equipment	3.6	25.2	3.8	(D)	-	5.0	3.2	.7	1.9	29.4	5.9	343.9
	Illinois	165.7	1,836.0	599.6	978.4	56.1	120.1	606.2	104.0	108.9	135.2	88.7	6,330.9
20	Food and kindred products	10.7	193.9	21.4	(D)	.3	13.9	38.2	58.9	37.8	10.1	12.6	677.2
26	Paper and allied products	(S)	(D)	(S)	(D)	(S)	2.6	44.6	(D)	-	.2	4.2	203.6
27	Printing and publishing	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
28	Chemicals and allied products	24.5	244.2	34.3	56.1	12.3	23.3	51.7	28.1	37.5	57.3	14.8	1,785.8
29	Petroleum and coal products	38.3	80.5	430.9	797.0	-	20.9	6.4	4.7	21.9	10.9	3.5	289.9
30	Rubber, misc. plastics products	1.8	4.8	-	.6	.9	1.2	-	-	-	.1	3.2	86.5
32	Stone, clay, glass products	(S)	(S)	(S)	(D)	(S)	1.0	38.6	2.9	4.6	.6	(S)	(S)
33	Primary metal industries	58.4	725.9	(D)	6.8	(D)	31.5	381.1	.9	1.8	28.2	11.9	1,520.4
34	Fabricated metal products	4.5	10.2	1.0	5.6	3.3	(S)	(S)	(S)	(S)	(S)	6.0	189.1
35	Machinery, except electrical	9.1	34.1	26.1	(D)	.2	8.8	27.4	(D)	(D)	10.4	12.2	570.6
36	Electric, electronic equipment	2.1	1.0	(D)	.3	.3	3.0	1.1	.2	-	3.5	4.2	112.1
37	Transportation equipment	2.6	17.4	(D)	(D)	-	2.4	.3	(D)	-	5.6	3.6	131.2
38	Instruments, related products	(S)	(S)	(S)	(S)	(S)	1.1	.4	(D)	-	-	1.6	43.0
	Michigan	141.4	2,651.6	226.6	597.5	161.8	123.6	780.7	94.2	95.8	196.2	88.9	8,370.9
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	3.1	40.7	11.1	14.4	.9	3.5	343.3
24	Lumber and wood products	(S)	(D)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
25	Furniture and fixtures	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.3	25.6
26	Paper and allied products	(S)	(S)	(S)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	6.4	727.1
28	Chemicals and allied products	9.2	143.7	7.5	6.2	3.4	26.9	55.0	9.4	21.6	(D)	13.3	595.2
29	Petroleum and coal products	5.9	-	(D)	(D)	-	(D)	(D)	(D)	(D)	(D)	(S)	(S)
32	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	1.3	166.0	.2	-	.2	2.5	861.3
33	Primary metal industries	76.4	596.8	(D)	(D)	144.1	19.9	330.3	(D)	-	49.2	15.3	4,078.2
34	Fabricated metal products	2.2	8.4	.5	3.4	1.4	(S)	(S)	(S)	(S)	(S)	4.7	153.2
35	Machinery, except electrical	4.2	10.1	-	.2	(D)	4.0	5.7	(D)	-	8.7	5.9	129.4
36	Electric, electronic equipment	(S)	(S)	(S)	(D)	(D)	.7	(D)	-	(D)	(D)	(S)	(S)
37	Transportation equipment	25.6	329.5	21.7	10.1	(D)	34.9	27.4	(D)	(D)	94.9	29.8	1,249.2
	Wisconsin	30.3	399.6	22.9	28.2	3.4	54.5	486.3	172.0	108.5	84.0	(S)	(S)
20	Food and kindred products	2.1	22.6	(D)	(D)	-	4.6	44.5	12.7	2.5	(D)	3.1	492.2
26	Paper and allied products	(S)	(S)	(S)	(D)	(S)	40.7	241.6	126.5	103.1	1.2	(S)	(S)
28	Chemicals and allied products	(S)	(D)	(S)	(S)	(S)	.7	(D)	(D)	(D)	.2	1.4	30.5
33	Primary metal industries	(S)	(S)	(S)	(S)	(D)	1.2	8.8	.2	-	(D)	2.9	559.6
34	Fabricated metal products	1.5	14.2	-	2.1	(D)	1.3	1.4	.1	2.0	2.3	(S)	(S)
35	Machinery, except electrical	3.3	32.2	.2	.2	.1	1.8	40.1	(D)	(D)	2.6	3.5	310.0
36	Electric, electronic equipment	(S)	(S)	(S)	(D)	(S)	(S)	(S)	(D)	(D)	(S)	1.6	31.3
37	Transportation equipment	1.1	(D)	(D)	(D)	-	1.1	148.9	-	-	(D)	1.5	64.5
	West North Central Division:												
	Minnesota	22.5	512.4	158.8	439.2	.6	23.6	264.0	77.2	81.6	153.2	16.4	888.7
20	Food and kindred products	3.6	31.8	-	-	-	4.9	188.5	33.7	34.5	7.7	3.5	163.4
26	Paper and allied products	1.8	(D)	.1	(D)	-	7.1	61.2	32.5	40.3	(D)	1.8	126.8
27	Printing and publishing	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.0	28.5
28	Chemicals and allied products	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	(S)	2.1	35.2
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
31	Leather and leather products	(S)	(D)	(D)	(D)	(D)	.7	(D)	(D)	(D)	(D)	(S)	(D)
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	.7	.1	-	(D)	.2	(S)	(S)
35	Machinery, except electrical	(S)	(S)	(D)	(D)	(S)	.6	-	-	(D)	.4	2.1	43.2
	Iowa	24.2	492.1	4.1	148.7	4.2	28.5	74.6	65.9	70.4	23.4	15.1	1,983.0
20	Food and kindred products	11.5	134.5	.6	126.6	.9	9.4	57.4	(D)	(D)	11.2	4.3	582.3
28	Chemicals and allied products	1.7	27.1	(D)	(D)	(D)	11.5	11.7	12.2	36.7	5.1	1.6	(D)
30	Rubber, misc. plastics products	(S)	(S)	(D)	(D)	(S)	2.3	(D)	(D)	(D)	(D)	1.3	54.4
33	Primary metal industries	(S)	(S)	(S)	(D)	(S)	1.0	-	-	-	(D)	(S)	(D)
35	Machinery, except electrical	4.7	37.7	.4	(D)	-	3.1	(D)	-	-	(D)	4.6	373.1

See footnotes at end of table.

Table 6B. Quantities of Pollutants Removed and Related Statistics, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Value in millions of dollars; quantities in thousands of short tons)

SIC code	State and major industry group	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	West North Central Division--Continued												
	Missouri	45.4	1,447.7	122.2	95.6	45.8	21.0	241.9	5.2	10.5	23.7	21.7	3,829.6
20	Food and kindred products	2.1	47.2	-	-	-	2.0	5.1	2.2	1.3	1.3	3.0	122.4
28	Chemicals and allied products	8.2	21.3	14.1	6.4	(D)	(D)	(D)	(D)	(D)	(D)	3.0	150.7
29	Petroleum and coal products	5.8	1.0	(D)	(D)	-	(D)	(D)	(D)	(D)	(D)	(S)	(S)
32	Stone, clay, glass products	5.7	1,300.8	(D)	-	21.9	(S)	(S)	(D)	(D)	(S)	2.1	1,770.9
33	Primary metal industries	11.3	67.6	(D)	(D)	(D)	4.1	(D)	-	-	(D)	1.4	291.2
36	Electric, electronic equipment	(S)	(S)	(S)	(D)	(S)	1.1	.9	-	-	(D)	1.0	19.0
37	Transportation equipment	9.5	7.1	(D)	.1	(D)	1.0	(D)	-	(D)	.2	4.3	195.8
	North Dakota	(S)	(S)	(S)	(S)	(S)	.9	85.9	3.2	5.8	-	(S)	(S)
	South Dakota	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Nebraska	4.7	46.2	.6	8.0	1.4	3.8	107.5	37.0	68.2	13.0	5.0	815.3
20	Food and kindred products	(S)	(S)	(S)	(S)	(D)	1.9	105.9	36.3	67.0	10.9	2.2	637.3
33	Primary metal industries	1.2	4.4	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Kansas	50.8	561.3	213.9	541.4	3.2	24.2	36.1	23.3	28.3	87.2	(S)	(S)
20	Food and kindred products	1.1	21.9	-	(D)	-	1.3	22.9	16.1	21.8	(D)	(S)	(S)
28	Chemcials and allied products	2.2	13.5	(D)	(D)	1.8	4.2	1.9	(D)	(D)	.1	(S)	(S)
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
30	Rubber, misc. plastics products	(S)	(D)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(D)
32	Stone, clay, glass products	9.9	484.2	.9	.1	.2	(D)	(D)	(D)	(D)	(D)	(S)	(S)
36	Electric, electronic equipment	1.0	.1	-	-	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
37	Transportation equipment	(S)	(D)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
	South Atlantic Division:												
	Delaware	15.3	46.7	44.0	60.5	21.8	23.9	74.0	4.2	7.3	8.3	8.3	322.3
20	Food and kindred products	(S)	(D)	(S)	(S)	(S)	1.0	.3	1.4	(D)	(D)	(S)	(S)
28	Chemicals and allied products	10.6	(D)	5.6	(D)	(D)	20.5	(D)	1.4	3.1	(D)	1.9	212.3
29	Petroleum and coal products	2.8	(D)	(D)	(D)	(D)	1.4	(D)	(D)	(D)	(D)	(S)	(D)
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	.4	(D)	-	-	-	(S)	(S)
	Maryland	56.1	752.2	16.9	24.4	5.2	41.9	157.9	24.0	12.6	90.6	16.7	2,024.1
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	61.1
26	Paper and allied products	(D)	(D)	(D)	(D)	(D)	(S)	(D)	(S)	(S)	(S)	(S)	(S)
28	Chemicals and allied products	7.7	15.8	1.3	2.8	1.1	(S)	(S)	(S)	(S)	(D)	4.1	178.4
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(S)	(D)	(D)	(D)	(D)	(S)	(S)
36	Electric, electronic equipment	(S)	(S)	(S)	(D)	(D)	(S)	(D)	(D)	(S)	(S)	1.2	16.1
37	Transportation equipment	(S)	(D)	(D)	(D)	(S)	(S)	(D)	(D)	(D)	(S)	1.7	107.4
	District of Columbia	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Virginia	34.3	618.4	56.2	44.5	23.3	41.8	179.8	257.7	252.3	19.3	22.0	1,728.6
22	Textile mill products	(S)	(D)	(S)	(D)	(S)	2.9	3.8	8.2	24.0	.2	1.2	70.0
25	Furniture and fixtures	1.6	73.5	-	.1	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
26	Paper and allied products	7.3	334.8	(D)	-	(D)	10.6	91.1	47.7	(D)	(D)	2.4	480.9
28	Chemicals and allied products	7.2	114.0	5.2	3.1	(D)	14.5	16.9	(D)	39.8	2.0	6.7	382.7
33	Primary metal industries	2.7	36.6	-	37.7	-	(S)	(S)	(S)	(S)	(S)	1.1	201.0
36	Electric, electronic equipment	.6	.2	-	(D)	-	1.5	(D)	-	-	-	(S)	(S)
37	Transportation equipment	(D)	(D)	(D)	(D)	(D)	1.5	.4	(D)	(D)	(D)	2.6	93.5
	West Virginia	58.4	521.7	38.1	17.7	44.0	91.9	459.4	96.7	226.3	22.8	26.5	3,117.2
28	Chemicals and allied products	16.1	186.3	(D)	(D)	(D)	56.3	34.6	37.3	(D)	13.5	9.6	432.4
29	Petroleum and coal products	(S)	(D)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(S)	(D)
33	Primary metal industries	37.0	237.3	(D)	(D)	(D)	31.6	(D)	(D)	(D)	8.4	(D)	(D)
36	Electric, electronic equipment	1.7	2.1	-	-	-	(S)	(D)	(S)	(S)	(D)	(S)	(D)
	North Carolina	35.7	873.6	18.2	22.4	20.8	46.3	273.0	135.8	175.2	22.3	27.2	2,583.2
20	Food and kindred products	(S)	(S)	(S)	(D)	(S)	2.1	27.8	5.7	.8	2.5	1.1	36.3
21	Tobacco products	4.4	22.9	(D)	(D)	.8	(S)	(D)	(D)	(D)	(S)	1.1	76.7
22	Textile mill products	8.7	37.3	.7	.6	.7	10.7	17.2	32.1	48.6	5.0	4.9	414.6
25	Furniture and fixtures	4.3	147.3	-	1.2	.7	(S)	(S)	(S)	(S)	(S)	1.5	138.2
26	Paper and allied products	5.6	223.0	(D)	(D)	(D)	10.5	125.1	73.4	73.7	-	3.4	908.0
28	Chemicals and allied products	2.6	111.4	(D)	(D)	5.0	9.1	(D)	18.2	31.0	3.9	5.6	630.3
33	Primary metal industries	1.8	(D)	-	3.2	(D)	(S)	(S)	(D)	(S)	(D)	(S)	(S)
35	Machinery, except electrical	1.1	.6	-	(D)	(D)	2.1	.4	-	(D)	3.7	1.3	29.0
36	Electric, electronic equipment	(S)	(S)	(S)	(D)	(S)	1.6	9.5	.1	(D)	3.1	1.1	27.6
	South Carolina	34.9	935.0	7.0	41.4	24.4	49.2	93.9	69.8	154.3	7.2	18.5	1,445.0
20	Food and kindred products	(S)	(D)	(S)	(S)	(S)	.7	(D)	-	-	1.4	(S)	(S)
22	Textile mill products	(S)	(S)	(S)	(D)	(S)	7.7	3.7	12.7	21.1	(D)	2.4	170.4
26	Paper and allied products	11.2	261.1	(D)	10.5	(D)	(S)	(S)	(S)	(D)	(S)	2.6	410.2
28	Chemicals and allied products	8.0	102.1	1.7	9.0	23.1	12.4	7.9	10.3	33.7	1.2	7.2	353.9
30	Rubber, misc. plastics products	(S)	(S)	(S)	(S)	(S)	1.0	(D)	(D)	(D)	.4	(S)	(S)
32	Stone, clay, glass products	(S)	(S)	(S)	(D)	(D)	1.5	3.3	(D)	(D)	(D)	1.2	81.2
33	Primary metal industries	1.6	25.5	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
34	Fabricated metal products	(S)	(S)	(D)	(D)	(D)	1.1	1.1	-	-	.2	(S)	(S)
	Georgia	38.8	835.9	32.6	10.2	18.8	39.1	170.4	112.9	50.0	149.4	17.6	1,642.7
20	Food and kindred products	(S)	(S)	(D)	(D)	(S)	3.9	11.2	9.0	3.9	5.8	2.3	262.6
22	Textile mill products	(S)	(S)	(D)	(S)	(S)	2.3	5.2	7.2	26.4	(D)	2.6	103.5
26	Paper and allied products	19.1	656.3	(D)	(D)	(D)	11.6	99.6	86.6	-	-	4.2	721.5
28	Chemicals and allied products	7.2	16.9	(D)	6.3	3.8	15.2	(D)	7.8	13.7	(D)	1.4	69.9
33	Primary metal industries	(S)	(S)	(S)	(S)	(S)	1.1	9.8	-	.2	8.9	(S)	(S)
37	Transportation equipment	1.3	(D)	-	-	(D)	1.8	2.1	(D)	(D)	-	1.5	42.5

See footnotes at end of table.

Table 6B. Quantities of Pollutants Removed and Related Statistics, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Value in millions of dollars; quantities in thousands of short tons)

SIC code	State and major industry group	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	South Atlantic Division--Continued												
	Florida	46.5	1,628.3	211.5	6.0	79.9	56.8	703.2	213.0	126.0	122.8	21.3	14,996.0
0	Food and kindred products	4.9	44.2	.7	.1	-	6.6	75.9	58.5	88.1	1.1	3.4	379.0
3	Paper and allied products	13.3	357.1	(D)	-	(D)	27.8	149.3	128.7	(D)	17.6	2.1	147.1
3	Chemicals and allied products	21.1	418.6	187.8	4.5	77.9	17.0	444.5	7.4	16.7	92.0	8.4	13,445.2
3	Electric, electronic equipment	(S)	(S)	(S)	(S)	(S)	1.7	.7	.1	(D)	.8	(S)	(S)
7	Transportation equipment	(S)	(S)	(D)	(D)	(S)	(S)	(D)	(D)	(D)	(D)	1.9	72.7
	East South Central Division:												
	Kentucky	36.8	550.4	42.3	270.2	23.2	37.2	252.8	30.6	30.3	27.3	27.9	1,564.6
0	Food and kindred products	1.9	10.7	.5	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(D)	(S)
1	Tobacco products	1.6	3.8	(D)	(D)	-	-	(D)	(D)	(D)	-	1.0	19.0
3	Chemicals and allied products	10.7	173.8	(D)	80.1	18.9	17.1	130.8	4.2	20.7	15.2	2.9	297.1
0	Rubber, misc. plastics products	(S)	(D)	(S)	(S)	(D)	(S)	(D)	(S)	(S)	(D)	1.9	17.0
1	Primary metal industries	9.1	(D)	-	(D)	(D)	7.6	(D)	(D)	(D)	(D)	(S)	(D)
5	Machinery, except electrical	1.8	4.9	4.7	2.4	.1	1.9	2.6	(D)	(D)	(D)	1.7	43.2
7	Electric, electronic equipment	3.1	9.0	3.2	.4	.1	.8	3.6	-	(D)	.1	2.0	105.3
7	Transportation equipment	(S)	(D)	(S)	(S)	(D)	1.1	(D)	(D)	(D)	1.4	1.7	52.4
	Tennessee	47.3	1,171.2	869.6	216.9	100.1	73.0	847.0	125.8	95.4	141.1	30.2	4,583.8
0	Food and kindred products	1.9	32.1	(D)	(D)	4.4	1.6	9.2	4.2	5.2	(D)	1.6	125.3
1	Textile mill products	(S)	(S)	(S)	(D)	(S)	.4	1.0	(D)	(D)	.3	1.1	17.3
3	Paper and allied products	1.8	203.5	(D)	(D)	(D)	3.4	196.3	36.8	(D)	(D)	2.4	214.6
1	Chemicals and allied products	25.0	512.3	(D)	(D)	(D)	57.0	(D)	81.0	64.6	(D)	13.9	2,121.3
0	Rubber, misc. plastics products	(S)	(S)	(D)	(S)	(D)	.6	(D)	(D)	(D)	-	1.9	61.0
3	Primary metal industries	7.5	46.6	482.0	37.6	25.0	1.8	(D)	.1	.1	(D)	(S)	(S)
5	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(S)	(D)	(S)	1.2	36.6
3	Electric, electronic equipment	1.4	(D)	(D)	(D)	.1	.9	.7	(D)	(D)	.5	1.1	67.6
	Alabama	86.6	1,044.0	66.7	355.6	68.2	61.2	283.8	136.4	137.6	117.5	25.6	2,801.6
0	Food and kindred products	(S)	(S)	(D)	(S)	(S)	.9	2.2	2.2	1.4	1.5	(S)	(S)
5	Paper and allied products	10.4	346.5	29.4	-	52.0	(D)	(D)	(D)	(D)	(D)	3.4	568.6
3	Chemicals and allied products	9.9	117.0	(D)	7.9	7.6	26.0	25.6	24.4	47.0	(D)	8.7	463.9
1	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(D)	(D)	(D)	(S)	(S)
3	Primary metal industries	56.6	285.7	(D)	344.5	8.5	15.9	48.4	(D)	(D)	74.5	4.3	1,187.4
4	Fabricated metal products	1.3	9.7	-	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Mississippi	29.2	536.8	137.9	21.5	37.7	27.3	147.7	118.5	362.7	70.5	12.3	2,026.1
0	Food and kindred products	(S)	(S)	(S)	(S)	(S)	.7	6.1	2.1	(D)	.2	(S)	(S)
1	Lumber and wood products	(S)	(S)	(S)	(S)	(S)	6.6	(D)	(D)	(D)	.3	(S)	(S)
2	Paper and allied products	3.1	250.8	(D)	-	(D)	3.3	71.2	41.5	(D)	-	(D)	(D)
3	Chemicals and allied products	5.7	55.2	(D)	(D)	(D)	10.5	(D)	(D)	(D)	3.6	1.5	(D)
2	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	3.0	.7	(D)	5.7	9.3	(S)	(S)
	West South Central Division:												
	Arkansas	23.1	179.5	79.8	8.6	13.4	28.8	130.9	92.8	291.6	3,027.3	14.4	2,636.4
0	Food and kindred products	1.1	4.5	-	(D)	.1	2.1	11.2	5.0	6.2	3.2	(S)	(S)
2	Paper and allied products	4.8	329.3	(D)	-	(D)	5.8	110.7	70.1	261.5	-	2.3	343.8
3	Chemicals and allied products	9.8	(D)	(D)	5.6	(D)	(S)	(S)	(S)	(S)	(D)	(S)	(D)
2	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
4	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	1.3	.4	(D)	(D)	.3	(S)	(S)
	Louisiana	170.8	1,100.9	402.6	1,236.8	65.4	182.9	2,597.6	419.4	242.0	554.4	47.1	9,206.3
0	Food and kindred products	(S)	(S)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	257.6
2	Paper and allied products	(S)	(S)	(D)	(D)	(D)	7.9	188.9	101.6	(D)	(D)	3.1	252.9
3	Chemicals and allied products	47.5	531.1	59.3	267.0	53.4	112.7	(D)	71.7	159.7	116.2	33.7	8,232.3
2	Petroleum and coal products	102.0	18.7	248.6	952.9	(D)	(D)	(D)	(D)	(D)	(D)	3.2	212.4
3	Primary metal industries	10.3	17.4	-	(D)	(D)	1.4	(D)	(D)	-	(D)	(S)	(S)
	Oklahoma	17.2	422.7	91.6	201.4	23.6	12.1	11.8	11.6	23.5	65.3	(S)	(S)
3	Chemicals and allied products	(S)	(D)	(S)	(S)	(D)	2.1	(D)	-	-	51.9	(S)	(S)
2	Petroleum and coal products	6.7	3.9	(D)	194.3	(D)	6.2	.3	(D)	1.9	.2	(S)	(S)
3	Primary metal industries	3.7	1.7	(D)	-	17.1	(S)	(D)	(S)	(S)	(D)	(S)	(S)
	Texas	397.8	2,167.0	1,287.7	4,466.2	117.4	300.9	505.4	403.3	704.1	468.1	116.7	13,345.1
0	Food and kindred products	2.7	32.1	-	2.2	.9	6.8	63.9	39.4	39.7	13.3	8.0	1,299.6
1	Lumber and wood products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.9	176.3
2	Paper and allied products	15.0	243.7	(D)	(D)	(D)	17.2	140.7	74.5	100.3	(D)	7.5	347.3
3	Chemicals and allied products	92.5	335.4	60.5	1,377.2	68.7	132.3	159.0	175.0	369.1	70.3	49.2	6,497.6
2	Petroleum and coal products	214.3	139.2	1,087.9	3,028.7	(D)	121.4	39.8	109.3	189.4	240.3	20.8	706.2
3	Stone, clay, glass products	(S)	(S)	(S)	(S)	(S)	1.3	32.4	1.4	2.5	(D)	2.6	997.8
3	Primary metal industries	53.1	381.9	105.2	36.5	38.7	14.1	64.5	-	1.0	17.1	9.2	2,852.0
4	Fabricated metal products	1.7	4.8	-	5.0	-	(S)	(S)	(D)	(D)	(S)	2.9	100.5
5	Machinery, except electrical	(S)	(S)	(S)	(S)	(D)	1.3	3.5	(D)	(D)	(D)	4.6	100.9
7	Electric, electronic equipment	(S)	(S)	(D)	(D)	(S)	1.9	.1	-	-	2.1	2.7	24.8
7	Transportation equipment	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	3.1	74.3
	Mountain Division:												
	Montana	15.9	285.6	77.5	169.1	4.6	3.4	79.2	25.7	18.7	1.7	1.5	486.8
2	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
	Idaho	17.3	422.6	162.0	2.6	8.3	10.2	107.2	83.5	129.4	2.3	5.2	4,201.3
2	Paper and allied products	(S)	(D)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
3	Chemicals and allied products	11.3	(D)	11.8	(D)	(D)	3.0	(D)	-	-	-	1.4	(D)

See footnotes at end of table.

Table 6B. Quantities of Pollutants Removed and Related Statistics, by State and Major Industry Group for Establishments With 20 or More Employees: 1979—Continued

(Value in millions of dollars; quantities in thousands of short tons)

SIC code	State and major industry group	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
		Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
			Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
	Mountain Division--Continued												
	Wyoming	(S)	(S)	(S)	(D)	(S)	1.4	72.0	6.9	(D)	(D)	(S)	(S)
29	Petroleum and coal products	(S)	(S)	(D)	(D)	(S)	1.0	(D)	(D)	(D)	(D)	(S)	(D)
	Colorado	29.3	766.0	1.0	3.7	1.2	12.6	139.2	11.9	11.6	16.6	7.0	1,343.9
20	Food and kindred products	(D)	(D)	(D)	(D)	(D)	3.2	47.0	11.3	10.9	5.3	1.2	112.1
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	3.1	(D)	-	-	(D)	(S)	(D)
34	Fabricated metal products	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(S)	(S)
38	Instruments, related products	(S)	(D)	(S)	(D)	(D)	1.7	(D)	(D)	(D)	(D)	(S)	(S)
	New Mexico	28.6	132.5	160.6	21.2	.4	1.2	68.4	(D)	2.9	.6	(S)	(S)
33	Primary metal industries	(D)	(D)	(D)	(D)	(D)	(S)	(D)	(D)	(D)	(D)	(S)	(D)
	Arizona	50.9	654.8	959.5	11.7	.5	(S)	(S)	(S)	(S)	(S)	4.8	6,936.0
	Utah	22.5	275.8	352.1	83.1	(D)	4.4	21.5	.5	1.1	20.0	3.0	952.3
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(D)	1.1	(D)	.2	1.0	(D)	(S)	(S)
33	Primary metal industries	18.2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(S)	(D)
	Nevada	2.7	4.4	-	.2	14.7	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	Pacific Division:												
	Washington	79.3	924.9	141.2	206.3	57.0	55.5	263.3	216.6	300.6	148.0	20.1	3,237.0
20	Food and kindred products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	418.6
24	Lumber and wood products	(S)	(S)	(S)	(S)	(S)	2.0	15.7	(D)	(D)	.3	6.7	1,421.0
26	Paper and allied products	11.6	151.4	67.7	(D)	(D)	35.5	146.4	181.8	274.5	(D)	3.7	546.7
29	Petroleum and coal products	11.4	(D)	20.6	(D)	-	7.6	(D)	1.3	2.1	(D)	(S)	(S)
33	Primary metal industries	39.7	108.8	(D)	3.5	42.7	3.4	6.6	.3	(D)	2.5	(S)	(S)
37	Transportation equipment	(S)	(D)	(D)	(S)	(S)	1.6	(D)	-	-	(D)	(S)	(S)
	Oregon	29.0	1,321.6	71.5	6.5	12.5	33.1	196.0	116.2	37.4	50.7	25.9	2,233.0
24	Lumber and wood products	7.6	693.3	.2	2.0	1.1	2.7	13.6	7.9	-	4.9	9.2	889.2
26	Paper and allied products	8.1	253.1	(D)	.2	(D)	19.4	112.8	96.1	(D)	18.9	8.3	328.6
33	Primary metal industries	10.1	49.1	(D)	.1	4.5	6.2	12.7	-	-	(D)	2.6	180.4
38	Instruments, related products	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
	California	254.8	2,635.6	1,066.7	1,021.4	57.8	120.0	964.7	192.3	544.9	615.8	100.2	8,106.0
20	Food and kindred products	7.3	98.0	(D)	.5	2.4	10.8	557.1	154.4	186.2	25.3	15.0	1,823.0
26	Paper and allied products	2.3	54.0	.1	11.6	(D)	4.3	36.1	21.9	12.6	.3	4.4	240.1
27	Printing and publishing	1.1	(D)	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
28	Chemicals and allied products	22.7	37.1	(D)	6.9	12.1	14.6	14.0	5.5	11.2	13.0	14.9	369.1
29	Petroleum and coal products	145.0	108.6	1,041.2	931.5	(D)	52.6	191.5	8.2	327.4	167.2	7.9	428.7
30	Rubber, misc. plastics products	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	(D)	4.1	144.0
32	Stone, clay, glass products	20.9	1,976.6	11.4	6.9	-	3.0	10.1	(D)	(D)	103.7	7.0	1,385.4
33	Primary metal industries	21.8	242.9	2.2	34.5	22.0	13.7	137.0	(D)	(D)	11.3	5.6	1,819.6
34	Fabricated metal products	(S)	(S)	(D)	(S)	(S)	3.0	2.5	.1	1.7	19.3	5.8	73.9
35	Machinery, except electrical	(S)	(S)	(S)	(S)	(S)	1.5	.2	-	(D)	2.1	4.0	246.3
36	Electric, electronic equipment	5.8	12.9	.4	8.4	(D)	5.5	(D)	-	.2	(D)	(S)	(S)
37	Transportation equipment	9.3	6.4	-	3.9	2.4	7.5	2.1	.3	(D)	18.6	11.6	282.1
38	Instruments, related products	(S)	(S)	(D)	(S)	(D)	.7	(D)	(D)	(D)	.4	1.5	51.6
	Alaska	(S)	(S)	(S)	(S)	(S)	6.2	22.2	10.4	12.1	17.4	1.6	107.6
	Hawaii	1.9	50.6	2.3	2.1	.1	3.6	8.3	6.5	-	162.7	4.7	2,431.8

Note: Totals may not agree precisely with detail because of independent rounding.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (NA) Not available. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater.

[1]The operating cost for solid waste includes payment for governmental units (solid waste collection/disposal) and operating costs as reported in table 5.

[2]Major industry group 23, Apparel and Other Textile Products, is excluded.

Table 6C. Quantities of Pollutants Removed and Related Statistics, by SMSA for Establishments With 20 or More Employees: 1979

(Value in millions of dollars; quantities in thousands of short tons)

Standard metropolitan statistical area	Air pollution abatement					Water pollution abatement					Solid waste collection/disposal[1]	
	Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
		Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
Akron, Ohio	8.6	66.0	(D)	(D)	0.2	(S)	(S)	(S)	(S)	(S)	2.9	182.8
Albany-Schenectady-Troy, N.Y.	5.9	(D)	.2	27.0	(D)	(S)	(S)	(S)	(S)	(S)	5.4	465.8
Allentown-Bethlehem-Easton, Pa.-N.J.	31.7	215.7	124.3	(D)	.6	16.1	106.7	64.1	178.4	115.4	7.0	593.7
Anderson, Ind.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.4	66.0
Ann Arbor Mich.	(S)	(S)	(S)	(S)	(S)	3.0	4.4	-	-	37.9	2.4	128.2
Augusta, Ga.-S.C.	7.8	53.5	7.5	(D)	(D)	7.5	6.3	7.0	10.0	.2	5.0	247.1
Baltimore, Md.	43.7	500.8	9.8	23.8	3.1	36.6	29.5	4.4	4.6	87.9	(S)	(S)
Baton Rouge, La.	66.1	97.6	(D)	(D)	23.6	69.8	1,992.2	54.0	48.1	73.0	11.9	1,484.1
Battle Creek, Mich.	.6	10.1	-	.6	-	(S)	(S)	(S)	(S)	(S)	1.0	123.4
Bay City, Mich.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Beaumont-Port Arthur-Orange, Tex.	80.6	85.3	241.6	1,127.2	18.4	76.8	16.8	53.1	105.5	40.5	14.7	379.2
Billings, Mont.	5.9	4.5	32.2	158.9	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Binghamton, N.Y.-Pa.	(S)	(S)	(S)	(S)	(S)	4.5	.4	-	-	1.2	(S)	(S)
Birmingham, Ala.	29.4	239.1	(D)	(D)	(D)	12.2	39.2	11.8	60.3	65.9	(S)	(S)
Bridgeport, Conn.	3.5	10.3	.1	.4	(D)	(S)	(S)	(S)	(S)	(S)	2.0	99.3
Buffalo, N.Y.	31.8	520.2	18.5	95.4	(D)	34.8	652.6	7.2	12.7	97.8	21.9	1,737.7
Canton, Ohio	7.1	30.7	(D)	(D)	(D)	6.9	19.2	1.2	.6	41.7	2.5	388.2
Cedar Rapids, Iowa	3.5	22.4	(D)	.9	(D)	(S)	(S)	(S)	(S)	(S)	1.4	88.8
Charleston, S.C.	4.0	536.0	6.4	1.6	(D)	.3	35.2	14.0	78.3	2.8	2.2	311.7
Charleston, W. Va.	7.7	114.3	(D)	9.3	14.9	(S)	(S)	(S)	(S)	(S)	4.3	217.4
Chattanooga, Tenn.-Ga.	4.7	22.6	(D)	38.1	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Chicago, Ill.	84.0	834.3	326.1	660.6	17.0	66.6	207.8	52.0	43.9	69.3	56.5	2,615.7
Cincinnati, Ohio-Ky.-Ind.	11.5	76.5	10.6	(D)	1.0	8.5	18.4	7.7	2.8	48.1	(S)	(S)
Cleveland, Ohio	47.5	333.0	7.2	(D)	11.2	36.9	77.0	2.2	.1	55.4	(S)	(S)
Columbia, S.C.	2.2	12.3	-	14.5	.2	(S)	(S)	(S)	(S)	(S)	2.2	51.6
Columbus, Ohio	5.9	182.1	2.4	5.5	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Corpus Christi, Tex.	22.6	58.1	106.6	148.3	(D)	7.8	10.2	3.1	28.2	9.2	3.1	1,579.6
Dallas-Fort Worth, Tex.	(S)	(S)	(S)	(S)	(S)	6.1	17.7	11.4	1.6	4.2	(S)	(S)
Davenport-Rock Island-Moline, Iowa-Ill.	4.8	105.3	(D)	(D)	(D)	2.8	1.1	1.4	1.4	6.3	(S)	(S)
Dayton, Ohio	7.8	279.6	4.1	15.8	(D)	5.7	19.2	3.9	.4	2.6	6.4	365.0
Decatur, Ill.	2.3	24.3	-	36.7	-	1.8	1.4	.1	5.0	.9	(S)	(S)
Denver-Boulder, Colo.	16.1	21.3	(D)	3.2	.9	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Detroit, Mich.	86.9	496.0	(D)	(D)	1.6	45.5	234.5	8.7	1.3	104.3	48.1	3,222.0
Dubuque, Iowa	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
El Paso, Texas	13.8	119.1	(D)	(D)	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Erie, Pa.	(S)	(S)	(S)	(S)	(S)	.9	19.0	15.2	-	1.4	(S)	(S)
Evansville, Ind.-Ky.	3.8	50.0	(D)	(D)	(D)	14.8	2.7	1.3	2.1	36.2	3.1	116.1
Fargo-Moorhead, N.Dak.-Minn.	.1	2.9	-	-	-	.2	35.0	1.2	2.2	-	(S)	(S)
Flint, Mich.	7.8	(D)	(D)	(D)	(D)	6.1	2.9	.3	-	9.9	(S)	(S)
Florence, Ala.	18.8	35.6	3.8	.6	3.4	2.5	1.9	.3	1.7	.6	(S)	(S)
Fort Wayne, Ind.	2.9	12.7	-	(D)	(D)	1.8	2.5	.2	.8	2.7	(S)	(S)
Gadsden, Ala.	(S)	(S)	(S)	(S)	(S)	2.5	19.0	-	-	9.0	1.7	461.1
Galveston-Texas City, Tex.	27.3	(D)	(D)	374.2	1.5	17.6	9.0	23.8	29.1	7.0	6.4	350.4
Gary-Hammond-East Chicago, Ind.	135.8	1,222.2	(D)	(D)	(D)	64.1	1,578.7	18.5	35.3	43.3	19.4	5,236.0
Green Bay, Wis.	(S)	(S)	(S)	(S)	(S)	10.2	80.2	40.9	62.3	-	2.0	312.8
Greensboro-Winston-Salem-High Point, N.C.	9.5	132.1	(D)	2.7	1.1	(S)	(S)	(S)	(S)	(S)	3.6	225.5
Hamilton-Middletown, Ohio	10.5	59.5	(D)	2.0	-	15.3	236.5	3.3	-	8.8	(S)	(S)
Hartford, Conn.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.8	101.0
Houston, Tex.	169.5	345.4	639.7	1,977.1	46.3	148.3	193.7	166.4	309.2	306.3	57.3	2,857.3
Huntington-Ashland, W. Va.-Ky.-Ohio	16.5	135.4	(D)	138.0	1.4	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Huntsville, Ala.	(S)	(S)	(S)	(S)	(S)	.9	.9	.4	.7	.1	(S)	(S)
Indianapolis, Ind.	(S)	(S)	(S)	(S)	(S)	5.9	7.3	6.6	4.0	10.7	(S)	(S)
Jackson, Miss.	2.5	90.6	-	-	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Jacksonville, Fla.	11.7	234.5	(D)	1.5	(D)	28.7	109.2	154.3	72.5	5.6	(S)	(S)
Jersey City, N.J.	(S)	(S)	(S)	(S)	(S)	4.9	2.4	.9	.7	10.8	(S)	(S)
Kansas City, Mo.-Kans.	21.8	225.1	(D)	(D)	(D)	8.0	108.0	6.4	6.2	1.3	(S)	(S)
Killeen-Temple, Tex.	4.1	463.7	3.7	125.4	.5	14.1	25.3	53.8	1.5	.6	5.6	732.6
Knoxville, Tenn.	(S)	(S)	(S)	(S)	(S)	3.8	1.0	.6	-	92.0	(S)	(S)
Lafayette-West Lafayette, Ind.	1.6	(D)	-	2.5	(D)	8.7	9.9	11.5	21.3	66.6	(S)	(S)
Lake Charles, La.	26.1	57.2	(D)	(D)	(D)	19.9	372.9	217.9	10.6	120.6	6.8	169.6
Lakeland-Winter Haven, Fla.	10.3	340.0	115.3	.2	64.1	9.2	395.9	6.2	13.2	87.6	(S)	(S)
Lancaster, Pa.	(S)	(S)	(S)	(S)	(S)	2.4	3.8	1.4	.8	2.4	(S)	(S)
Lansing-East Lansing, Mich.	4.6	(D)	(D)	(D)	(D)	3.7	1.0	-	-	11.9	2.3	239.0
Las Vegas, Nev.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Lawrence-Haverhill, Mass.-N.H.	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.0	28.7
Lima, Ohio	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	2.8	118.1
Long Branch-Asbury Park, N.J.	(S)	(S)	(S)	(S)	(S)	4.6	.8	.1	.1	.1	(S)	(S)
Lorain-Elyria, Ohio	11.3	190.7	(D)	(D)	(D)	10.4	44.0	.7	1.1	2.0	(S)	(S)
Los Angeles-Long Beach, Calif.	(S)	(S)	(S)	(S)	(S)	42.7	239.7	9.3	340.6	143.3	(S)	(S)
Louisville, Ky.-Ind.	15.6	430.0	18.0	119.4	(D)	8.8	31.5	3.2	17.2	16.1	(S)	(S)

See footnotes at end of table.

Table 6C. Quantities of Pollutants Removed and Related Statistics, by SMSA for Establishments With 20 or More Employees: 1979—Continued

(Value in millions of dollars; quantities in thousands of short tons)

Standard metropolitan statistical area	Air pollution abatement					Water pollution abatement					Solid waste collection disposal[1]	
	Operating costs	Quantity of pollutant removed				Operating costs	Quantity of pollutant removed				Operating costs	Quantity of solid waste removed
		Particulates	Sulfur oxides	Nitrogen oxides, hydrocarbons, carbon monoxide	Heavy metals, radioactive and toxic substances, and other		Total suspended solids	Biochemical oxygen demand	Chemical oxygen demand	Oil and grease toxic substances and other		
Mansfield, Ohio	1.1	12.7	0.6	-	-	1.6	3.1	-	-	1.8	(S)	(S)
Memphis, Tenn.-Ark.-Miss	(S)	(S)	(S)	(S)	(S)	22.9	125.4	28.1	51.9	20.0	(S)	(S)
Milwaukee, Wis	10.5	49.3	(D)	15.6	.6	3.3	63.7	.8	2.1	62.7	(S)	(S)
Minneapolis-St. Paul, Minn.-Wis	17.0	403.3	(D)	435.9	.6	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Mobile, Ala	6.9	(D)	12.9	(D)	12.6	14.8	49.2	17.7	7.4	22.8	(S)	(S)
Modesto, Calif	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Monroe, La	(S)	(S)	(S)	(S)	(S)	4.9	35.0	13.4	1.8	.2	(S)	(S)
Muskegon-Muskegon Heights, Mich	1.8	43.6	-	.4	1.9	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Nashville-Davidson, Tenn	3.0	(D)	(D)	4.4	.6	3.6	.4	4.2	6.8	4.6	(S)	(S)
Nassau-Suffolk, N.Y	(S)	(S)	(S)	(S)	(S)	4.2	6.5	1.6	3.1	6.0	(S)	(S)
New Brunswick-Perth Amboy-Sayreville, N.J	49.3	66.6	(D)	12.1	18.7	15.9	21.3	5.7	5.3	2.0	(S)	(S)
New London-Norwich, Conn.-R.I	(S)	(S)	(S)	(S)	(S)	7.2	5.6	74.6	91.2	2.0	(S)	(S)
New Orleans, La	8.9	9.8	(D)	(D)	.2	9.9	33.6	1.8	46.8	3.7	(S)	(S)
New York, N.Y	19.9	61.9	2.3	(D)	2.0	(S)	(S)	(S)	(S)	(S)	18.1	887.2
Newark, N.J	39.4	60.8	(D)	81.7	57.1	37.2	19.5	45.3	74.2	7.7	(S)	(S)
Newport News-Hampton, Va	4.6	(D)	(D)	(D)	(D)	3.7	21.5	15.8	22.5	.9	2.0	112.9
Norfolk-Virginia Beach-Portsmouth, Va.-N.C	1.4	5.0	(D)	(D)	1.6	(S)	(S)	(S)	(S)	(S)	1.3	62.0
Odessa, Tex	2.1	111.0	-	8.1	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Parkersburg-Marietta, W. Va.-Ohio	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	6.8	1,558.0
Pensacola, Fla	(S)	(S)	(S)	(S)	(S)	4.6	32.6	11.2	9.9	.2	(S)	(S)
Peoria, Ill	16.3	(D)	21.4	.4	(D)	8.3	89.6	9.1	14.1	1.7	4.2	530.3
Petersburg-Colonial Heights-Hopewell, Va	3.7	40.3	(D)	(D)	1.5	3.5	7.6	138.2	21.7	-	1.7	110.6
Philadelphia, Pa.-N.J	89.8	452.5	145.9	488.9	30.8	52.6	129.6	29.0	51.0	21.7	25.9	1,322.5
Phoenix, Ariz	2.1	128.4	1.6	.8	.5	1.8	28.1	11.4	32.7	1.1	(S)	(S)
Pine Bluff, Ark	2.4	(D)	-	-	(D)	3.3	81.2	36.9	224.0	-	(S)	(S)
Pittsburgh, Pa	102.2	880.9	256.1	48.6	1.1	45.8	286.9	2.4	21.3	144.4	(S)	(S)
Pittsfield, Mass	(S)	(S)	(S)	(S)	(S)	1.9	67.9	2.6	10.5	-	(S)	(S)
Portland, Maine	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	59.4
Portland, Oreg.-Wash	(S)	(S)	(S)	(S)	(S)	10.9	49.7	44.2	.6	11.2	(S)	(S)
Poughkeepsie, N.Y	(S)	(S)	(S)	(S)	(S)	4.2	.5	.1	.1	.1	(S)	(S)
Providence-Warwick-Pawtucket, R.I	(S)	(S)	(S)	(S)	(S)	4.5	3.1	352.9	4.4	.6	(S)	(S)
Provo-Orem, Utah	5.7	106.9	3.0	.9	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Pueblo, Colo	11.4	72.2	.3	.3	.3	2.6	91.5	.2	-	4.4	(S)	866.7
Raleigh-Durham, N.C	(S)	(S)	(S)	(S)	(S)	2.2	.6	2.1	3.0	.8	(S)	(S)
Richmond, Va	1.7	10.1	-	(D)	(D)	(S)	(S)	(S)	(S)	(S)	4.8	83.9
Riverside-San Bernardino-Ontario, Calif	24.0	1,476.1	(D)	17.6	.9	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Rochester, N.Y	5.2	58.9	(D)	(D)	(D)	18.7	61.7	19.2	26.7	.5	13.8	621.8
Saginaw, Mich	12.4	50.4	145.7	335.6	143.3	4.3	103.7	.7	.4	8.2	2.7	1,623.3
St. Louis, Mo.-Ill	50.0	837.4	285.8	190.8	22.5	19.4	76.6	6.1	10.4	33.0	16.1	840.9
Salt Lake City-Ogden, Utah	16.7	168.8	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	703.8
San Francisco-Oakland, Calif	65.8	163.5	266.3	159.9	(D)	37.7	47.0	15.8	29.9	74.7	21.4	820.3
San Jose, Calif	8.3	(D)	(D)	2.2	.1	6.6	4.3	3.0	2.5	254.2	(S)	(S)
Savannah, Ga	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.4	215.5
Seattle-Everett, Wash	5.2	504.0	(D)	.4	.4	6.3	12.5	55.1	195.2	.5	(S)	(S)
Shreveport, La	(S)	8.5	-	2.3	(D)	1.1	2.5	1.8	11.6	1.6	(S)	(S)
South Bend, Ind	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.5	141.6
Spokane, Wash	5.1	21.4	-	(D)	.3	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Steubenville-Weirton, Ohio.-W. Va	23.1	176.2	8.1	.5	.1	26.2	188.0	.6	-	26.3	13.0	2,258.3
Stockton, Calif	(S)	(S)	(S)	(S)	(S)	1.9	188.0	98.9	8.2	.3	(S)	(S)
Syracuse, N.Y	4.6	79.1	(D)	(D)	(D)	4.9	430.1	1.8	1.5	4.4	(S)	(S)
Tacoma, Wash	22.7	62.3	(D)	(D)	(D)	3.2	25.5	15.3	4.7	3.3	1.9	260.2
Tampa-St. Petersburg, Fla	(S)	(S)	(S)	(S)	(S)	3.5	43.8	1.2	2.6	16.5	7.2	7,990.1
Texarkana, Ark	1.0	82.4	5.2	-	-	(S)	(S)	(S)	(S)	(S)	1.0	146.6
Toledo, Ohio-Mich	20.1	318.3	31.0	290.9	.1	12.9	174.3	2.4	4.3	11.5	(S)	(S)
Tulsa, Okla	7.1	98.8	(D)	30.6	19.8	5.7	1.0	.1	.2	2.2	(S)	(S)
Vallejo-Fairfield-Napa, Calif	20.7	6.6	99.0	200.0	2.0	(S)	(S)	(S)	(S)	(S)	2.0	164.3
Vineland-Millville-Bridgeton, N.J	2.0	1.0	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Washington, DC.-Md.-Va	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	1.1	72.3
Waterloo-Cedar Falls, Iowa	2.5	28.9	-	2.3	-	(S)	(S)	(S)	(S)	-	(S)	228.4
Wheeling	3.9	44.9	(D)	-	(D)	5.5	21.0	.1	-	11.0	2.0	(S)
Wichita, W. Va.-Ohio	33.5	16.4	200.0	400.1	1.8	16.2	2.4	3.7	.3	26.5	(S)	(S)
Wilmington, Del.-N.J.-Md	24.3	43.1	(D)	(D)	(D)	49.0	84.3	9.9	15.2	7.7	8.4	387.4
Wilmington, N.C	(S)	(S)	(S)	(S)	(S)	5.9	1.3	8.6	13.4	3.7	(S)	(S)
Worcester, Mass	2.2	9.2	-	1.5	-	(S)	(S)	(S)	(S)	(S)	(S)	(S)
York, Pa	3.2	66.5	(D)	(D)	(D)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Youngstown-Warren, Ohio	19.3	234.8	(D)	1.3	(D)	9.1	53.1	.1	.1	35.5	(S)	(S)

Note: Totals may not agree precisely with detail because of independent rounding. Major industry group 23, Apparel and Other Textile Products, was not included in the survey and therefore is excluded from the SMSA totals. No major industry groups are shown. No SMSA totals are shown where GAC is less than $1.0 million or the standard error is 20 or greater.

- Represents zero. (D) Withheld to avoid disclosing operations of individual companies. (S) Data suppressed because did not meet publication standards. This includes cells where PACE or GAC is less than $1.0 million or the standard error is 20 or greater.

[1]The operating costs for solid waste include payment to governmental units (solid waste collection/disposal) and operating cost as reported in table 5.

Appendix A. Pollution Abatement Form and Instructions

DUE DATE: 60 DAYS AFTER RECEIPT OF FORM

Form Approved: O.M.B. No. 41-R2807

FORM MA-200
(12-21-79)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

SURVEY ON POLLUTION ABATEMENT COSTS AND EXPENDITURES - 1979

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.

Please read the instructions before completing this report.

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

Change of operating status

Mark (X) one if applicable

This establishment has been

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

RETURN THIS COPY

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

Name of person to contact regarding this report

Telephone		
Area code	Number	Extension

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 1979. However, if your establishment uses a fiscal year that ends between 10/31/79 and 2/29/80, 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 marking the appropriate box(es) in section pertaining to "Change in 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	5,600
$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.

The MA-200 survey form has been changed for items 5, 6, 8, and 10. Please read the instructions for these items carefully.

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 1979 should answer only item 1, certify in item 12, 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 1979 is required to submit data for items 2–11 as applicable.

▶ Item 1 – IF NO PAYMENTS TO GOVERNMENT, CAPITAL, OR CURRENT COST INCURRED

Mark (X) in box for appropriate reason

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*

Important Before marking item 1, please review items 7 and 8 on page 2, under normal operations those expenses such as sewage fees and trash removal in excess of $500 should be reported on this form.

SPECIFIC INSTRUCTIONS

CAPITAL EXPENDITURES FOR NEW PLANT AND EQUIPMENT FOR POLLUTION ABATEMENT – 1979

▶ **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, clarifers, 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 5** – Gross value of assets include all fixed depreciable assets for pollution abatement on the books depreciable at the end of the year. The book value represents the actual cost of assets at the time they were acquired, including cost incurred in making the assets useable (such as transportation and installation).

Included are all buildings, structures, machinery, and equipment (production, office, transportation equipment for abatement activities) for which depreciation or amortization reserves are maintained. Excluded are nondepreciable capital assets, including inventories and intangible assets such as patent rights and royalties. Also excluded are land and depletable assets such as timber and minerals rights. Report value of assets by form of pollution abated (air, water, or solid waste).

▶Item 2 – CAPITAL EXPENDITURES FOR ABATEMENT OF AIR POLLUTANTS	Item code	Expenditures in 1979 (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 1979 for new plant and equipment designed to abate air pollutants through **end-of-line techniques**	1010	$		☐
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? ☐ 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	$		☐
c. TOTAL AIR CAPITAL *(Sum of lines 2a and 2b)* →	1050	$		☐

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	%
(2) Sulfur oxides	1070	%
(3) Nitrogen oxides, hydrocarbons, carbon monoxide	1080	%
(4) Other (heavy metals, radioactive and toxic substances) – *Specify*	1090	%
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 1979 (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 1979 for new plant and equipment designed to abate water pollutants through end-of-line techniques	2010	$		☐
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. ☐ NO – *Skip to c*	2040	$		☐
c. TOTAL WATER CAPITAL *(Sum of lines 3a and 3b)* →	2050	$		☐
▶Item 4 – CAPITAL EXPENDITURES FOR SOLID WASTE DISPOSAL Report your total expenditures in 1979 on new plant and equipment designed for the disposal of solid waste	3010	$		☐

Item 5 – GROSS VALUE OF DEPRECIABLE ASSETS FOR POLLUTION ABATEMENT (original cost, end of year)

Report your best estimate of the original costs of your inplace plant and equipment for pollution abatement by form of pollution abated.

	Item code	Gross value of assets in 1979 (Report in thousands of dollars) Mark (X) here if less than $500 and greater than 0. Millions ($000)	Thousands (000)	
a. Air	3020			☐
b. Water	3030			☐
c. Solid waste	3040			☐
d. TOTAL *(Sum of lines 5a through 5c)* →	3050			☐

SPECIFIC INSTRUCTIONS

COST RECOVERED THROUGH ABATEMENT ACTIVITIES – 1979

▶ **Item 6** – 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 8) by the estimate reported here.

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

▶ **Item 7a** – 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 7b** – 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 8** – Report the annual operating costs and expenses for pollution abatement incurred in 1979. 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 1979 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 9–11).

Item 6 – 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 1979 (Report in thousands of dollars) Mark (X) here if less than $500 and greater than 0. Millions ($000)	Thousands (000)	
a. Air	4010	$		☐
b. Water	4020	$		☐
c. Solid waste	4030	$		☐
d. TOTAL *(Sum of lines 6a through 6c)* →	4050	$		☐

Item 7 – PAYMENTS TO GOVERNMENT FOR POLLUTION REMOVAL

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

	Item code	Annual costs in 1979 (Report in thousands of dollars) Mark (X) here if less than $500 and greater than 0. Millions ($000)	Thousands (000)	
a. Public sewage use *(If you report on this line, be sure to complete ITEM 10.)*	5010	$		☐
b. Municipal solid waste collection/disposal *(If you report on this line, be sure to complete ITEM 11.)*	5020	$		☐

Item 8 – ANNUAL OPERATING COSTS FOR POLLUTION ABATEMENT

Report your best estimate of the annual costs of pollution abatement activities, by kind of cost and by form of pollution abated, including services provided by private contractors (trash removal, etc.).

NOTE: DO NOT reduce your estimate by costs recovered (item 6). DO NOT include the payments to governmental units (item 7).

Mark (X) the box in shaded area if less than $500 and greater than 0.	ANNUAL COSTS IN 1979 (Report in thousand of dollars) AIR Millions ($000)	Thousands (000)		WATER Millions ($000)	Thousands (000)		SOLID WASTE Millions ($000)	Thousands (000)		TOTAL Millions ($000)	Thousands (000)	
a. Depreciation or amortization			7010 ☐			7110 ☐			7210 ☐			8010 ☐
b. Labor			7020 ☐			7120 ☐			7220 ☐			8020 ☐
c. Materials and supplies			7030 ☐			7130 ☐			7230 ☐			8030 ☐
d. Services, equipment leasing, and other costs			7040 ☐			7140 ☐			7240 ☐			8040 ☐
e. TOTAL *(Sum of lines 8a through 8d)* →			7050 ☐			7150 ☐			7250 ☐			8050 ☐

FORM MA-200 (12-21-79)

APPENDIX A

SPECIFIC INSTRUCTIONS FOR TONNAGES OF POLLUTANTS REMOVED

▶ **Item 9** – Report the annual total tonnages of the listed air pollutants abated during 1979. The tonnages should include all air pollutants abated during 1979 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 total tonnages of the listed water pollutants during 1979. The tonnages should include all water pollutants abated during 1979 by new as well as previously existing pollution abatement equipment. If this information is not available from records, report engineering estimates where possible.

▶ **Item 11** – 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 1979	*Mark (X) here if less than ½ ton and greater than 0.*
Item 9 – AIR POLLUTANTS ABATED BY WEIGHT On the basis of your best judgement estimate the total tonnages of specific air pollutants abated during 1979 by new as well as previously installed pollution abatement facilities.			
a. Particulates	9010	Tons	☐
b. Sulfur oxides	9020	Tons	☐
c. Nitrogen oxides, hydrocarbons, carbon monoxide	9030	Tons	☐
d. Other (heavy metals, radioactive and toxic substances) – *Specify* _____	9040	Tons	☐
Item 10 – WATER POLLUTANTS ABATED BY WEIGHT On the basis of your best judgement, estimate the total tonnages of specific water pollutants abated during 1979 by new as well as previously installed pollution abatement facilities.			
a. Total suspended solids (dry weight basis)	9110	Tons	☐
b. Biochemical oxygen demand (BOD5)	9120	Tons	☐
c. Chemical oxygen demand (COD)	9130	Tons	☐
d. Other (oil and grease, toxic substances, etc.) – *Specify* _____	9150	Tons	☐
Item 11 – SOLID WASTE DISPOSAL BY WEIGHT On the basis of your best judgement, estimate the tonnage of solid waste properly disposed during 1979, 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	Tons	☐

Remarks – Suggestions for improvements in this questionnaire are solicited.

Item 12 – CERTIFICATION OF SUBSTANTIAL ACCURACY OF REPORT

Signature of authorized person	Title	
Address *(Number, street, city, State, ZIP code)*		Date

☆ U.S. GOVERNMENT PRINTING OFFICE:1980--660-256

Appendix B. Standard Consolidated Statistical Areas and Standard Metropolitan Statistical Areas

(Titles and definitions of the SMSA's in the State established by the Department of Commerce, Office of Federal Statistical Policy and Standards, as of December 1979)

Standard Consolidated Statistical Areas

Boston-Lawrence-Lowell, Mass.-N.H.	Consists of Boston, Mass., SMSA; Lawrence-Haverhill, Mass.-N.H., SMSA; Lowell, Mass.-N.H., SMSA; and Brockton, Mass., SMSA
Chicago-Gary, Ill.-Ind.	Consists of Chicago, Ill., SMSA, and Gary-Hammond-East Chicago, Ind., SMSA
Cincinnati-Hamilton, Ohio-Ky.-Ind.	Consists of Cincinnati, Ohio-Ky.-Ind., SMSA, and Hamilton-Middletown, Ohio, SMSA
Cleveland-Akron-Lorain, Ohio	Consists of Cleveland, Ohio, SMSA; Akron, Ohio, SMSA; and Lorain-Elyria, Ohio, SMSA
Detroit-Ann Arbor, Mich.	Consists of Detroit, Mich., SMSA, and Ann Arbor, Mich., SMSA
Houston-Galveston, Tex.	Consists of Houston, Tex., SMSA, and Galveston-Texas City, Tex., SMSA
Los Angeles-Long Beach-Anaheim, Calif	Consists of Los Angeles-Long Beach, Calif., SMSA; Anaheim-Santa Ana-Garden Grove, Calif., SMSA; Riverside-San Bernardino-Ontario, Calif., SMSA; and Oxnard-Simi Valley-Ventura, Calif., SMSA
Miami-Fort Lauderdale, Fla.	Consists of Miami, Fla., SMSA, and Fort Lauderdale-Hollywood, Fla., SMSA
Milwaukee-Racine, Wis.	Consists of Milwaukee, Wis., SMSA, and Racine, Wis., SMSA
New York-Newark-Jersey City, N.Y.-N.J.-Conn.	Consists of New York, N.Y.-N.J., SMSA; Nassau-Suffolk, N.Y., SMSA; Newark, N.J., SMSA; Jersey City, N.J., SMSA; New Brunswick-Perth Amboy-Sayreville, N.J., SMSA; Paterson-Clifton-Passaic, N.J., SMSA; Long Branch-Asbury Park, N.J., SMSA; Stamford, Conn., SMSA; and Norwalk, Conn., SMSA
Philadelphia-Wilmington-Trenton, Pa.-Del.-N.J.-Md.	Consists of Philadelphia, Pa.-N.J., SMSA; Wilmington, Del.-N.J.-Md., SMSA; and Trenton, N.J., SMSA
San Francisco-Oakland-San Jose, Calif.	Consists of San Francisco-Oakland, Calif., SMSA; San Jose, Calif., SMSA; and Vallejo-Fairfield-Napa, Calif., SMSA
Seattle-Tacoma, Wash.	Consists of Seattle-Everett, Wash., SMSA, and Tacoma, Wash., SMSA

Standard Metropolitan Statistical Areas

Abilene, Tex.	Consists of Callahan, Jones, and Taylor Counties, Tex.
Akron, Ohio	Consists of Portage and Summit Counties, Ohio
Albany, Ga.	Consists of Dougherty and Lee Counties, Ga.
Albany-Schenectady-Troy, N.Y.	Consists of Albany, Montgomery, Rensselaer, Saratoga, and Schenectady Counties, N.Y.
Albuquerque, N. Mex.	Consists of Bernalillo and Sandoval Counties, N. Mex.
Alexandria, La.	Consists of Grant and Rapides Parishes, La.
Allentown-Bethlehem-Easton, Pa.-N.J.	Consists of Carbon, Lehigh, and Northampton Counties, Pa.; and Warren County, N.J.
Altoona, Pa.	Coextensive with Blair County, Pa.
Amarillo, Tex.	Consists of Potter and Randall Counties, Tex.
Anaheim-Santa Ana-Garden Grove, Calif.	Coextensive with Orange County, Calif.
Anchorage, Alaska	Coextensive with Anchorage Division, Alaska
Anderson, Ind.	Coextensive with Madison County, Ind.

Ann Arbor, Mich.	Coextensive with Washtenaw County, Mich.
Anniston, Ala.	Coextensive with Calhoun County, Ala.
Appleton-Oshkosh, Wis.	Consists of Calumet, Outagamie, and Winnebago Counties, Wis.
Asheville, N.C.	Consists of Buncombe and Madison Counties, N.C.
Atlanta, Ga.	Consists of Butts, Cherokee, Clayton, Cobb, De Kalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, and Walton Counties, Ga.
Atlantic City, N.J.	Coextensive with Atlantic County, N.J.
Augusta, Ga.-S.C.	Consists of Columbia and Richmond Counties, Ga., and Aiken County, S.C.
Austin, Tex.	Consists of Hays, Travis, and Williamson Counties, Tex.
Bakersfield, Calif.	Coextensive with Kern County, Calif.
Baltimore, Md.	Consists of Baltimore city and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties, Md.
Baton Rouge, La.	Consists of Ascension, East Baton Rouge, Livingston, and West Baton Rouge Parishes, La.
Battle Creek, Mich.	Consists of Barry and Calhoun Counties, Mich.
Bay City, Mich.	Coextensive with Bay County, Mich.
Beaumont-Port Arthur-Orange, Tex.	Consists of Hardin, Jefferson, and Orange Counties, Tex.
Billings, Mont.	Coextensive with Yellowstone County, Mont.
Biloxi-Gulfport, Miss.	Consists of Hancock, Harrison, and Stone Counties, Miss.
Binghamton, N.Y.-Pa.	Consists of Broome and Tioga Counties, N.Y., and Susquehanna County, Pa.
Birmingham, Ala.	Consists of Jefferson, St. Clair, Shelby, and Walker Counties, Ala.
Bismarck, N. Dak.	Consists of Burleigh and Morton Counties, N. Dak.
Bloomington, Ind.	Coextensive with Monroe County, Ind.
Bloomington-Normal, Ill.	Coextensive with McLean County, Ill.
Boise City, Idaho	Coextensive with Ada County, Idaho
Boston, Mass.	Consists of Beverly, Lynn, Peabody, and Salem cities, and Boxford, Danvers, Hamilton, Lynnfield, Manchester, Marblehead, Middleton, Nahant, Saugus, Swampscott, Topsfield, and Wenham towns in Essex County; Cambridge, Everett, Malden, Medford, Melrose, Newton, Somerville, Waltham, and Woburn cities, and Acton, Arlington, Ashland, Bedford, Belmont, Boxborough; Burlington, Carlisle, Concord, Framingham, Holliston, Lexington, Lincoln, Natick, North Reading, Reading, Sherborn, Stoneham, Sudbury, Wakefield, Watertown, Wayland, Weston, Wilmington, and Winchester towns in Middlesex County; Quincy city, and Bellingham, Braintree, Brookline, Canton, Cohasset, Dedham, Dover, Foxborough, Franklin, Holbrook, Medfield, Medway, Millis, Milton, Needham, Norfolk, Norwood, Randolph, Sharon, Stoughton, Walpole, Wellesley, Westwood, Weymouth, and Wrentham towns in Norfolk County; Abington, Duxbury, Hanover, Hanson, Hingham, Hull, Kingston, Marshfield, Norwell, Pembroke, Rockland, Scituate towns in Plymouth County; and Boston, Chelsea, and Revere cities, and Winthrop town in Suffolk County, Mass.
Bradenton, Fla.	Coextensive with Manatee County, Fla.
Bridgeport, Conn.	Consists of Bridgeport and Shelton cities, and Easton, Fairfield, Monroe, Stratford, and Trumbull towns in Fairfield County; and Derby and Milford cities in New Haven County, Conn.
Bristol, Conn.	Consists of Bristol city and Burlington town in Hartford County, and Plymouth town in Litchfield County, Conn.
Brockton, Mass.	Consists of Easton town in Bristol County; Avon town in Norfolk County; and Brockton city, and Bridgewater, East Bridgewater, Halifax, West Bridgewater, and Whitman towns in Plymouth County, Mass.
Brownsville-Harlingen-San Benito, Tex.	Coextensive with Cameron County, Tex.
Bryan-College Station, Tex.	Coextensive with Brazos County, Tex.
Buffalo, N.Y.	Consists of Erie and Niagara Counties, N.Y.
Burlington, N.C.	Coextensive with Alamance County, N.C.
Caguas, P. R.	Consists of Caguas, Gurabo, and San Lorenzo Municipios, P.R.
Canton, Ohio	Consists of Carroll and Stark Counties, Ohio
Cedar Rapids, Iowa	Coextensive with Linn County, Iowa
Champaign-Urbana-Rantoul, Ill.	Coextensive with Champaign County, Ill.

Charleston-North Charleston, S.C.	Consists of Berkeley, Charleston, and Dorchester Counties, S.C.
Charleston, W. Va.	Consists of Kanawha and Putnam Counties, W. Va.
Charlotte-Gastonia, N.C.	Consists of Gaston, Mecklenburg, and Union Counties, N.C.
Chattanooga, Tenn.-Ga.	Consists of Hamilton, Marion, and Sequatchie Counties, Tenn.; and Catoosa, Dade, and Walker Counties, Ga.
Chicago, Ill.	Consists of Cook, Du Page, Kane, Lake, McHenry, and Will Counties, Ill.
Cincinnati, Ohio-Ky.-Ind.	Consists of Clermont, Hamilton, and Warren Counties, Ohio; Boone, Campbell, and Kenton Counties, Ky.; and Dearborn County, Ind.
Clarksville-Hopkinsville, Tenn.-Ky.	Consists of Montgomery County, Tenn. and Christian County, Ky.
Cleveland, Ohio	Consists of Cuyahoga, Geauga, Lake, and Medina Counties, Ohio
Colorado Springs, Colo.	Consists of El Paso and Teller Counties, Colo.
Columbia, Mo.	Coextensive with Boone County, Mo.
Columbia, S.C.	Consists of Lexington and Richland Counties, S.C.
Columbus, Ga.-Ala.	Consists of Chattahoochee County and Columbus (consolidated government), Ga., and Russell County, Ala.
Columbus, Ohio	Consists of Delaware, Fairfield, Franklin, Madison, and Pickaway Counties, Ohio
Corpus Christi, Tex.	Consists of Nueces and San Patrico Counties, Tex.
Dallas-Fort Worth, Tex.	Consists of Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties, Tex.
Danbury, Conn.	Consists of Danbury city and Bethel, Brookfield, New Fairfield, Newtown, and Redding towns in Fairfield County; and New Milford town in Litchfield County, Conn.
Davenport-Rock Island-Moline, Iowa-Ill.	Consists of Scott County, Iowa and Henry and Rock Island Counties, Ill.
Dayton, Ohio	Consists of Greene, Miami, Montgomery, and Preble Counties, Ohio
Daytona Beach, Fla.	Coextensive with Volusia County, Fla.
Decatur, Ill.	Coextensive with Macon County, Ill.
Denver-Boulder, Colo.	Consists of Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, and Jefferson Counties, Colo.
Des Moines, Iowa	Consists of Polk and Warren Counties, Iowa
Detroit, Mich.	Consists of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties, Mich.
Dubuque, Iowa	Coextensive with Dubuque County, Iowa
Duluth-Superior, Minn.-Wis.	Consists of St. Louis County, Minn. and Douglas County, Wis.
Eau Claire, Wis.	Consists of Chippewa and Eau Claire Counties, Wis.
El Paso, Tex.	Coextensive with El Paso County, Tex.
Elkhart, Ind.	Coextensive with Elkhart County, Ind.
Elmira, N.Y.	Coextensive with Chemung County, N.Y.
Enid, Okla.	Coextensive with Garfield County, Okla.
Erie, Pa.	Coextensive with Erie County, Pa.
Eugene-Springfield, Oreg.	Coextensive with Lane County, Oreg.
Evansville, Ind.-Ky.	Consists of Gibson, Posey, Vanderburgh, and Warrick Counties, Ind. and Henderson County, Ky.
Fall River, Mass.-R.I.	Consists of Fall River city and Dighton, Somerset, Swansea, and Westport towns in Bristol County, Mass.; and Little Compton, Portsmouth, and Tiverton towns in Newport County, R.I.
Fargo-Moorhead, N. Dak.-Minn.	Consists of Cass County, N. Dak. and Clay County, Minn.
Fayetteville, N.C.	Coextensive with Cumberland County, N.C.
Fayetteville-Springdale, Ark.	Consists of Benton and Washington Counties, Ark.
Fitchburg-Leominster, Mass.	Consists of Shirley and Townsend towns in Middlesex County, and Fitchburg and Leominster cities and Lunenburg and Westminster towns in Worcester County, Mass.
Flint, Mich.	Consists of Genesee and Shiawassee Counties, Mich.
Florence, Ala.	Consists of Colbert and Lauderdale Counties, Ala.
Fort Collins, Colo.	Coextensive with Larimer County, Colo.
Fort Lauderdale-Hollywood, Fla.	Coextensive with Broward County, Fla.
Fort Myers-Cape Coral, Fla.	Coextensive with Lee County, Fla.

Fort Smith, Ark.-Okla.	Consists of Crawford and Sebastian Counties, Ark. and Le Flore and Sequoyah Counties, Okla.
Fort Wayne, Ind.	Consists of Adams, Allen, De Kalb, and Wells Counties, Ind.
Fresno, Calif.	Coextensive with Fresno County, Calif.
Gadsden, Ala.	Coextensive with Etowah County, Ala.
Gainesville, Fla.	Coextensive with Alachua County, Fla.
Galveston-Texas City, Tex.	Coextensive with Galveston County, Tex.
Gary-Hammond-East Chicago, Ind.	Consists of Lake and Porter Counties, Ind.
Grand Forks, N. Dak.-Minn.	Consists of Grand Forks County, N. Dak. and Polk County, Minn.
Grand Rapids, Mich.	Consists of Kent and Ottawa Counties, Mich.
Great Falls, Mont.	Coextensive with Cascade County, Mont.
Greeley, Colo.	Coextensive with Weld County, Colo.
Green Bay, Wis.	Coextensive with Brown County, Wis.
Greensboro—Winston-Salem—High Point, N.C.	Consists of Davidson, Forsyth, Guilford, Randolph, Stokes, and Yadkin Counties, N.C.
Greenville-Spartanburg, S.C.	Consists of Greenville, Pickens, and Spartanburg Counties, S.C.
Hamilton-Middletown, Ohio	Coextensive with Butler County, Ohio
Harrisburg, Pa.	Consists of Cumberland, Dauphin, and Perry Counties, Pa.
Hartford, Conn.	Consists of Hartford city and Avon, Bloomfield, Canton, East Granby, East Hartford, East Windsor, Enfield, Farmington, Glastonbury, Granby, Manchester, Marlborough, Newington, Rocky Hill, Simsbury, South Windsor, Suffield, West Hartford, Wethersfield, Windsor, and Windsor Locks towns in Hartford County; New Hartford town in Litchfield County; Cromwell, East Hampton, and Portland towns in Middlesex County; Colchester town in New London County; and Andover, Bolton, Columbia, Coventry, Ellington, Hebron, Stafford, Tolland, Vernon, and Willington towns in Tolland County, Conn.
Honolulu, Hawaii	Coextensive with Honolulu County, Hawaii
Houston, Tex.	Consists of Brazoria, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties, Tex.
Huntington-Ashland, W. Va.-Ky.-Ohio	Consists of Cabell and Wayne Counties, W. Va.; Boyd and Greenup Counties, Ky.; and Lawrence County, Ohio
Huntsville, Ala.	Consists of Limestone, Madison, and Marshall Counties, Ala.
Indianapolis, Ind.	Consists of Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, and Shelby Counties, Ind.
Iowa City, Iowa	Coextensive with Johnson County, Iowa
Jackson, Mich.	Coextensive with Jackson County, Mich.
Jackson, Miss.	Consists of Hinds and Rankin Counties, Miss.
Jacksonville, Fla.	Consists of Baker, Clay, Duval, Nassau, and St. Johns Counties, Fla.
Janesville-Beloit, Wis.	Coextensive with Rock County, Wis.
Jersey City, N.J.	Coextensive with Hudson County, N.J.
Johnson City-Kingsport-Bristol, Tenn.-Va.	Consists of Carter, Hawkins, Sullivan, Unicoi, and Washington Counties, Tenn., and Bristol city and Scott and Washington Counties, Va.
Johnstown, Pa.	Consists of Cambria and Somerset Counties, Pa.
Kalamazoo-Portage, Mich.	Consists of Kalamazoo and Van Buren Counties, Mich.
Kankakee, Ill.	Coextensive with Kankakee County, Ill.
Kansas City, Mo.-Kans.	Consists of Cass, Clay, Jackson, Platte, and Ray Counties, Mo., and Johnson and Wyandotte Counties, Kans.
Kenosha, Wis.	Coextensive with Kenosha County, Wis.
Killeen-Temple, Tex.	Consists of Bell and Coryell Counties, Tex.
Knoxville, Tenn.	Consists of Anderson, Blount, Knox, and Union Counties, Tenn.
Kokomo, Ind.	Consists of Howard and Tipton Counties, Ind.
La Crosse, Wis.	Coextensive with La Crosse County, Wisc.
Lafayette, La.	Coextensive with Lafayette Parish, La.
Lafayette-West Lafayette, Ind.	Coextensive with Tippecanoe County, Ind.
Lake Charles, La.	Coextensive with Calcasieu Parish, La.
Lakeland-Winter Haven, Fla.	Coextensive with Polk County, Fla.

Lancaster, Pa.	Coextensive with Lancaster County, Pa.
Lansing-East Lansing, Mich.	Consists of Clinton, Eaton, Ingham, and Ionia Counties, Mich.
Laredo, Tex.	Coextensive with Webb County, Tex.
Las Cruces, N. Mex.	Coextensive with Dona Ana County, N. Mex.
Las Vegas, Nev.	Coextensive with Clark County, Nev.
Lawrence, Kans.	Coextensive with Douglas County, Kans.
Lawrence-Haverhill, Mass.-N.H.	Consists of Haverhill and Lawrence cities and Amesbury, Andover, Georgetown, Groveland, Merrimac, Methuen, North Andover, Salisbury, and West Newbury towns in Essex County, Mass. and Atkinson, Hampstead, Kingston, Newton, Plaistow, Salem, and Windham towns in Rockingham County, N.H.
Lawton, Okla.	Coextensive with Comanche County, Okla.
Lewiston-Auburn, Maine	Consists of Auburn and Lewiston cities and Lisbon town in Androscoggin County, Maine
Lexington-Fayette, Ky.	Consists of Bourbon, Clark, Fayette, Jessamine, Scott, and Woodford Counties, Ky.
Lima, Ohio	Consists of Allen, Auglaize, Putnam, and Van Wert Counties, Ohio
Lincoln, Nebr.	Coextensive with Lancaster County, Nebr.
Little Rock-North Little Rock, Ark.	Consists of Pulaski and Saline Counties, Ark.
Long Branch-Asbury Park, N.J.	Coextensive with Monmouth County, N.J.
Longview-Marshall, Tex.	Consists of Gregg and Harrison Counties, Tex.
Lorain-Elyria, Ohio	Coextensive with Lorain County, Ohio
Los Angeles-Long Beach, Calif.	Coextensive with Los Angeles County, Calif.
Louisville, Ky-Ind.	Consists of Bullitt, Jefferson, and Oldham Counties, Ky. and Clark and Floyd Counties, Ind.
Lowell, Mass.-N.H.	Consists of Lowell city and Billerica, Chelmsford, Dracut, Tewksbury, Tyngsborough, and Westford towns in Middlesex County, Mass.; and Pelham town in Hillsborough County, N.H.
Lubbock, Tex.	Coextensive with Lubbock County, Tex.
Lynchburg, Va.	Consists of Lynchburg city and Amherst, Appomattox, and Campbell Counties, Va.
Macon, Ga.	Consists of Bibb, Houston, Jones, and Twiggs Counties, Ga.
Madison, Wis.	Coextensive with Dane County, Wis.
Manchester, N.H.	Consists of Manchester city and Bedford and Goffstown towns in Hillsborough County; Allenstown, Hooksett, and Pembroke towns in Merrimach County; and Derry and Londonderry towns in Rockingham County, N.H.
Mansfield, Ohio	Coextensive with Richland County, Ohio
Mayaguez, P. R.	Consists of Anasco, Hormigueros, and Mayaguez Municipios, P.R.
McAllen-Pharr-Edinburg, Tex.	Coextensive with Hidalgo County, Tex.
Melbourne-Titusville-Cocoa, Fla.	Coextensive with Brevard County, Fla.
Memphis, Tenn.-Ark.-Miss.	Consists of Shelby and Tipton Counties, Tenn.; Crittenden County, Ark.; and De Soto County, Miss.
Meriden, Conn.	Coextensive with Meriden city in New Haven County, Conn.
Miami, Fla.	Coextensive with Dade County, Fla.
Midland, Tex.	Coextensive with Midland County, Tex.
Milwaukee, Wis.	Consists of Milwaukee, Ozaukee, Washington, and Waukesha Counties, Wis.
Minneapolis-St. Paul, Minn.-Wis.	Consists of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright Counties, Minn. and St. Croix County, Wis.
Mobile, Ala.	Consists of Baldwin and Mobile Counties, Ala.
Modesto, Calif.	Coextensive with Stanislaus County, Calif.
Monroe, La.	Coextensive with Ouachita Parish, La.
Montgomery, Ala.	Consists of Autauga, Elmore, and Montgomery Counties, Ala.
Muncie, Ind.	Coextensive with Delaware County, Ind.
Muskegon-Norton Shores-Muskegon Heights, Mich	Consists of Muskegon and Oceana Counties, Mich.
Nashua, N.H.	Consists of Nashua city and Amherst, Hudson, Merrimack, and Milford towns in Hillsborough County, N.H.
Nashville-Davidson, Tenn.	Consists of Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson Counties, Tenn.

Nassau-Suffolk, N.Y.	Consists of Nassau and Suffolk Counties, N.Y.
New Bedford, Mass.	Consists of New Bedford city and Acushnet, Dartmouth, Fairhaven, and Freetown towns in Bristol County; and Lakeville, Marion, and Mattapoisett towns in Plymouth County, Mass.
New Britain, Conn.	Consists of New Britain city and Berlin, Plainville, and Southington towns in Hartford County, Conn.
New Brunswick-Perth Amboy-Sayreville, N.J.	Coextensive with Middlesex County, N.J.
New Haven-West Haven, Conn.	Consists of Clinton town in Middlesex County; and New Haven and West Haven cities and Bethany, Branford, East Haven, Guilford, Hamden, Madison, North Branford, North Haven, Orange, Wallingford, and Woodbridge towns in New Haven County, Conn.
New London-Norwich, Conn.-R.I.	Consists of Old Saybrook town in Middlesex County; New London and Norwich cities and Bozrah, East Lyme, Griswold, Groton, Ledyard, Lisbon, Montville, Old Lyme, Preston, Sprague, Stonington, and Waterford towns in New London County, Conn.; and Hopkinton and Westerly towns in Washington County, R.I.
New Orleans, La.	Consists of Jefferson, Orleans, St. Bernard, and St. Tammany Parishes, La.
New York, N.Y.-N.J.	Consists of Bronx, Kings, New York, Putnam, Queens, Richmond, Rockland, and Westchester Counties, N.Y. and Bergen County, N.J.
Newark, N.J.	Consists of Essex, Morris, Somerset, and Union Counties, N.J.
Newport News-Hampton, Va.	Consists of Hampton, Newport News, Poquoson, and Williamsburg cities and Gloucester, James City, and York Counties, Va.
Norfolk-Virginia Beach-Portsmouth, Va.-N.C.	Consists of Chesapeake, Norfolk, Portsmouth, Suffolk, and Virginia Beach cities, Va. and Currituck County, N.C.
Northeast Pennsylvania	Consists of Lackawanna, Luzerne, and Monroe Counties, Pa.
Norwalk, Conn.	Consists of Norwalk city and Weston, Westport, and Wilton towns in Fairfield County, Conn.
Odessa, Tex.	Coextensive with Ector County, Tex.
Oklahoma City, Okla.	Consists of Canadian, Cleveland, McClain, Oklahoma, and Pottawatomie Counties, Okla.
Omaha, Nebr.-Iowa	Consists of Douglas and Sarpy Counties, Nebr. and Pottawattamie County, Iowa
Orlando, Fla.	Consists of Orange, Osceola, and Seminole Counties, Fla.
Owensboro, Ky.	Coextensive with Daviess County, Ky.
Oxnard-Simi Valley-Ventura, Calif.	Coextensive with Ventura County, Calif.
Panama City, Fla.	Coextensive with Bay County, Fla.
Parkersburg-Marietta, W. Va.-Ohio	Consists of Wirt and Wood Counties, W. Va. and Washington County, Ohio
Pascagoula-Moss Point, Miss.	Coextensive with Jackson County, Miss.
Paterson-Clifton-Passaic, N.J.	Coextensive with Passaic County, N.J.
Pensacola, Fla.	Consists of Escambia and Santa Rosa Counties, Fla.
Peoria, Ill.	Consists of Peoria, Tazewell, and Woodford Counties, Ill.
Petersburg-Colonial Heights-Hopewell, Va.	Consists of Colonial Heights, Hopewell, and Petersburg cities and Dinwiddie and Prince George Counties, Va.
Philadelphia, Pa.-N.J.	Consists of Bucks, Chester, Delaware, Montgomery, and Philadelphia Counites, Pa.; and Burlington, Camden, and Gloucester Counties, N.J.
Phoenix, Ariz.	Coextensive with Maricopa County, Ariz.
Pine Bluff, Ark.	Coextensive with Jefferson County, Ark.
Pittsburgh, Pa.	Consists of Allegheny, Beaver, Washington, and Westmoreland Counties, Pa.
Pittsfield, Mass.	Consists of Pittsfield city and Adams, Cheshire, Dalton, Lanesborough, Lee, Lenox, and Stockbridge towns in Berkshire County, Mass.
Ponce, P.R.	Consists of Juan Diaz, Ponce, and Villalba Municipios, P.R.
Portland, Maine	Consists of Portland, South Portland, and Westbrook cities and Cape Elizabeth, Cumberland, Falmouth, Freeport, Gorham, Scarborough, Windham, and Yarmouth towns in Cumberland County; and Saco city and Old Orchard Beach town in York County, Maine
Portland, Oreg.-Wash.	Consists of Clackamas, Multnomah, and Washington Counties, Oreg. and Clark County, Wash.
Poughkeepsie, N.Y.	Coextensive with Dutchess County, N.Y.

Providence-Warwick-Pawtucket, R.I.-Mass.	Consists of Barrington, Bristol, and Warren towns in Bristol County; Warwick city and Coventry, East Greenwich, and West Warwick towns in Kent County; Jamestown town in Newport County; Central Falls, Cranston, East Providence, Pawtucket, Providence, and Woonsocket cities and Burrillville, Cumberland, Johnston, Lincoln, North Providence, North Smithfield, Scituate, and Smithfield towns in Providence County; and Narragansett, North Kingstown, and South Kingstown towns in Washington County, R.I.; Attleboro city and North Attleborough, Norton, Rehoboth, and Seekonk towns in Bristol County; Plainville town in Norfolk County; and Blackstone and Millville towns in Worcester County, Mass.
Provo-Orem, Utah	Coextensive with Utah County, Utah
Pueblo, Colo.	Coextensive with Pueblo County, Colo.
Racine, Wis.	Coextensive with Racine County, Wis.
Raleigh-Durham, N.C.	Consists of Durham, Orange, and Wake Counties, N.C.
Rapid City, S. Dak.	Consists of Pennington and Meade Counties, S. Dak.
Reading, Pa.	Coextensive with Berks County, Pa.
Reno, Nev.	Coextensive with Washoe County, Nev.
Richland-Kennewick-Pasco, Wash	Consists of Benton and Franklin Counties, Wash.
Richmond, Va.	Consists of Richmond city and Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, and Powhatan Counties, Va.
Riverside-San Bernardino-Ontario, Calif.	Consists of Riverside and San Bernardino Counties, Calif.
Roanoke, Va.	Consists of Roanoke and Salem cities and Botetourt, Craig, and Roanoke Counties, Va.
Rochester, Minn.	Coextensive with Olmsted County, Minn.
Rochester, N.Y.	Consists of Livingston, Monroe, Ontario, Orleans, and Wayne Counties, N.Y.
Rockford, Ill.	Consists of Boone and Winnebago Counties, Ill.
Sacramento, Calif.	Consists of Placer, Sacramento, and Yolo Counties, Calif.
Saginaw, Mich.	Coextensive with Saginaw County, Mich.
St. Cloud, Minn.	Consists of Benton, Sherburne, and Stearns Counties, Minn.
St. Joseph, Mo.	Consists of Andrew and Buchanan Counties, Mo.
St. Louis, Mo.-Ill.	Consists of St. Louis city and Franklin, Jefferson, St. Charles, and St. Louis Counties, Mo.; and Clinton, Madison, Monroe, and St. Clair Counties, Ill.
Salem, Oreg.	Consists of Marion and Polk Counties, Oreg.
Salinas-Seaside-Monterey, Calif.	Coextensive with Monterey County, Calif.
Salt Lake City-Ogden, Utah	Consists of Davis, Salt Lake, Tooele, and Weber Counties, Utah
San Angelo, Tex.	Coextensive with Tom Green County, Tex:
San Antonio, Tex.	Consists of Bexar, Comal, and Guadalupe Counties, Tex.
San Diego, Calif.	Coextensive with San Diego County, Calif.
San Francisco-Oakland, Calif.	Consists of Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties, Calif.
San Jose, Calif.	Coextensive with Santa Clara County, Calif.
San Juan, P.R.	Consists of Bayamon, Canovanas, Carolina, Catano, Guaynabo, Loiza, San Juan, Toa Baja, and Trujillo Alto Municipios, P.R.
Santa Barbara-Santa Maria-Lompoc, Calif.	Coextensive with Santa Barbara County, Calif.
Santa Cruz, Calif.	Coextensive with Santa Cruz County, Calif
Santa Rosa, Calif.	Coextensive with Sonoma County, Calif.
Sarasota, Fla.	Coextensive with Sarasota County, Fla.
Savannah, Ga.	Consists of Bryan, Chatham, and Effingham Counties, Ga.
Seattle-Everett, Wash.	Consists of King and Snohomish Counties, Wash.
Sherman-Denison, Tex.	Coextensive with Grayson County, Tex.
Shreveport, La.	Consists of Bossier, Caddo, and Webster Parishes, La.
Sioux City, Iowa-Nebr.	Consists of Woodbury County, Iowa and Dakota County, Nebr.
Sioux Falls, S. Dak.	Coextensive with Minnehaha County, S.D.
South Bend, Ind.	Consists of Marshall and St. Joseph Counties, Ind.
Spokane, Wash.	Coextensive with Spokane County, Wash.
Springfield, Ill.	Consists of Menard and Sangamon Counties, Ill.

Springfield, Mo.	Consists of Christian and Greene Counties, Mo.
Springfield, Ohio	Consists of Champaign and Clark Counties, Ohio
Springfield-Chicopee-Holyoke, Mass.-Conn.	Consists of Chicopee, Holyoke, Springfield, and Westfield cities and Agawam, East Longmeadow, Hampden, Longmeadow, Ludlow, Monson, Palmer, Southwick, West Springfield, and Wilbraham towns in Hampden County; Northampton city and Belchertown, Easthampton, Granby, Hadley, Hatfield, Southampton, and South Hadley towns in Hampshire County; Warren town in Worcester County, Mass.; and Somers town in Tolland County, Conn.
Stamford, Conn.	Consists of Stamford city and Darien, Greenwich, and New Canaan towns in Fairfield County, Conn.
Steubenville-Weirton, Ohio-W. Va.	Consists of Jefferson County, Ohio and Brooke and Hancock Counties, W. Va.
Stockton, Calif.	Coextensive with San Joaquin County, Calif.
Syracuse, N.Y.	Consists of Madison, Onondaga, and Oswego Counties, N.Y.
Tacoma, Wash.	Coextensive with Pierce County, Wash.
Tallahassee, Fla.	Consists of Leon and Wakulla Counties, Fla.
Tampa-St. Petersburg, Fla.	Consists of Hillsborough, Pasco, and Pinellas Counties, Fla.
Terre Haute, Ind.	Consists of Clay, Sullivan, Vermillion, and Vigo Counties, Ind.
Texarkana, Tex.-Texarkana, Ark.	Consists of Bowie County, Tex. and Little River and Miller Counties, Ark.
Toledo, Ohio-Mich.	Consists of Fulton, Lucas, Ottawa, and Wood Counties, Ohio and Monroe County, Mich.
Topeka, Kans.	Consists of Jefferson, Osage, and Shawnee Counties, Kans.
Trenton, N.J.	Coextensive with Mercer County, N.J.
Tucson, Ariz.	Coextensive with Pima County, Ariz.
Tulsa, Okla.	Consists of Creek, Mayes, Osage, Rogers, Tulsa, and Wagoner Counties, Okla.
Tuscaloosa, Ala.	Coextensive with Tuscaloosa County, Ala.
Tyler, Tex.	Coextensive with Smith County, Tex.
Utica-Rome, N.Y.	Consists of Herkimer and Oneida Counties, N.Y.
Vallejo-Fairfield-Napa, Calif.	Consists of Napa and Solano Counties, Calif.
Vineland-Millville-Bridgeton, N.J.	Coextensive with Cumberland County, N.J.
Waco, Tex.	Coextensive with McLennan County, Tex.
Washington, D.C.-Md.-Va.	Consists of District of Columbia; Charles, Montgomery, and Prince Georges Counties, Md; and Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park cities and Arlington, Fairfax, Loudoun, and Prince William Counties, Va.
Waterbury, Conn.	Consists of Thomaston, Watertown, and Woodbury towns in Litchfield County; and Waterbury city, Naugatuck borough, and Beacon Falls, Cheshire, Middlebury, Prospect, Southbury, and Wolcott towns in New Haven County, Conn.
Waterloo-Cedar Falls, Iowa	Coextensive with Black Hawk County, Iowa
West Palm Beach-Boca Raton, Fla.	Coextensive with Palm Beach County, Fla.
Wheeling, W. Va.-Ohio	Consists of Marshall and Ohio Counties, W. Va. and Belmont County, Ohio
Wichita, Kans.	Consists of Butler and Sedgwick Counties, Kans.
Wichita Falls, Tex.	Consists of Clay and Wichita Counties, Tex.
Williamsport, Pa.	Coextensive with Lycoming County, Pa.
Wilmington, Del.-N.J.-Md.	Consists of New Castle County, Del.; Salem County, N.J.; and Cecil County, Md.
Wilmington, N.C.	Consists of Brunswick and New Hanover Counties, N.C.
Worcester, Mass.	Consists of Worcester city and Auburn, Berlin, Boylston, Brookfield, Charlton, East Brookfield, Grafton, Holden, Leicester, Millbury, Northborough, Northbridge, North Brookfield, Oxford, Paxton, Shrewsbury, Spencer, Sterling, Sutton, Upton, Uxbridge, Webster, Westborough, and West Boylston towns in Worcester County, Mass.
Yakima, Wash.	Coextensive with Yakima County, Wash.
York, Pa.	Consists of Adams and York Counties, Pa.
Youngstown-Warren, Ohio	Consists of Mahoning and Trumbull Counties, Ohio

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