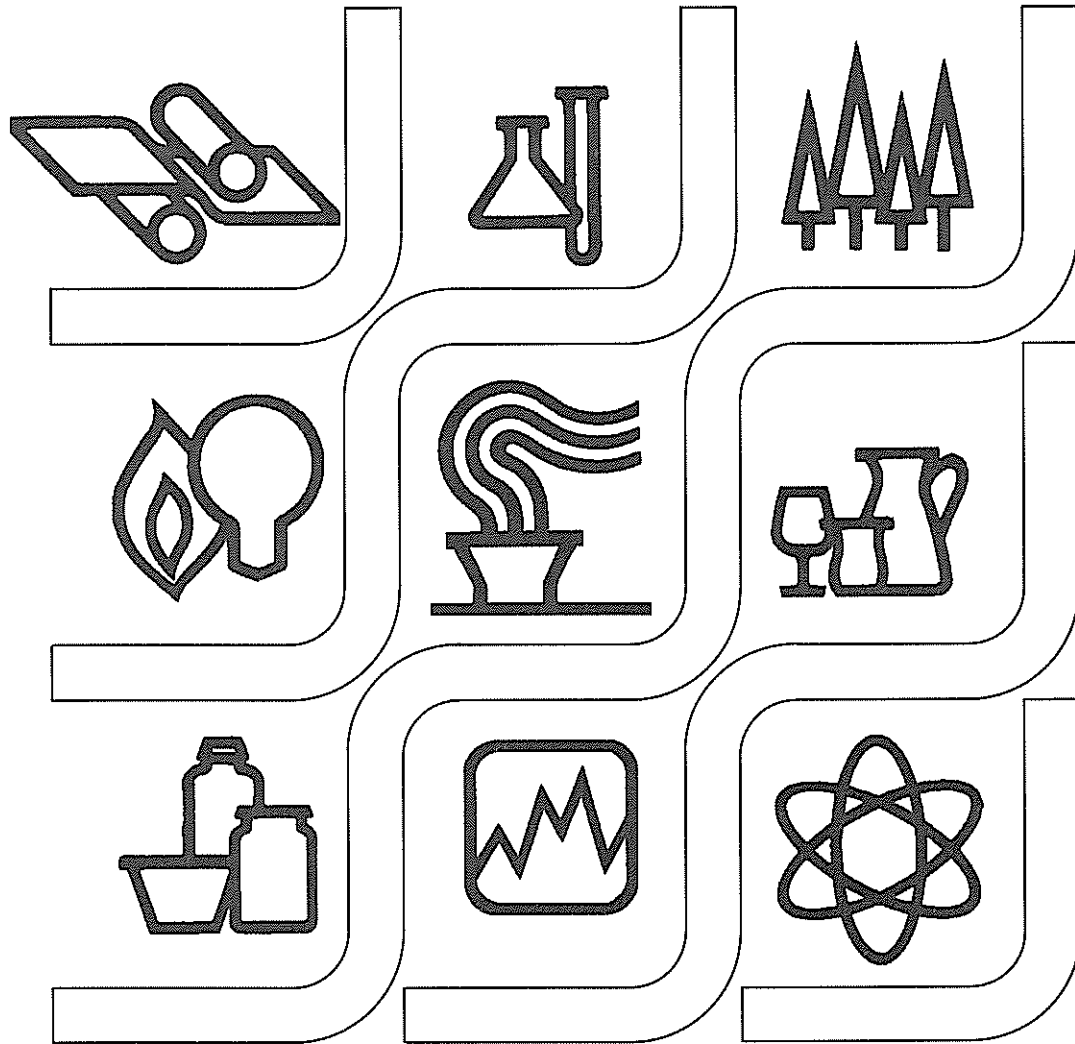




CURRENT INDUSTRIAL REPORTS  
**Pollution Abatement  
Costs and Expenditures, 1992**

MA200(92)-1



U.S. Department of Commerce  
Economics and Statistics Administration  
BUREAU OF THE CENSUS

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## Acknowledgments

This report was prepared under the direction of **John Berry**, Assistant Division Chief for Economic Indicator Programs, Industry Division. Within the Industry Division, the preparation of this report was performed under the supervision of **Thomas Flood**, Chief, Technology and Innovation Branch.

Review and analysis of the MA200, Survey of Pollution Abatement Costs and Expenditures data were performed by **Gretchen Dickson** with the assistance of **Jesse Havard** and **Carol Muschette**.

The electronic computer programs for the MA200 were developed under the direction of **Deborah Tasky**, Chief, Current Industry Programming Branch, assisted by **Anne Linonis**, **Steven Potemkin**, **Samuel Jones**, **Mark Markovic**, and **Nicholas Spanos**.

**Gretchen Dickson** developed the programming and processing system and conducted the review and analysis of the PA-2, Plant and Equipment Survey: Supplement for Pollution Abatement.

**Lillie M. Skinner** coordinated the various phases of the publication process.

The staff of the Administrative and Publications Services Division, **Walter C. Odom**, Chief, performed publication planning, design, composition, editorial review, and printing planning and procurement. **Cynthia G. Brooks** provided publication coordination and editing.

A special acknowledgment is due the many businesses whose cooperation was essential to the success of this report.

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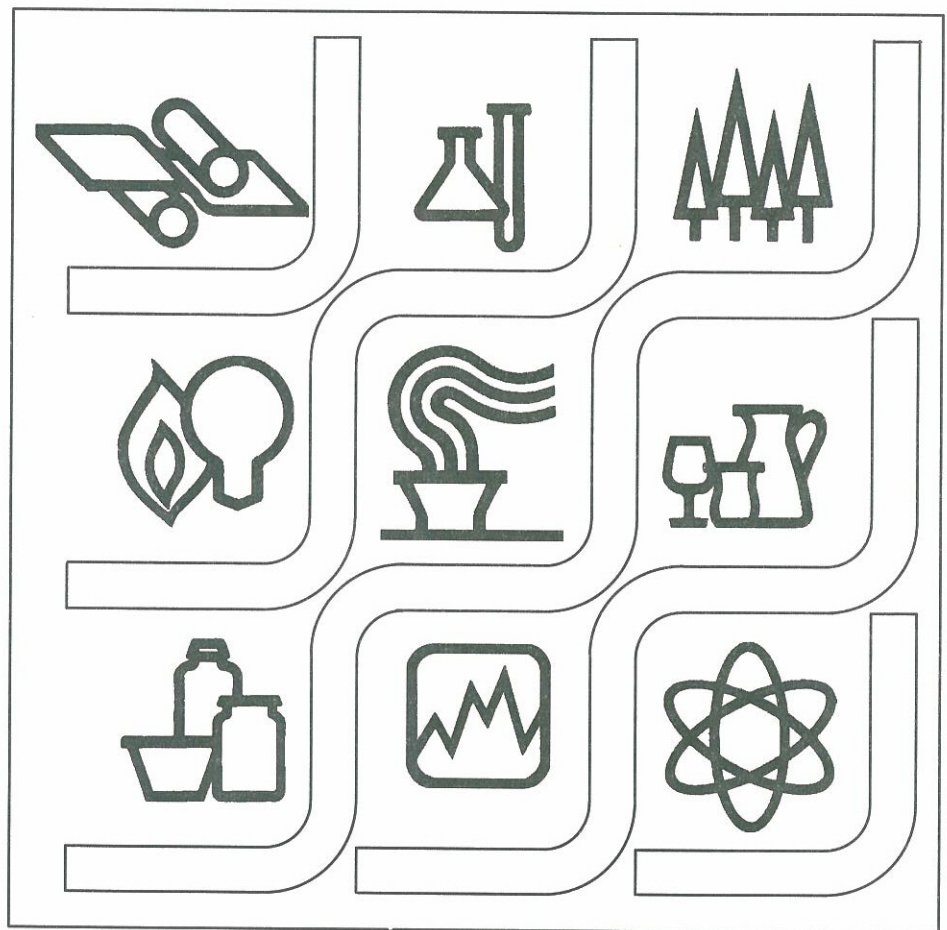
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Issued March 1994



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Ronald H. Brown, Secretary

**Economics and Statistics Administration**  
Paul A. London, Acting Under Secretary  
for Economic Affairs

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**SUGGESTED CITATION**

U. S. Bureau of the Census; Current Industrial Reports; MA200(92)-1; *Pollution Abatement Costs and Expenditures, 1992*; U. S. Government Printing Office; Washington, DC; 1994.

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# Introduction

## MANUFACTURING

Tables 1 through 13b present manufacturing pollution abatement costs and expenditures data. These data are collected on the Form MA200, Survey of Pollution Abatement Costs and Expenditures. The survey has been conducted annually by the Bureau of the Census since 1973, except for 1987.

### Summary of Survey Results

Pollution abatement capital expenditures by manufacturing establishments with 20 employees or more amounted to \$8,393 million in 1992. Of this total, \$7,867 million was attributable to a particular media: \$4,403 million for air, \$2,510 million for water, and \$954 million for solid/contained waste. Spending for the nonmedia and other was \$526 million.

Approximately 79 percent of the \$8,393 million new capital expenditures for pollution abatement was made by establishments classified in four major industry groups: Chemicals and Allied Products (Major Group 28), Petroleum and Coal Products (Major Group 29), Paper and Allied Products (Major Group 26), and Primary Metal Industries (Major Group 33).

In 1992, three States (Texas, California, and Louisiana) accounted for approximately 38 percent of total new pollution abatement capital expenditures. Texas comprised 18 percent of the total.

Operating costs related to pollution abatement activities totaled \$19,228. Of this amount, \$17,466 was attributable to a particular media: \$5,395 million for air, \$6,577 million for water, and \$5,494 million for solid/contained waste. Spending for the nonmedia and other was \$1,762 million.

The pollution abatement totals for the media for 1992 can be compared with the following in 1991: \$7,390 million in pollution abatement capital expenditures and \$17,309 million in pollution abatement operating costs. Total pollution abatement media capital expenditures increased 7 percent. Air and solid/contained waste capital expenditures increased 19 and 10 percent, respectively. Water capital expenditures decreased 11 percent. Total pollution abatement media operating costs showed an overall increase of \$158 million or 1 percent. Air operating costs increased 9 percent. Water operating costs increased 4 percent. Solid/contained waste operating costs decreased 9 percent.

### Information in the Tables

**Historic Tables.** Tables 1 and 2 show historic and summary data. Table 1 shows the data by major groups (two-digit industries), and table 2 shows the data by State.

**Detail Tables.** Pollution abatement capital expenditures (PACE) and pollution abatement operating costs (PAOC) are shown for the media air, water, and solid/contained waste and for the nonmedia and other. These data are shown for industries and States.

PACE data for the media air, water, and solid/contained waste are shown in tables 3 through 6c. PACE for the media totals are shown in table 3 at the two-, three-, and four-digit industry level. PACE media totals for States by major groups (two-digit industries) are shown in table 5. Detail for table 3 is shown in tables 4a through 4c at the major group level. Tables 6a through 6c show detail for table 5 at the State level.

Within the PACE detail tables 4a through 4c and 6a through 6c, the media capital expenditures are separated on the basis of abatement technique. The tables distinguish 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 production process enhancements (PPE). Separate expenditure data also are shown in the detail tables for expenditures to abate hazardous and nonhazardous pollutants.

For air expenditures, tables 4a (industry data) and 6a (State data) show data for the major types of air pollutants (particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead) as a group. If an air expenditure is not for one of the major types of air pollutants and is not hazardous, it is classified as other. Analysis of these data should take into account that, where expenditures occur for a single device that has the ability to abate more than one pollutant, the classification of the device is guided by the primary purpose for which the device was installed.

Pollution abatement operating costs (PAOC) data for the media air, water, and solid/contained waste are shown in tables 7 through 11b. PAOC for the media totals are shown in table 7 at the two-, three-, and four-digit industry level. PAOC media totals for States by major groups

(two-digit industries) are shown in table 9. Detail for table 7 is shown in tables 8a, 8b, and 8c at the major group level. Tables 10a, 10b, and 10c show detail for table 9 at the State level.

Within the PAOC detail tables, data are shown for expenditures to abate hazardous and nonhazardous pollutants. Within nonhazardous water and nonhazardous solid/contained waste, costs are shown as payments to industry and payments to government.

Tables 11a and 11b tabulate the pollution abatement operating cost data for the media by kind of cost instead of by media. Tables 11a and 11b show data for all media by kind of cost: depreciation; salaries and wages; fuel and electricity; contract work/services; and materials, leasing, and other costs. Table 11a shows two-, three-, and four-digit industry data; and table 11b shows State by major group data.

Pollution abatement nonmedia and other capital expenditures are shown in tables 12a and 12b. Table 12a shows data by major group (two-digit industry level). Table 12b shows data by State. The nonmedia pollution abatement expenditures are for underground storage tanks and site cleanup. Other expenditures include noise abatement, radiation abatement, multimedia, and not elsewhere classified (n.e.c.). Multimedia expenditures are for the abatement of pollutants that cross media.

Pollution abatement nonmedia and other operating costs are shown in tables 13a and 13b. Table 13a shows data by major group (two-digit industry level). Table 13b shows data by State. The nonmedia and other are described for site cleanup, noise abatement, radiation abatement, multimedia, and n.e.c. The 1993 publication will include data on pollution abatement operating costs for underground storage tanks.

### Changes in Data Collection From the 1991 to the 1992 Survey

The 1992 MA-200 survey form differs from previous years. These changes may affect the year-to-year comparisons of some of the results.

Some of the general terminology and definitions are changed or new:

Pollution abatement is redefined as "... for the purpose of reducing or eliminating unwanted emissions or wastes that are created by the production process and harmful to the environment or the removal of pollution created by production in prior years. For this survey, only expenditures with the primary purpose of protecting the environment are included." The revised pollution abatement definition replaces a reference to "pollutants" in prior definitions with "unwanted emissions or wastes." It expands the prior definition by adding the

qualification "harmful to the environment" to the qualification "created by the production process." The definition then goes a step further and specifies that expenditures qualify for reporting only if the *primary purpose* is environmental protection. It adds the reporting of expenditures to remove pollution created by production in prior years.

The techniques for pollution abatement are clarified. "Prevention" is changed to "source reduction" and "waste minimization." Definitions for these two new terms are provided on the 1992 MA-200 survey form. "Collection/disposal" and "recycling" are now defined.

Instructions and the type of data collected for capital expenditures for the media are changed:

Capital expenditures now include a measure of "end of line" and "production process enhancements" (formerly changes-in-production process) for solid/contained waste as well as for air and water. New "special instructions" explain how to report production process enhancement expenditures if it is not feasible to report only the portion intended for environmental protection.

"Percent hazardous" is now collected for water pollution abatement capital expenditures as well as for air and solid/contained waste.

The seven types of pollutants data collected for air pollution capital expenditures are combined into three categories:

1. Hazardous
2. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead
3. Other nonhazardous air pollutants

The instructions for capital expenditures clarify that "construction in progress intended for environmental protection" is reportable.

The instructions also clarify that "recycling equipment if your primary product is recycling" is *not* reportable.

The instructions and items for the pollution abatement operating costs for the media are also revised:

The operating cost categories are changed for 1992. Costs for "fuel and electricity" are separate from "materials and supplies." "Services," now termed "contract work/services," is separate from "equipment leasing and other costs." "Materials and supplies" and "equipment leasing and other costs" are combined into "materials, leasing, and miscellaneous." "Labor" was renamed "salaries and wages" to emphasize that dollars spent on environmental administration are now reported in this category.



"Percent hazardous" is now collected for air and water as well as for solid/contained waste.

Form instructions clarify that the following expenses are reportable for 1992:

- Incremental costs for consumption of environmentally preferable materials and fuels
- Conducting environmental studies for development or expansion
- Compliance and environmental auditing
- Developing pollution abatement operating procedures

Additional instructions explain that "taxes, fines, permits, legal fees, and superfund taxes and contributions" are *not* reportable.

Though not specified in the prior-year instructions, testing and monitoring procedures and equipment were excluded from previous surveys. These costs and expenditures are reportable for 1992.

"Cost recovered" is now termed "cost offsets." These offsets are pollution abatement operating expenses recovered as a result of pollution abatement techniques. The definition is clarified for 1992 to specify that cost offsets must be related to production and for environmental protection.

This report shows pollution abatement expenditures for "nonmedia" and "other" for the first time. "Nonmedia" includes data for underground storage tanks and site cleanup. "Other" expenditures are for noise abatement, radiation abatement, multimedia, and not elsewhere classified (n.e.c). "Multimedia" expenditures are for the abatement of pollutants that cross media.

## Scope

The survey covers plants classified in manufacturing industries<sup>1</sup> by the annual survey of manufactures (ASM) with the following specific differences:

1. Establishments in Major Group 23, Apparel and Other Textile Products, are excluded from the pollution abatement survey. These establishments operate primarily in rented quarters where the abatement of pollution is generally arranged by the landlord.
2. The sample does not include establishments with fewer than 20 employees. Early surveys showed that establishments with fewer than 20 employees contributed only about 2 percent to the pollution estimates while constituting more than 10 percent of the sample size. No adjustment is made to account for these establishments.

<sup>1</sup>Establishments are classified in industries by industry definitions described in the 1987 edition of the *Standard Industrial Classification (SIC) Manual* published by the Office of Management and Budget. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.)

## Methodology

The 1992 survey results are based upon a probability sample panel of approximately 17,000 establishments selected as a subsample of the 1989 ASM. The ASM is, in turn, a probability sample selected from the 1987 Census of Manufactures, which is supplemented annually by new establishments identified by the Social Security Administration. A subsample of these new establishments is added annually to the pollution abatement survey sample.

The sample selection of the pollution abatement survey panel is a two-stage operation. The selection of the ASM panel represents the first stage, and the selection of the pollution abatement survey panel from the ASM is the second stage. Probabilities of selection were assigned proportionate to the ASM weighted value of shipments which satisfied predetermined reliability constraints. These reliability constraints were subject to the limitation that the overall sample size not exceed 17,000 establishments. Selection is within four-digit industries. When selected, an establishment's subsampling weight is the inverse of its probability of selection. The product of this weight and its ASM weight represents the final survey weight for the establishment. Subsampling probabilities were adjusted prior to sampling if this composite weight exceeded 500.

## Revisions

Statistics for previous years may be revised, primarily as the result of corrected data from respondents.

## Limitations of the Data

**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 estimate 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 are provided by the estimated relative standard errors of 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) may be used to define confidence interval ranges that could be expected to include comparable complete coverage value for 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 two standard errors below to two 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 \$.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, about 95 percent confidence that the interval \$19.2 to \$20.8 million includes the complete coverage total, and almost certain confidence that the interval \$18.8 to \$21.2 million includes the complete coverage total.

The estimated absolute standard errors of the ratio of year-to-year change are also presented for these same key items. These estimated errors are derived from the variances of the individual yearly estimates, and thus are overestimates since the correlations from year-to-year estimates are not accounted for. Since this year-to-year change is itself a percentage measure, the absolute standard error of this measure is displayed rather than the relative standard error to avoid confusion.

For example, if an estimated total for 1992 is \$22.0 million with an associated relative standard error of 2 percent, and if an estimated total for 1991 is \$20.0 million with an associated relative standard error of 3 percent, the implied change is 10 percent, and the absolute standard error of year-to-year change is 3 percent on the 10 percent.

**Stratum Variation.** To maintain a minimal sample, the universe is divided into three strata. Stratum 1 contains four-digit industries with historically high pollution abatement expenditures. The sample selected to represent stratum 1 is designed to yield estimates for each four-digit industry in the stratum with a specified level of expected reliability.

Stratum 3 contains four-digit industries with little or no historic pollution expenditures. A small sample represents this stratum. Because of the minimal expenditures, estimates for the four-digit industries are not published at that level. The estimates are included in the two- and three-digit level data.

Stratum 2 contains all four-digit industries not in stratum 1 or 3. The sample selected to represent stratum 2 is designed to yield estimates for all three-digit manufacturing industries with a specified level of expected reliability.

Plants in stratum 2 and especially stratum 3 tend to have high weights resulting from their lower probabilities of selection. Thus, more data variability is seen in industries with historically low pollution abatement. The confidence interval ranges reflect this observation. For example, in table 11, for industry 2013, the pollution abatement operating cost is \$31.2 million with a relative standard error of 23 percent. The standard error is \$7.2 million. There is 67 percent confidence that the interval \$24.0 to \$38.4 million includes the complete coverage total; about 95 percent confidence that the interval \$16.8 to \$45.6 million includes the complete coverage total; and almost certain confidence that the interval \$9.6 to \$52.8 million includes the complete coverage total.

Data variability decreases at higher tabulations of the data. The three-digit industry group 201 consists of the four-digit industry 2013, used in the example above, and industries 2011 and 2015. Continuing with the example, the relative standard error for the four-digit industry 2013 is 23 percent. At the three-digit level, the relative standard error drops to 6 percent.

**Response Limitations.** There are limitations resulting from the accuracy of survey respondents' reporting and constraints on surveying capabilities. Specific response limitations are:

1. **Production process enhancements (PPE) capital expenditures.** The survey respondent is instructed to report "the pollution abatement portion of the installed cost of enhancement projects intended for environmental protection. Estimate the pollution abatement portion as the extra cost of pollution abatement features in structures and equipment (i.e., your actual spending less what you would have spent without the pollution abatement features built in)." Telephone conversations and interviews with survey respondents indicate that estimating such an incremental cost is difficult in many instances. The net effect of this reporting problem is not known; thus, the data user should consider this limitation when interpreting the PPE data.
2. **Cost offsets.** This item attempts to measure how much of pollution abatement costs are recovered through reuse or sale of recovered materials and energy. Part of the instructions state: "Cost offsets must be related to production and for environmental protection." This qualification makes it imperative that the data preparer be aware of the original motivation of the decision to minimize waste or recover energy in order to adequately complete the form. The Bureau of the Census believes that this information is not always known.
3. **Operating costs for pollution abatement.** The survey respondent is asked to provide the following data separately: depreciation, salaries and wages, fuel and

electricity, contract work/services, and materials, 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. Thus, these data must be estimated from other information.

4. **Nonmedia costs and expenditures.** Caution should be used in interpreting site cleanup data. Much of media, nonmedia, and other pollution abatement expenditures can be linked to laws and regulations. The expenditures are predictable, and industry estimates are reliable within the standard errors. Many site cleanup expenditures are related to laws, and, therefore, are predictable by industry. However, some site cleanup incidents are the result of accidents. This makes the data more volatile than the media, underground storage tanks, and other pollution abatement expenditures data which are generally relatable to existing and pending legislation. Note that standard errors are given only for key measures, not for specific types of pollution abatement. In addition, there are abandoned sites under site cleanup, but since no plants are located on or specifically associated with the sites, the expenses are not covered by this survey.
5. **Air capital expenditures for major group 29.** The air capital expenditures for Major Group 29, Petroleum and Coal Products, include expenditures to meet the clean fuel requirements of the Clean Air Act. Expenditures for equipment and structures yielding cleaner fuel generally also achieve pollution abatement in the production process. Thus, it is generally not possible to separate clean fuel expenditures from pollution abatement expenditures for the production process.

**Operational Errors.** In addition to the response limitations, the estimates are subject to various operational errors; e.g., errors of collection, reporting, and transcription. The operational errors would also occur if a complete canvass were conducted under the same conditions used for this survey. Explicit measures of the effects of the operational errors 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 reasonability and consistency.

## NONMANUFACTURING

Table 14 and tables 15a through 15d present nonmanufacturing pollution abatement capital expenditures data. The data are collected on the Form PA-2, Plant and Equipment Survey: Supplement for Pollution Abatement. The Bureau of the Census has conducted the survey annually since 1988. Prior to 1988, the Bureau of Economic Analysis conducted the survey.

## Summary of Survey Results

In 1992, pollution abatement capital expenditures for the media, nonmedia, and other by nonmanufacturing companies amounted to \$405 million for mining, \$4,367 million for petroleum, and \$3,038 million for electric utilities. Pollution abatement capital expenditures for the media air, water, and solid/contained waste amounted to \$318 million for mining, \$3,874 million for petroleum, and \$2,887 million for electric utilities. This represented a 16 percent increase, a 9 percent increase, and a 49 percent increase, respectively, compared with the prior year. Air capital expenditures showed gains of 11 percent for petroleum and 85 percent for electric utilities and a decrease of 10 percent for mining. Water capital expenditures showed an increase of 21 percent for mining and decreases of 8 percent for petroleum and 1 percent for electric utilities. Solid/contained waste capital expenditures rose 84 percent for mining, 79 percent for petroleum, and 18 percent for electric utilities. Nonmedia and other expenditures were not collected prior to 1992.

## Information in the Tables

**Historic Table.** Table 14 shows pollution abatement capital expenditures for the media air, water, and solid/contained waste totals and for total nonmedia and other by industry. Table 14 also shows new plant and equipment data by industry.

**Detail Tables.** Detail for table 14 is shown in tables 15a through 15d. Within tables 15a through 15c, the media capital expenditures are separated on the basis of abatement technique and by hazardous and nonhazardous expenditures. For air expenditures (table 15a), data also are shown as a group for the major types of air pollutants: particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead. If an air expenditure is not for one of the major types of air pollutants and is not hazardous, it is classified as other. In table 15d, nonmedia and other abatement expenditures are shown for underground storage tanks, site cleanup, noise pollution, radiation, multimedia, or n.e.c. types of pollutants.

## Changes in Data Collection From the 1991 to the 1992 Survey

The 1992 PA-2 survey form differs from previous years. These changes may affect the year-to-year comparisons of some of the results.

Some of the general terminology and definitions are changed or new:

Pollution abatement is redefined as ". . . for the purpose of reducing or eliminating unwanted emissions or wastes that are created by the production process

and harmful to the environment or the removal of pollution created by production in prior years. For this survey, only expenditures with the primary purpose of protecting the environment are included." The revised pollution abatement definition replaces a reference to "pollutants" in prior definitions with "unwanted emissions or wastes." It expands the prior definition by adding the qualification "harmful to the environment" to the qualification "created by the production process." The definition then goes a step further and specifies that expenditures qualify for reporting only if the *primary purpose* is environmental protection. It adds the reporting of expenditures to remove pollution created by production in prior years.

The techniques for pollution abatement are clarified. "Prevention" is changed to "source reduction" and "waste minimization." Definitions are provided on the form for these. "Collection/disposal" and "recycling" are now defined.

Instructions and the type of data collected for capital expenditures for the media are changed:

Capital expenditures now include a measure of "end of line" and "production process enhancements" (formerly changes-in-production process) for solid/contained waste as well as for air and water. New "special instructions" explain how to report production process enhancement expenditures if it is not feasible to report only the portion intended for environmental protection.

"Percent hazardous" is now collected for air and water pollution abatement capital expenditures as well as for solid/contained waste.

Type-of-pollutants data are now collected for air pollution capital expenditures. Air pollutants are collected by three categories:

1. Hazardous
2. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead
3. Other nonhazardous air pollutants

The instructions clarify that "research and development" is *not* reportable.

Though not specified in the prior-year instructions, expenditures for testing and monitoring equipment were excluded from previous surveys. These expenditures are reportable for 1992.

This report shows pollution abatement expenditures for "nonmedia" and "other" for the first time. The "nonmedia" include data for underground storage tanks and site

cleanup. "Other" expenditures are for noise abatement, radiation abatement, multimedia, and not elsewhere classified. "Multimedia" expenditures are for the abatement of pollutants that cross media.

### Scope

The survey covers companies classified in mining, petroleum, and electric utility industries and includes all operations of the company. A company's capital expenditures are assigned to a single industry in accordance with the standard industrial classification (SIC) of the company's principal product or service. For mining, the survey covers the four SIC major groups: 10, Metal Mining; 12, Coal Mining; 13, Oil and Gas Extraction; and 14, Nonmetallic Minerals, Except Fuels. For petroleum, the survey covers SIC Major Group 29, Petroleum and Coal Products. The survey of pollution abatement expenditures in nonmanufacturing also covers SIC major group 29 used in the manufacturing survey, but the data differ. The manufacturing survey collects data at the plant level and represents only manufacturing operations of companies, while the PA-2 collects data at the company level and may cover the petroleum extraction and distribution network of a company. For electric utilities, the survey covers SIC Industry Groups 491, Electric Services; and 493, Combination Utility Services, with the exception of Rural Electric Administration utilities.

### Methodology

The total new plant and equipment expenditures shown in table 14 are estimates from the Plant and Equipment Expenditures Survey (P&E) conducted by the Bureau of the Census. See the U. S. Department of Commerce News, Wednesday, April 10, 1991, CB91-125, PESVY(90)-4 for a description of the P&E's coverage and methodology. The same mail panel is used for the P&E and its pollution abatement supplement, the PA-2. Spending ratios derived from the data collected on the PA-2 are applied to the P&E estimates to yield the total new pollution abatement capital expenditures estimates.

### Limitations of the Data

The data are subject to various response and operational errors; e.g., errors of collection, reporting, and transcription. 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 reasonability and consistency.

### SELECTED INDUSTRIAL AIR POLLUTION CONTROL EQUIPMENT

Table 16 presents Selected Industrial Air Pollution Control Equipment: 1988 to 1992. These data are collected by

the Bureau of the Census annually on the Current Industrial Reports Form MA35J. This information is provided for reference. For more detail, see the MA35J annual publication.

### Scope

This survey covers firms engaged in the manufacture of selected industrial air pollution control equipment.

### Methodology

The statistics in table 16 were collected by mail on Form MA35J. The survey panel includes all known manufacturers of the selected products specifically designed for use in air pollution control, approximately 100 companies.

### Revisions

Statistics for previous years may be revised, primarily as the result of corrected data from respondents.

### Limitations of the Data

The data are subject to various response and operational errors; e.g., errors of collection, reporting, and transcription. However, it is believed that most of the significant errors are identified by the computer edit and corrected in the course of the Census Bureau's review of the data for reasonableness and consistency.

### QUESTIONS CONCERNING THIS REPORT

Please direct questions concerning data in this report to the Bureau of the Census, Industry Division, Federal Office Building 4, Room 2105, Washington, DC 20233, or call the Technology and Innovation Branch on 301-763-1755.

### TERMINOLOGY AND ABBREVIATIONS

For an explanation of the terms used in this report, see appendixes A and B, which are reproductions of the report forms MA-200 and PA-2, including instructions.

The following abbreviations and symbols appear frequently in the tables:

-	Represents zero
(D)	Withheld to avoid disclosing operations of individual companies
(Z)	Less than half the unit shown
(X)	Not applicable
(NA)	Not available
EOL	End of line
n.e.c.	Not elsewhere classified
PACE	Pollution abatement capital expenditures
PAO <sup>Ⓒ</sup>	Pollution abatement operating costs
PPE	Production process enhancements
r	Revised by 5 percent or more from previously published figures

Figure 1.  
Pollution Abatement Capital Expenditures by  
Major Group and Media: 1988 to 1992

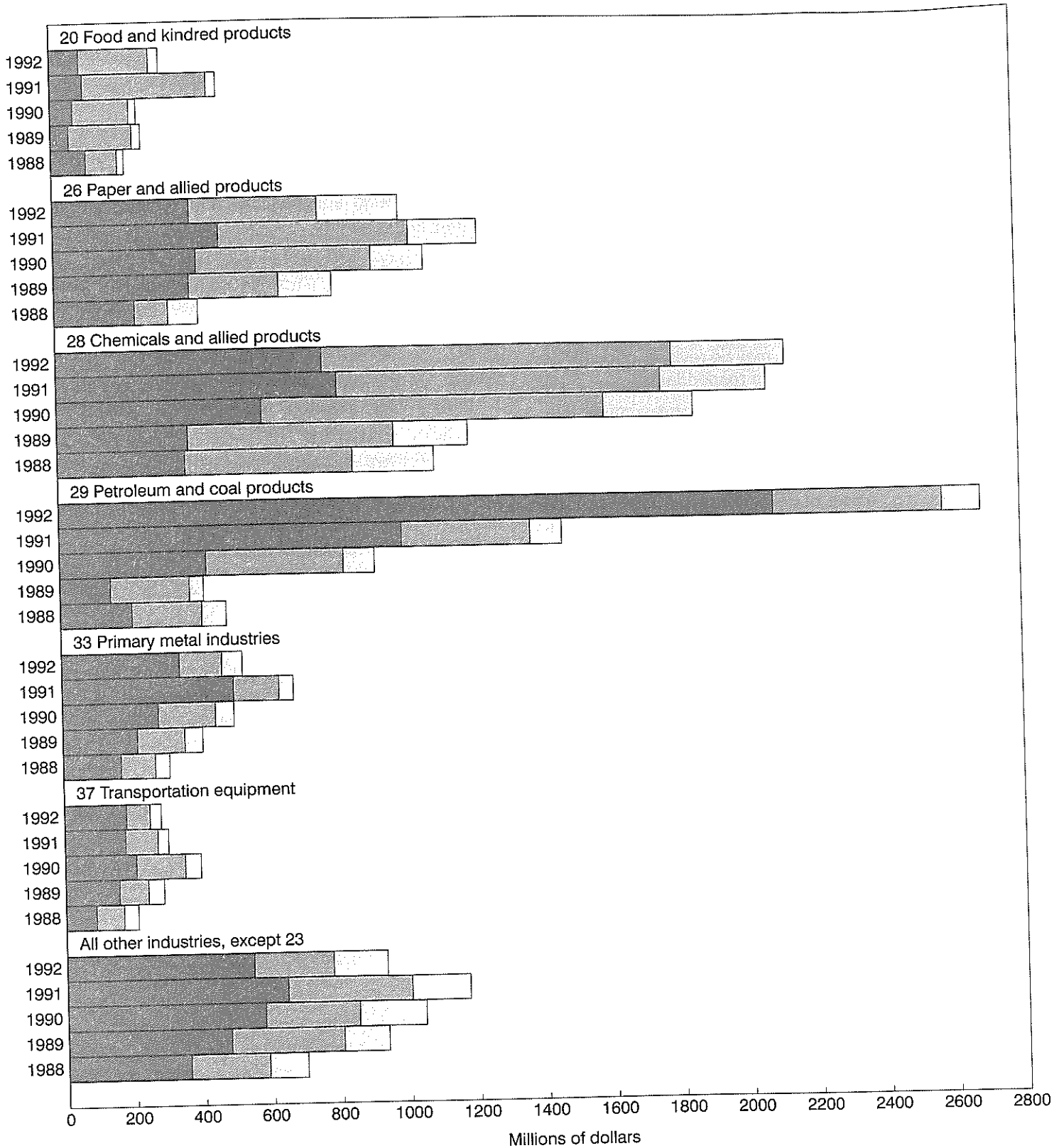


Figure 2.  
Pollution Abatement Capital Expenditures by State: 1992

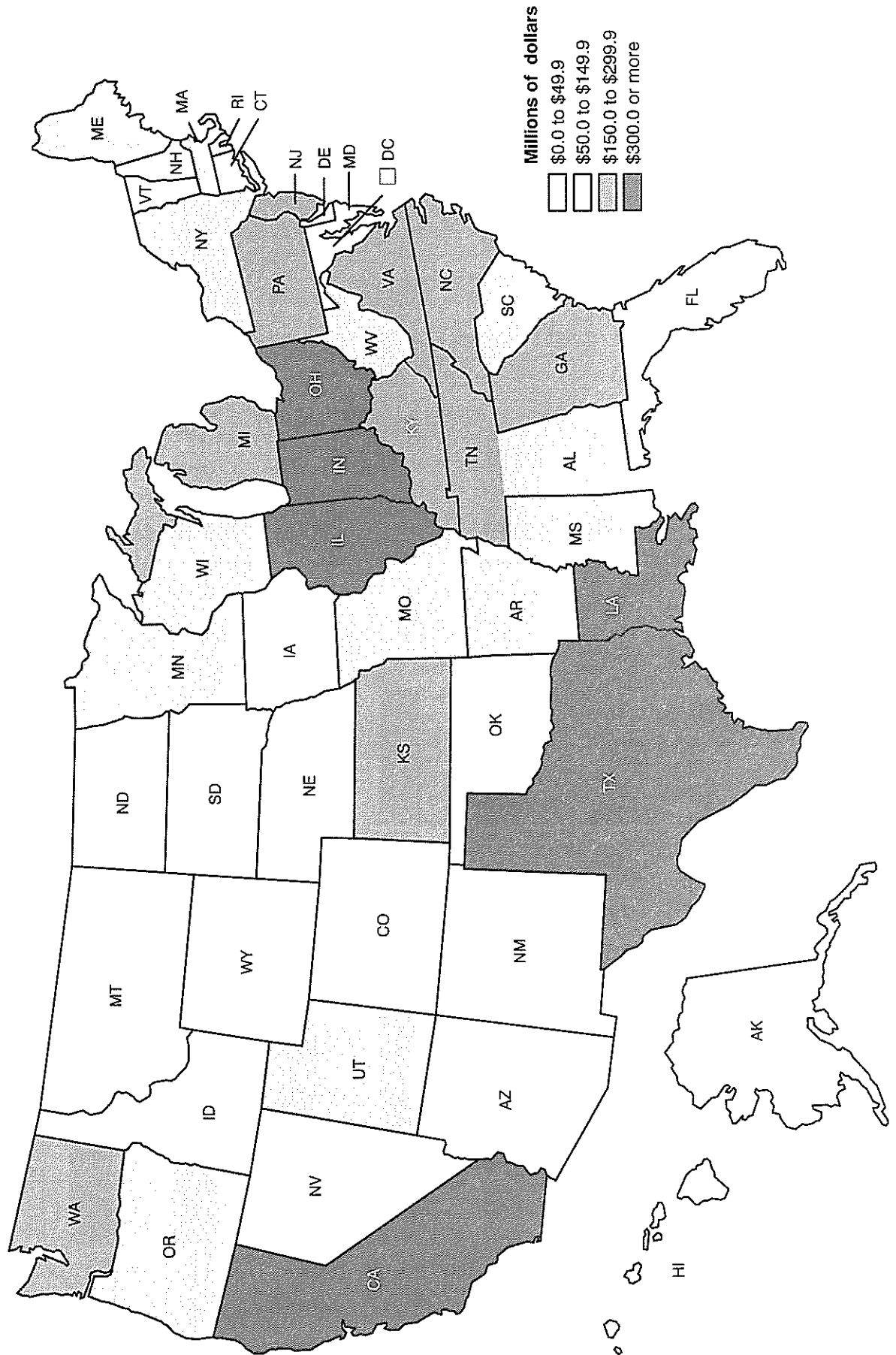


Figure 3. Pollution Abatement Capital Expenditures (PACE) and Operating Costs (PAOC) by Major Group and Media: 1992

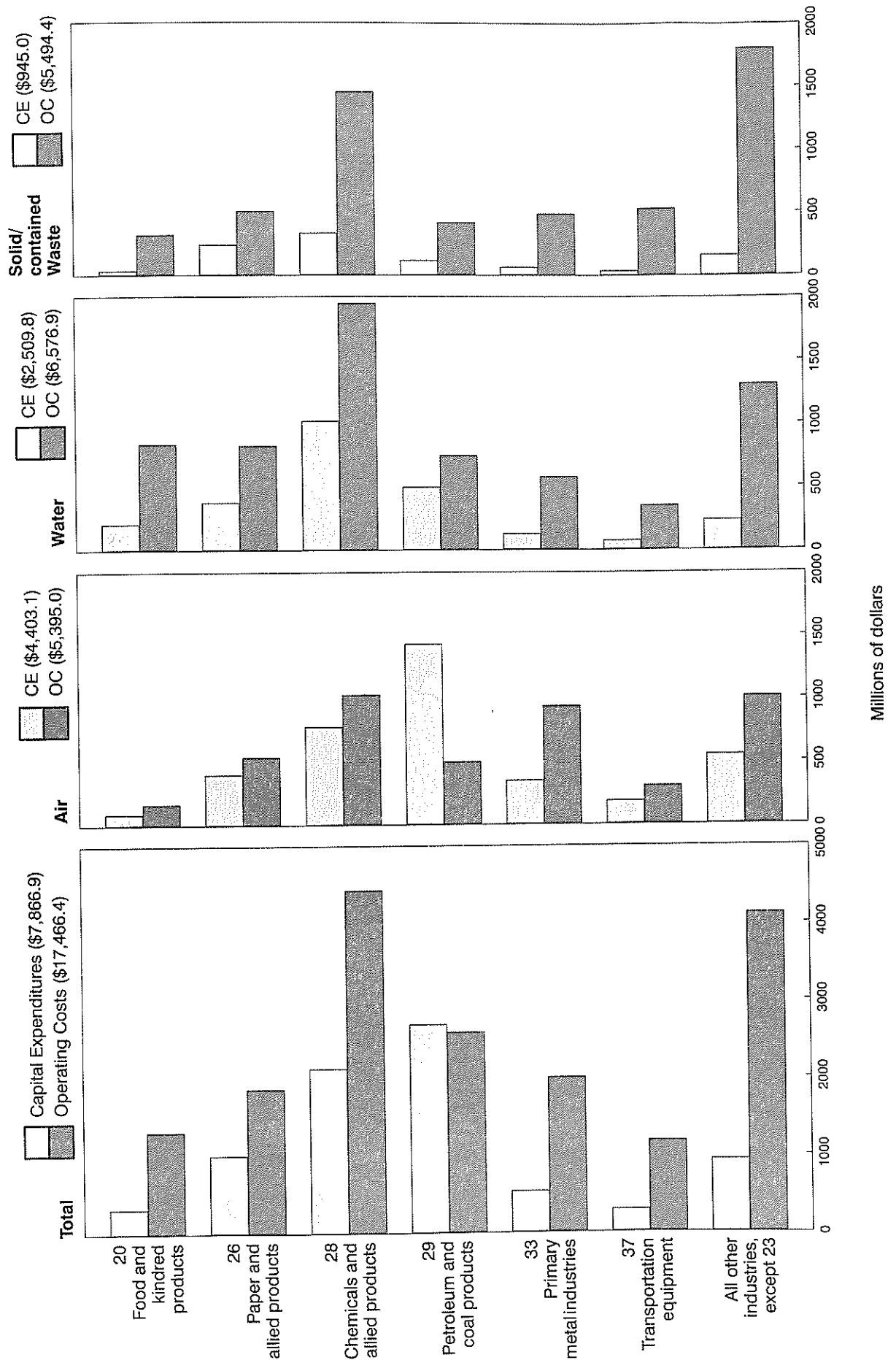
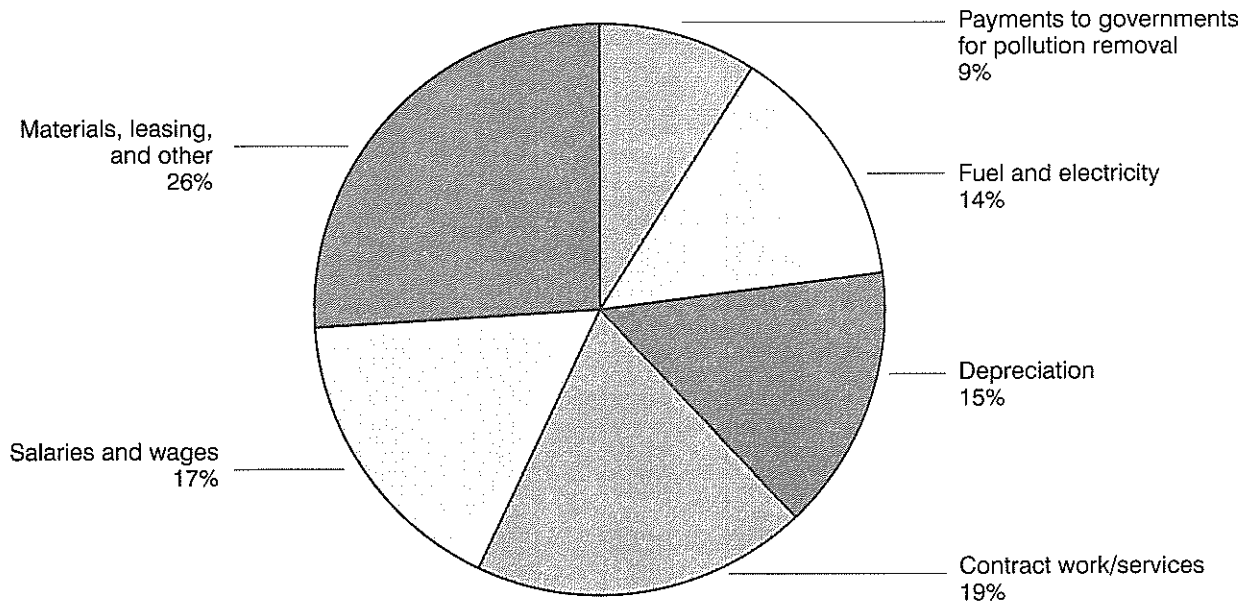




Figure 4.  
**Pollution Abatement Operating Costs by Kinds of Cost  
for All Industries: 1992**





this table cover manufacturing establishments with 20 or more employees. See introductory text for a detailed description of survey coverage and for the meaning of abbreviations and symbols ]

Pollution abatement operating costs (PAOC) <sup>2</sup>						Standard error of change (percent)		Standard error of estimate (percent)		SIC code
Total PAOCNM <sup>4</sup>	Media				Nonmedia and other	PACE	PAOC	PACE	PAOC	
	Total	Air	Water	Solid/contained waste						
19 228.0 (NA) (NA) (NA) (NA) (NA)	17 466.4 17 308.9 17 070.7 15 625.6 14 008.2	5 395.0 4 955.6 5 010.9 4 694.2 4 466.5	6 576.9 6 345.0 6 416.4 5 853.4 5 275.9	5 494.4 6 008.3 5 643.4 5 078.0 4 265.8	1 761.6 (NA) (NA) (NA) (NA)	5 4 4 6 (X)	2 2 2 2 (X)	3 4 2 3 4	2 4 2 2 2	1992 1991 1990 1989 1988
1 340.1 (NA) (NA) (NA) (NA) (D) (NA) (NA) (NA) (NA)	1 312.0 1 254.2 1 108.8 1 056.2 1 160.0 33.5 48.4 44.8 42.4 37.6	162.7 149.6 145.9 137.4 157.8 11.2 16.4 15.9 14.1 12.4	835.7 788.5 692.4 663.5 673.3 10.8 13.7 13.3 13.5 14.8	313.6 316.1 270.4 255.3 328.9 11.5 18.3 15.6 14.9 10.4	28.1 (NA) (NA) (NA) (NA) (D) (NA) (NA) (NA) (NA)	28 53 12 27 (X) 94 11 8 53 (X)	5 4 3 6 (X) 13 2 4 17 (X)	7 42 11 12 19 15 36 30 40 1	3 5 4 4 5 6 18 17 15 2	1992 20 1991 1990 1989 1988 1992 21 1991 1990 1989 1988
284.2 (NA) (NA) (NA) (NA)	256.2 213.7 186.3 185.9 177.0	38.1 36.1 26.2 25.3 30.5	152.5 123.5 114.7 109.4 98.8	65.7 54.1 57.5 51.3 47.6	7.9 (NA) (NA) (NA) (NA)	20 47 38 32 (X)	11 7 5 10 (X)	10 32 25 18 11	4 9 8 7 6	1992 22 1991 1990 1989 1988
268.0 (NA) (NA) (NA) (NA)	243.0 298.4 259.3 270.0 236.1	89.3 91.1 86.2 88.4 84.0	49.5 34.8 37.1 38.6 57.6	104.2 172.6 136.0 143.0 94.5	25.0 (NA) (NA) (NA) (NA)	29 64 82 62 (X)	12 10 8 15 (X)	12 42 25 44 15	5 13 12 10 9	1992 24 1991 1990 1989 1988
126.0 (NA) (NA) (NA) (NA)	118.5 136.2 140.8 132.6 118.4	43.0 45.9 50.5 50.4 33.8	14.3 24.3 23.4 25.8 12.4	61.2 66.0 66.9 56.4 72.3	7.5 (NA) (NA) (NA) (NA)	20 37 68 21 (X)	14 5 8 28 (X)	15 23 35 26 30	6 16 16 16 20	1992 25 1991 1990 1989 1988
1 896.2 (NA) (NA) (NA) (NA)	1 860.7 1 635.0 1 606.8 1 449.0 1 343.3	535.6 400.8 397.5 388.1 372.4	822.7 790.7 788.3 686.8 627.7	502.4 443.5 421.0 374.2 343.2	35.5 (NA) (NA) (NA) (NA)	5 4 4 6 (X)	6 2 3 5 (X)	6 3 3 2 3	4 4 4 4 3	1992 26 1991 1990 1989 1988
260.0 (NA) (NA) (NA) (NA)	239.0 228.1 240.7 281.6 206.4	85.6 87.7 70.5 67.3 72.0	36.5 30.3 30.6 36.2 34.2	117.0 110.2 139.6 178.1 100.3	21.0 (NA) (NA) (NA) (NA)	18 13 45 10 (X)	11 14 10 18 (X)	13 12 23 7 18	4 11 10 11 8	1992 27 1991 1990 1989 1988
4 862.2 (NA) (NA) (NA) (NA) (NA)	4 425.1 4 046.9 3 943.4 3 509.2 3 074.9	1 026.9 879.6 841.8 794.0 706.4	1 946.8 1 786.9 1 799.0 1 613.8 1 428.5	1 451.3 1 380.5 1 302.5 1 101.4 940.1	437.1 (NA) (NA) (NA) (NA)	3 5 5 9 (X)	4 3 2 3 (X)	3 3 4 2 8	3 3 2 2 2	1992 28 1991 1990 1989 1988
3 190.8 (NA) (NA) (NA) (NA) (NA)	2 585.4 2 849.0 2 704.9 2 170.0 2 005.5	1 428.9 1 464.7 1 472.2 1 258.2 1 175.8	742.8 793.9 701.9 578.7 561.7	413.7 590.4 530.8 333.0 268.0	605.4 (NA) (NA) (NA) (NA)	11 3 7 3 (X)	4 2 4 2 (X)	6 2 3 3 2	4 3 4 2 2	1992 29 1991 1990 1989 1988
403.9 (NA) (NA) (NA) (NA)	379.6 440.9 427.6 403.3 277.9	105.7 121.0 96.6 85.3 62.5	73.3 76.9 113.4 99.6 62.2	200.5 243.0 217.6 218.4 153.3	24.3 (NA) (NA) (NA) (NA)	39 22 17 29 (X)	9 14 4 15 (X)	27 20 15 12 11	5 9 10 9 6	1992 30 1991 1990 1989 1988
53.9 (NA) (NA) (NA) (NA)	53.5 45.9 48.9 41.6 23.1	3.7 2.1 7.0 2.8 2.5	30.6 26.2 26.1 23.2 11.3	19.2 15.6 15.7 15.6 9.3	4 (NA) (NA) (NA) (NA)	40 90 70 50 (X)	37 8 7 57 (X)	43 55 25 27 41	13 23 25 27 18	1992 31 1991 1990 1989 1988
521.6 (NA) (NA) (NA) (NA) (NA)	491.2 464.9 497.3 591.7 438.4	248.5 220.5 247.6 328.4 247.7	94.6 85.1 93.1 85.0 67.7	148.1 159.2 156.7 178.3 123.1	30.3 (NA) (NA) (NA) (NA)	19 21 14 26 (X)	5 3 8 15 (X)	15 16 10 13 12	4 4 5 10 6	1992 32 1991 1990 1989 1988
2 101.1 (NA) (NA) (NA) (NA) (NA)	1 893.4 2 002.6 2 025.5 1 931.1 1 809.0	933.1 911.7 943.7 883.1 965.8	575.0 564.0 565.4 574.3 516.1	485.3 526.9 516.4 473.7 327.2	107.7 (NA) (NA) (NA) (NA)	5 6 5 7 (X)	4 3 2 4 (X)	5 5 4 5 4	3 3 4 4 3	1992 33 1991 1990 1989 1988
869.3 (NA) (NA) (NA) (NA)	761.2 842.6 813.8 895.7 761.9	130.4 133.8 114.2 123.8 135.0	284.3 301.1 343.5 389.4 316.8	346.6 407.6 356.1 382.4 310.1	108.0 (NA) (NA) (NA) (NA)	8 12 12 19 (X)	6 8 5 15 (X)	7 11 9 9 17	4 5 8 8 10	1992 34 1991 1990 1989 1988
524.6 (NA) (NA) (NA) (NA) (NA)	463.7 573.9 557.7 571.9 429.6	65.4 70.0 77.9 80.6 68.4	160.5 165.1 159.5 170.5 139.4	237.9 338.8 320.3 320.8 221.8	60.9 (NA) (NA) (NA) (NA)	22 23 25 83 (X)	7 5 7 14 (X)	7 18 10 38 6	4 8 7 9 7	1992 35 1991 1990 1989 1988
722.1 (NA) (NA) (NA) (NA) (NA)	657.1 833.0 787.8 729.1 659.3	117.9 22.1 113.1 100.9 92.2	288.8 323.6 370.3 308.9 252.5	250.4 409.5 304.4 319.3 314.6	65.0 (NA) (NA) (NA) (NA)	18 44 18 47 (X)	10 10 7 14 (X)	6 33 12 21 33	5 12 14 12 5	1992 36 1991 1990 1989 1988

Table 1. Summary Capital Expenditures and Operating Costs by Major Groups: 1988 to 1992

[Million dollars, except percentages. Totals may not agree with detail because of independent rounding. For data prior to 1988, see MA200(88)-1. Statistics in other than the first two columns in

SIC code	Major group	Annual survey of manufactures (ASM) <sup>1</sup>		Pollution abatement capital expenditures (PACE) <sup>2</sup>						
		Value of shipments	New capital expenditures	Total PACENM <sup>3</sup>	Media				Nonmedia and other	
					Total	Air	Water	Solid/contained waste		
37	Transportation equipment .....	1992..	(NA)	(NA)	321.0	281.0	179.4	69.2	32.5	40.0
		1991..	364 032.1	10 646.9	(NA)	301.4	175.8	84.7	30.8	(NA)
		1990..	367 926.7	10 578.7	(NA)	395.3	206.6	142.6	46.1	(NA)
		1989..	365 980.7	9 966.7	(NA)	286.8	158.0	84.6	46.2	(NA)
		1988..	354 047.8	7 147.3	(NA)	210.2	87.6	80.4	42.2	(NA)
38	Instruments and related products .....	1992..	(NA)	(NA)	123.2	89.1	52.7	18.8	17.5	34.1
		1991..	127 159.7	4 489.5	(NA)	104.4	27.1	44.3	33.0	(NA)
		1990..	123 776.7	4 292.0	(NA)	91.5	57.7	25.5	8.2	(NA)
		1989..	118 486.1	4 427.3	(NA)	86.1	33.9	37.8	14.4	(NA)
		1988..	114 528.4	3 961.0	(NA)	30.7	15.5	11.8	3.4	(NA)
39	Miscellaneous manufacturing industries .....	1992..	(NA)	(NA)	19.1	16.6	10.2	(D)	(D)	2.5
		1991..	37 131.4	822.1	(NA)	13.1	7.3	3.8	2.0	(NA)
		1990..	37 205.2	805.5	(NA)	17.7	6.6	7.0	4.1	(NA)
		1989..	35 841.8	824.5	(NA)	10.0	3.3	5.2	1.5	(NA)
		1988..	34 869.4	714.7	(NA)	11.3	3.6	5.7	2.0	(NA)

<sup>1</sup>Includes Major Group 23, Apparel and Other Textile Products.<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.<sup>3</sup>PACENM denotes pollution abatement capital expenditures, including the nonmedia and other.<sup>4</sup>PAOCNM denotes pollution abatement operating costs, including the nonmedia and other.

— Con.

this table cover manufacturing establishments with 20 or more employees. See introductory text for a detailed description of survey coverage and for the meaning of abbreviations and symbols ]

Pollution abatement operating costs (PAOC) <sup>2</sup>						Standard error of change (percent)		Standard error of estimate (percent)		SIC code
Total PAOCNM <sup>4</sup>	Media				Nonmedia and other	PACE	PAOC	PACE	PAOC	
	Total	Air	Water	Solid/ contained waste						
1 298.5	1 171.7	298.5	347.0	526.2	126.8	10	5	10		
(NA)	1 118.3	254.7	319.6	544.0	(NA)	1	1	6	4	1992 37
(NA)	1 232.0	247.3	373.1	611.6	(NA)	12	4	10	3	1991
(NA)	1 000.3	212.2	318.1	470.1	(NA)	6	4	5	4	1990
(NA)	974.4	215.7	299.2	459.5	(NA)	(X)	(X)	2	3	1989
									3	1988
393.3	331.9	48.0	89.4	194.5	61.5	18	8	11		
(NA)	280.0	33.3	77.9	168.7	(NA)	1	1	20	4	1992 38
(NA)	247.7	37.4	68.5	141.7	(NA)	12	4	10	6	1991
(NA)	239.9	36.2	70.9	132.8	(NA)	33	9	12	7	1990
(NA)	197.7	21.7	79.9	96.1	(NA)	(X)	(X)	3	7	1989
									5	1988
(D)	89.7	22.7	21.7	45.3	(D)	23	11	7		
(NA)	74.9	14.5	17.0	43.4	(NA)	1	1	17	5	1992 39
(NA)	114.7	19.2	32.7	62.7	(NA)	33	24	19	8	1991
(NA)	124.0	17.7	47.3	58.9	(NA)	19	72	16	59	1990
(NA)	76.7	10.1	20.9	45.7	(NA)	(X)	(X)	15	44	1989
									9	1988

Table 2. Summary Capital Expenditures and Operating Costs by States: 1988 to 1992

[Million dollars, except percentages. Totals may not agree with detail because of independent rounding. For data prior to 1988, see MA200(88)-1. Statistics in this table cover manufacturing

State and year	Pollution abatement capital expenditures (PACE) <sup>1</sup>					
	Total PACENM <sup>2</sup>	Media				Nonmedia and other
		Total	Air	Water	Solid/contained waste	
United States	1992.. 8 393.0	7 866.9	4 403.1	2 509.8	954.0	526.1
	1991.. (NA)	7 390.1	3 706.3	2 814.6	869.2	(NA)
	1990.. (NA)	6 030.8	2 562.0	2 651.4	817.5	(NA)
	1989.. (NA)	4 309.0	1 819.0	1 824.5	665.5	(NA)
	1988.. (NA)	3 423.3	1 524.1	1 289.4	609.7	(NA)
Alabama	1992.. 126.8	119.4	54.3	48.2	16.9	7.4
	1991.. (NA)	316.6	143.0	133.7	39.9	(NA)
	1990.. (NA)	195.7	70.6	99.1	26.0	(NA)
	1989.. (NA)	104.6	39.8	49.5	15.3	(NA)
	1988.. (NA)	58.9	18.0	25.4	15.5	(NA)
Alaska	1992.. 15.3	15.3	2.1	11.4	1.8	-
	1991.. (NA)	9.3	6.0	(D)	(D)	(NA)
	1990.. (NA)	11.1	8.5	(D)	(D)	(NA)
	1989.. (NA)	(D)	6.3	(D)	2	(NA)
	1988.. (NA)	(D)	(D)	(D)	(D)	(NA)
Arizona	1992.. 32.0	30.8	13.6	16.2	1.1	1.2
	1991.. (NA)	24.4	15.6	5.3	3.4	(NA)
	1990.. (NA)	18.3	9.7	5.5	3.1	(NA)
	1989.. (NA)	48.3	30.9	7.5	10.0	(NA)
	1988.. (NA)	(D)	(D)	1.6	3.6	(NA)
Arkansas	1992.. 81.9	75.6	28.3	41.2	6.0	6.4
	1991.. (NA)	57.1	17.6	28.4	11.2	(NA)
	1990.. (NA)	80.0	34.4	37.8	7.7	(NA)
	1989.. (NA)	74.5	54.3	16.8	3.3	(NA)
	1988.. (NA)	90.0	62.8	19.9	7.2	(NA)
California	1992.. 589.8	547.9	418.7	88.5	40.7	41.9
	1991.. (NA)	696.6	443.7	226.4	26.5	(NA)
	1990.. (NA)	503.0	286.6	176.1	40.3	(NA)
	1989.. (NA)	367.9	141.0	186.9	40.0	(NA)
	1988.. (NA)	408.4	243.2	134.9	30.3	(NA)
Colorado	1992.. 15.1	13.7	6.5	5.9	1.2	1.4
	1991.. (NA)	30.0	7.9	11.0	11.1	(NA)
	1990.. (NA)	26.0	9.4	13.0	3.6	(NA)
	1989.. (NA)	49.3	8.6	38.5	2.2	(NA)
	1988.. (NA)	10.9	2.3	(D)	(D)	(NA)
Connecticut	1992.. 34.9	29.3	7.9	13.2	8.2	5.5
	1991.. (NA)	70.8	14.4	51.2	5.1	(NA)
	1990.. (NA)	41.3	10.9	26.6	3.8	(NA)
	1989.. (NA)	51.9	10.0	30.8	11.1	(NA)
	1988.. (NA)	25.4	4.6	12.7	8.1	(NA)
Delaware	1992.. 61.1	59.8	43.9	(D)	(D)	1.3
	1991.. (NA)	60.0	33.0	(D)	(D)	(NA)
	1990.. (NA)	25.7	23.0	2.1	.5	(NA)
	1989.. (NA)	22.5	16.0	4.1	2.4	(NA)
	1988.. (NA)	12.5	(D)	7.0	(D)	(NA)
District of Columbia	1992.. (Z)	(Z)	(Z)	(Z)	-	-
	1991.. (NA)	(D)	-	(D)	-	(NA)
	1990.. (NA)	(D)	(D)	(D)	(D)	(NA)
	1989.. (NA)	(D)	(D)	(D)	(D)	(NA)
	1988.. (NA)	(D)	(D)	(D)	(D)	(NA)
Florida	1992.. 110.8	105.9	24.5	74.0	7.4	4.9
	1991.. (NA)	90.1	18.6	63.1	8.4	(NA)
	1990.. (NA)	130.5	64.3	59.3	6.9	(NA)
	1989.. (NA)	82.9	53.0	19.8	10.2	(NA)
	1988.. (NA)	64.0	33.9	17.2	12.9	(NA)
Georgia	1992.. 186.0	173.3	146.9	15.8	10.6	12.7
	1991.. (NA)	271.0	170.0	86.6	14.4	(NA)
	1990.. (NA)	238.3	124.8	98.8	14.7	(NA)
	1989.. (NA)	145.4	78.1	51.5	15.7	(NA)
	1988.. (NA)	80.7	24.1	36.2	20.5	(NA)
Hawaii	1992.. 2.8	2.8	.5	2.3	-	(Z)
	1991.. (NA)	4.0	1.8	(D)	(D)	(NA)
	1990.. (NA)	23.2	12.6	(D)	(D)	(NA)
	1989.. (NA)	(D)	(D)	(D)	(D)	(NA)
	1988.. (NA)	7.9	3.5	(D)	(D)	(NA)
Idaho	1992.. 25.8	25.0	14.3	10.3	.4	.8
	1991.. (NA)	36.5	26.2	9.4	.9	(NA)
	1990.. (NA)	32.2	4.1	26.1	2.1	(NA)
	1989.. (NA)	17.3	5.3	6.5	5.5	(NA)
	1988.. (NA)	11.2	(D)	(D)	2.7	(NA)
Illinois	1992.. 366.8	350.5	250.1	81.3	19.1	16.2
	1991.. (NA)	207.0	129.8	63.0	14.2	(NA)
	1990.. (NA)	273.2	81.0	158.3	33.8	(NA)
	1989.. (NA)	179.3	78.4	78.0	22.9	(NA)
	1988.. (NA)	146.7	93.0	37.0	16.8	(NA)
Indiana	1992.. 383.4	330.9	220.6	94.3	16.0	32.5
	1991.. (NA)	364.4	204.5	139.4	20.5	(NA)
	1990.. (NA)	246.7	94.2	131.7	20.7	(NA)
	1989.. (NA)	175.7	72.3	86.1	17.2	(NA)
	1988.. (NA)	116.7	33.4	57.3	26.0	(NA)
Iowa	1992.. 52.2	46.9	27.0	14.2	5.7	5.3
	1991.. (NA)	38.3	22.1	12.3	4.9	(NA)
	1990.. (NA)	30.5	17.6	9.7	3.2	(NA)
	1989.. (NA)	35.6	11.5	19.6	4.5	(NA)
	1988.. (NA)	27.0	18.2	6.4	2.4	(NA)
Kansas	1992.. 193.9	186.1	153.7	23.5	8.9	7.8
	1991.. (NA)	85.0	68.9	9.7	6.4	(NA)
	1990.. (NA)	35.6	12.8	20.1	2.7	(NA)
	1989.. (NA)	24.7	7.9	15.0	1.8	(NA)
	1988.. (NA)	14.1	2.8	10.3	1.0	(NA)

See footnotes at end of table.



Table 2. Summary Capital Expenditures and Operating Costs by States: 1988 to 1992—Con.

[Million dollars, except percentages. Totals may not agree with detail because of independent rounding. For data prior to 1988, see MA200(88)-1. Statistics in this table cover manufacturing

State and year	Pollution abatement capital expenditures (PACE) <sup>1</sup>					
	Total PACENM <sup>2</sup>	Media				Nonmedia and other
		Total	Air	Water	Solid/contained waste	
Kentucky ----- 1992..	197.5	180.9	132.4	25.7	22.8	16.6
----- 1991..	(NA)	152.0	86.4	50.6	15.1	(NA)
----- 1990..	(NA)	135.5	60.3	68.4	6.9	(NA)
----- 1989..	(NA)	53.5	30.7	17.5	5.3	(NA)
----- 1988..	(NA)	71.1	31.9	29.1	10.2	(NA)
Louisiana ----- 1992..	1 091.0	1 057.2	477.6	430.8	148.8	33.8
----- 1991..	(NA)	564.2	315.6	184.0	64.5	(NA)
----- 1990..	(NA)	301.9	85.4	144.9	71.6	(NA)
----- 1989..	(NA)	191.3	61.0	100.1	30.2	(NA)
----- 1988..	(NA)	144.5	44.9	58.8	40.8	(NA)
Maine ----- 1992..	67.2	62.2	23.8	26.8	11.6	5.0
----- 1991..	(NA)	95.4	21.0	(D)	(D)	(NA)
----- 1990..	(NA)	104.1	25.6	25.1	53.4	(NA)
----- 1989..	(NA)	82.4	26.5	21.0	34.9	(NA)
----- 1988..	(NA)	46.8	22.4	9.8	14.6	(NA)
Maryland ----- 1992..	45.2	38.1	16.4	16.2	5.5	7.1
----- 1991..	(NA)	94.6	67.6	21.9	5.2	(NA)
----- 1990..	(NA)	133.1	80.6	45.2	7.3	(NA)
----- 1989..	(NA)	72.9	26.6	41.0	5.3	(NA)
----- 1988..	(NA)	36.9	13.5	11.7	5.7	(NA)
Massachusetts ----- 1992..	65.0	59.5	18.4	35.6	5.5	5.5
----- 1991..	(NA)	55.6	17.5	26.3	11.8	(NA)
----- 1990..	(NA)	69.9	14.5	44.2	11.1	(NA)
----- 1989..	(NA)	44.2	14.8	25.2	4.2	(NA)
----- 1988..	(NA)	37.2	11.0	22.2	4.0	(NA)
Michigan ----- 1992..	183.9	159.3	99.4	37.9	22.0	24.6
----- 1991..	(NA)	172.9	90.0	49.7	33.1	(NA)
----- 1990..	(NA)	178.9	97.2	52.7	29.1	(NA)
----- 1989..	(NA)	289.0	180.6	80.6	27.9	(NA)
----- 1988..	(NA)	154.4	58.7	67.4	28.4	(NA)
Minnesota ----- 1992..	137.2	133.1	91.8	29.7	11.6	4.1
----- 1991..	(NA)	64.4	43.9	13.8	6.7	(NA)
----- 1990..	(NA)	92.6	54.6	30.4	7.6	(NA)
----- 1989..	(NA)	46.6	11.3	23.0	12.3	(NA)
----- 1988..	(NA)	47.4	25.4	16.1	5.8	(NA)
Mississippi ----- 1992..	115.8	112.8	88.3	15.5	8.8	3.0
----- 1991..	(NA)	68.2	43.2	19.0	6.0	(NA)
----- 1990..	(NA)	68.7	27.2	35.1	6.5	(NA)
----- 1989..	(NA)	67.1	32.0	29.8	5.2	(NA)
----- 1988..	(NA)	23.0	10.5	8.4	4.1	(NA)
Missouri ----- 1992..	69.8	65.2	28.5	25.5	11.2	4.5
----- 1991..	(NA)	61.4	39.4	16.6	5.3	(NA)
----- 1990..	(NA)	72.4	22.3	43.8	6.3	(NA)
----- 1989..	(NA)	38.0	13.4	16.3	8.3	(NA)
----- 1988..	(NA)	56.8	29.7	21.5	5.6	(NA)
Montana ----- 1992..	7.6	7.1	2.2	(D)	(D)	.5
----- 1991..	(NA)	18.3	14.7	(D)	(D)	(NA)
----- 1990..	(NA)	9.5	6.0	(D)	(D)	(NA)
----- 1989..	(NA)	4.2	2.4	1.6	.2	(NA)
----- 1988..	(NA)	(D)	(D)	(D)	(D)	(NA)
Nebraska ----- 1992..	12.4	8.0	3.7	2.6	1.7	4.4
----- 1991..	(NA)	5.6	2.7	2.2	.7	(NA)
----- 1990..	(NA)	5.8	3.4	1.9	.4	(NA)
----- 1989..	(NA)	4.3	1.2	2.6	.5	(NA)
----- 1988..	(NA)	5.6	2.8	(D)	(D)	(NA)
Nevada ----- 1992..	5.4	5.3	2.1	2.5	.8	.1
----- 1991..	(NA)	2.2	1.0	1.2	(Z)	(NA)
----- 1990..	(NA)	4.1	(D)	(D)	3.1	(NA)
----- 1989..	(NA)	1.3	(D)	.9	(D)	(NA)
----- 1988..	(NA)	138.0	134.4	3.0	.5	(NA)
New Hampshire ----- 1992..	17.6	(D)	(D)	2.2	(D)	(D)
----- 1991..	(NA)	8.5	2.5	3.6	2.4	(NA)
----- 1990..	(NA)	9.7	3.8	2.9	3.0	(NA)
----- 1989..	(NA)	7.7	2.2	1.4	4.1	(NA)
----- 1988..	(NA)	10.8	(D)	(D)	2.3	(NA)
New Jersey ----- 1992..	192.7	154.0	65.6	70.3	18.0	38.8
----- 1991..	(NA)	245.5	100.3	124.0	21.3	(NA)
----- 1990..	(NA)	152.3	60.3	74.3	17.6	(NA)
----- 1989..	(NA)	121.4	44.8	56.6	20.0	(NA)
----- 1988..	(NA)	84.6	24.2	45.9	14.5	(NA)
New Mexico ----- 1992..	44.3	44.3	36.2	(D)	(D)	-
----- 1991..	(NA)	25.0	9.5	(D)	(D)	(NA)
----- 1990..	(NA)	67.3	34.0	32.7	.7	(NA)
----- 1989..	(NA)	9.9	9.3	.4	.1	(NA)
----- 1988..	(NA)	(D)	(D)	(D)	(D)	(NA)
New York ----- 1992..	184.5	128.8	72.9	29.0	26.8	55.7
----- 1991..	(NA)	200.5	88.8	55.4	56.3	(NA)
----- 1990..	(NA)	249.3	121.8	78.9	48.7	(NA)
----- 1989..	(NA)	209.5	96.7	74.0	38.8	(NA)
----- 1988..	(NA)	102.1	45.8	33.0	23.2	(NA)
North Carolina ----- 1992..	281.0	259.8	97.3	132.2	30.3	21.2
----- 1991..	(NA)	276.3	69.8	181.0	26.5	(NA)
----- 1990..	(NA)	212.3	81.3	110.6	20.4	(NA)
----- 1989..	(NA)	114.7	44.4	46.3	24.0	(NA)
----- 1988..	(NA)	89.3	51.7	30.1	7.6	(NA)
North Dakota ----- 1992..	3.7	3.7	1.1	2.2	.3	-
----- 1991..	(NA)	(D)	(D)	(D)	-	(NA)
----- 1990..	(NA)	(D)	(D)	(D)	(D)	(NA)
----- 1989..	(NA)	3.3	1.8	(D)	(D)	(NA)
----- 1988..	(NA)	4.9	(D)	1.4	(D)	(NA)

See footnotes at end of table.



establishments with 20 or more employees. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols ]

Pollution abatement operating costs (PAOC) <sup>1</sup>						Standard error of change (percent)		Standard error of estimate (percent)		State and year
Total PAOCNM <sup>2</sup>	Media				Nonmedia and other	PACE	PAOC	PACE	PAOC	
	Total	Air	Water	Solid/contained waste						
339.1	324.8	138.4	102.2	84.1	14.3	11	7	6	5	1992 KY
(NA)	331.3	121.4	107.8	102.1	(NA)	17	8	8	6	1991
(NA)	327.7	131.2	103.8	92.7	(NA)	30	4	13	5	1990
(NA)	295.5	118.1	94.2	82.2	(NA)	10	8	7	5	1989
(NA)	237.5	101.9	80.4	55.2	(NA)	(X)	(X)	12	5	1988
969.2	920.0	317.3	347.6	255.1	49.3	5	5	2	5	1992 LA
(NA)	892.4	282.3	366.7	243.4	(NA)	7	5	2	3	1991
(NA)	827.0	261.3	328.9	236.7	(NA)	8	2	4	3	1990
(NA)	682.9	240.8	278.5	163.7	(NA)	11	5	4	3	1989
(NA)	643.8	213.5	257.4	172.9	(NA)	(X)	(X)	8	4	1988
129.7	123.5	21.2	60.7	41.5	6.2	6	12	8	10	1992 ME
(NA)	127.3	18.8	59.6	48.9	(NA)	12	3	7	7	1991
(NA)	113.5	16.0	56.2	41.2	(NA)	16	4	13	7	1990
(NA)	117.8	21.1	63.0	33.6	(NA)	5	12	3	5	1989
(NA)	88.5	14.8	46.8	26.9	(NA)	(X)	(X)	2	8	1988
210.0	205.6	55.4	80.5	69.7	4.4	8	7	19	6	1992 MD
(NA)	212.4	47.6	77.7	87.1	(NA)	8	8	4	4	1991
(NA)	194.2	47.6	77.8	68.8	(NA)	11	3	10	6	1990
(NA)	192.4	49.9	83.4	59.1	(NA)	38	7	15	6	1989
(NA)	216.3	70.1	84.0	62.1	(NA)	(X)	(X)	13	6	1988
261.0	246.2	34.3	106.9	105.1	14.8	20	11	11	7	1992 MA
(NA)	247.8	39.1	99.2	109.5	(NA)	19	16	16	9	1991
(NA)	249.2	33.7	88.8	126.8	(NA)	29	11	18	13	1990
(NA)	268.9	51.3	84.6	19.3	(NA)	23	22	12	16	1989
(NA)	208.9	34.2	74.3	100.4	(NA)	(X)	(X)	16	7	1988
796.1	763.0	220.2	290.8	252.0	33.1	8	5	7	3	1992 MI
(NA)	692.6	186.1	266.0	240.5	(NA)	6	4	6	3	1991
(NA)	739.5	195.9	273.6	270.0	(NA)	14	5	7	5	1990
(NA)	703.8	180.0	274.6	249.2	(NA)	42	8	23	4	1989
(NA)	713.6	227.0	296.6	190.1	(NA)	(X)	(X)	4	7	1988
261.4	254.5	72.2	102.5	79.8	7.0	24	15	7	6	1992 MN
(NA)	247.3	58.7	87.3	101.3	(NA)	7	18	10	14	1991
(NA)	211.9	61.2	77.4	73.3	(NA)	26	4	3	7	1990
(NA)	204.2	54.8	73.9	75.5	(NA)	17	10	14	7	1989
(NA)	168.5	41.3	72.7	54.4	(NA)	(X)	(X)	10	6	1988
271.9	269.1	120.9	86.1	62.1	2.8	32	10	6	7	1992 MS
(NA)	216.0	101.0	62.6	52.3	(NA)	19	3	19	5	1991
(NA)	201.0	92.4	65.0	43.6	(NA)	7	4	6	5	1990
(NA)	160.6	62.5	62.2	36.0	(NA)	29	9	5	6	1989
(NA)	153.9	53.2	63.7	37.1	(NA)	(X)	(X)	10	6	1988
299.1	287.6	79.2	111.6	96.8	11.6	11	8	8	4	1992 MO
(NA)	268.4	59.8	115.2	93.4	(NA)	13	15	8	7	1991
(NA)	344.2	72.9	160.1	111.2	(NA)	17	5	13	17	1990
(NA)	319.6	66.4	137.4	115.8	(NA)	16	25	18	18	1989
(NA)	230.4	66.0	82.6	81.7	(NA)	(X)	(X)	16	5	1988
(D)	25.5	17.3	4.8	3.4	(D)	17	7	9	12	1992 MT
(NA)	44.5	25.2	11.9	7.4	(NA)	82	17	43	5	1991
(NA)	39.9	21.9	11.7	6.4	(NA)	67	5	7	16	1990
(NA)	39.6	21.8	12.5	5.3	(NA)	(X)	18	(X)	14	1989
(NA)	31.3	19.4	8.3	3.6	(NA)	(X)	(X)	(X)	4	1988
62.7	60.0	12.8	23.6	23.5	2.7	26	28	11	12	1992 NE
(NA)	41.1	8.7	14.8	17.6	(NA)	14	10	15	16	1991
(NA)	37.9	9.3	14.6	14.0	(NA)	29	12	19	15	1990
(NA)	32.9	9.4	12.1	11.4	(NA)	18	11	15	11	1989
(NA)	43.9	10.9	18.1	14.9	(NA)	(X)	(X)	19	11	1988
12.7	11.0	3.4	4.6	3.0	1.8	128	65	45	20	1992 NV
(NA)	9.0	3.1	2.6	3.3	(NA)	41	61	29	50	1991
(NA)	7.8	1.4	2.9	3.4	(NA)	273	12	69	38	1990
(NA)	9.5	2.1	5.3	2.2	(NA)	2	53	52	53	1989
(NA)	11.3	4.6	3.0	3.7	(NA)	(X)	(X)	58	33	1988
47.4	44.1	5.8	20.6	17.7	3.4	(X)	17	(X)	15	1992 NH
(NA)	49.7	5.2	22.6	21.9	(NA)	23	5	13	13	1991
(NA)	51.3	6.3	21.5	23.5	(NA)	28	8	26	14	1990
(NA)	51.9	7.3	19.7	24.9	(NA)	17	22	23	14	1989
(NA)	36.1	3.1	18.2	14.8	(NA)	(X)	(X)	6	8	1988
784.8	673.8	146.6	285.7	241.5	111.0	8	16	12	13	1992 NJ
(NA)	669.5	188.7	244.4	236.4	(NA)	8	4	4	9	1991
(NA)	668.9	169.9	273.8	225.3	(NA)	10	5	6	6	1990
(NA)	615.5	147.2	231.3	237.0	(NA)	14	9	8	7	1989
(NA)	595.4	163.4	185.3	186.8	(NA)	(X)	(X)	7	4	1988
65.2	63.4	34.2	11.4	17.8	1.8	127	52	70	42	1992 NM
(NA)	54.7	29.1	11.5	14.1	(NA)	16	4	26	15	1991
(NA)	51.8	31.9	7.3	12.6	(NA)	438	5	64	17	1990
(NA)	45.0	26.0	8.0	11.1	(NA)	(X)	15	(X)	18	1989
(NA)	56.2	(D)	(D)	8.0	(NA)	(X)	(X)	4	3	1988
718.5	650.6	115.5	235.6	299.4	67.9	7	7	8	5	1992 NY
(NA)	665.5	106.0	248.2	311.3	(NA)	12	9	8	6	1991
(NA)	619.5	109.6	239.9	270.0	(NA)	14	3	12	6	1990
(NA)	624.6	111.5	241.9	271.2	(NA)	23	10	10	6	1989
(NA)	556.5	87.7	206.8	282.1	(NA)	(X)	(X)	6	7	1988
580.8	554.4	185.5	213.2	155.6	26.5	8	9	4	3	1992 NC
(NA)	433.4	113.5	182.6	137.2	(NA)	15	9	8	8	1991
(NA)	431.4	117.7	172.1	141.7	(NA)	16	5	9	7	1990
(NA)	411.1	110.2	168.7	132.2	(NA)	12	11	8	8	1989
(NA)	344.3	109.2	143.6	91.5	(NA)	(X)	(X)	4	5	1988
(D)	19.3	4.4	6.8	8.1	(D)	29	117	32	52	1992 ND
(NA)	8.7	(D)	3.3	(D)	(NA)	(X)	4	(X)	12	1991
(NA)	8.0	1.7	2.8	3.5	(NA)	(X)	10	(X)	13	1990
(NA)	5.3	1.3	2.2	1.8	(NA)	23	13	27	18	1989
(NA)	10.2	(D)	4.5	(D)	(NA)	(X)	(X)	19	18	1988

Table 2. Summary Capital Expenditures and Operating Costs by States: 1988 to 1992—Con.

[Million dollars, except percentages. Totals may not agree with detail because of independent rounding. For data prior to 1988, see MA200(88)-1. Statistics in this table cover manufacturing

State and year	Pollution abatement capital expenditures (PACE) <sup>1</sup>						
	Total PACENM <sup>2</sup>	Media				Nonmedia and other	
		Total	Air	Water	Solid/contained waste		
Ohio .....	1992.. 335.6	309.1	142.7	127.4	39.0	26.4	
	1991.. (NA)	290.0	130.9	93.8	65.3	(NA)	
	1990.. (NA)	298.9	130.8	128.5	39.5	(NA)	
	1989.. (NA)	240.4	107.0	99.5	33.9	(NA)	
	1988.. (NA)	172.1	55.4	78.4	38.2	(NA)	
Oklahoma .....	1992.. 42.6	41.1	13.9	10.8	16.4	1.5	
	1991.. (NA)	63.4	28.8	30.4	4.2	(NA)	
	1990.. (NA)	38.3	18.2	17.3	2.7	(NA)	
	1989.. (NA)	34.5	18.8	12.1	2.6	(NA)	
	1988.. (NA)	20.7	13.4	4.7	2.6	(NA)	
Oregon .....	1992.. 109.5	105.8	37.0	63.2	5.6	3.7	
	1991.. (NA)	74.3	12.9	47.4	14.0	(NA)	
	1990.. (NA)	51.5	23.2	21.8	6.5	(NA)	
	1989.. (NA)	39.3	16.5	16.7	6.1	(NA)	
	1988.. (NA)	36.6	18.4	12.7	5.5	(NA)	
Pennsylvania .....	1992.. 305.7	272.4	140.5	63.0	68.9	33.4	
	1991.. (NA)	340.4	185.9	124.3	30.2	(NA)	
	1990.. (NA)	206.1	94.1	81.5	30.6	(NA)	
	1989.. (NA)	166.2	71.5	71.7	23.0	(NA)	
	1988.. (NA)	119.0	51.3	46.4	21.2	(NA)	
Rhode Island .....	1992.. 5.4	2.2	.8	1.3	.2	3.2	
	1991.. (NA)	5.9	1.4	4.2	.2	(NA)	
	1990.. (NA)	13.6	4.2	5.7	3.7	(NA)	
	1989.. (NA)	12.1	3.3	5.3	3.6	(NA)	
	1988.. (NA)	13.4	5.7	5.2	2.5	(NA)	
South Carolina .....	1992.. 126.0	119.9	44.1	64.7	11.1	6.1	
	1991.. (NA)	99.3	42.8	44.5	12.0	(NA)	
	1990.. (NA)	127.4	53.6	57.0	16.8	(NA)	
	1989.. (NA)	100.8	43.6	46.8	10.4	(NA)	
	1988.. (NA)	47.3	14.9	22.0	10.4	(NA)	
South Dakota .....	1992.. 4.3	(D)	(D)	1.1	.5	(D)	
	1991.. (NA)	3.0	2.2	.2	.6	(NA)	
	1990.. (NA)	(D)	(D)	(D)	(D)	(NA)	
	1989.. (NA)	(D)	(D)	(D)	(D)	(NA)	
	1988.. (NA)	(D)	(D)	(D)	(D)	(NA)	
Tennessee .....	1992.. 222.2	218.3	163.9	33.5	21.0	3.9	
	1991.. (NA)	139.2	95.1	28.4	15.7	(NA)	
	1990.. (NA)	136.3	84.4	39.2	12.7	(NA)	
	1989.. (NA)	86.1	38.4	32.8	14.9	(NA)	
	1988.. (NA)	148.1	42.8	78.9	26.5	(NA)	
Texas .....	1992.. 1 491.8	1 446.0	777.2	483.5	185.3	45.8	
	1991.. (NA)	1 055.7	511.4	390.1	154.2	(NA)	
	1990.. (NA)	895.3	328.7	417.8	148.8	(NA)	
	1989.. (NA)	481.0	150.1	214.9	116.0	(NA)	
	1988.. (NA)	365.3	78.4	183.6	103.3	(NA)	
Utah .....	1992.. 86.9	86.4	74.8	10.0	1.6	5	
	1991.. (NA)	61.9	51.7	8.8	1.4	(NA)	
	1990.. (NA)	32.2	5.8	21.6	4.7	(NA)	
	1989.. (NA)	17.9	5.7	11.0	1.3	(NA)	
	1988.. (NA)	16.4	(D)	(D)	3.9	(NA)	
Vermont .....	1992.. (D)	13.7	1.5	9.0	3.2	(D)	
	1991.. (NA)	3.0	(D)	.3	(D)	(NA)	
	1990.. (NA)	(D)	1.4	5.0	(D)	(NA)	
	1989.. (NA)	6.2	(D)	4.5	(D)	(NA)	
	1988.. (NA)	4.1	.7	3.2	.1	(NA)	
Virginia .....	1992.. 222.8	217.6	128.0	65.1	24.4	5.2	
	1991.. (NA)	119.0	60.9	39.3	18.8	(NA)	
	1990.. (NA)	75.5	24.3	36.6	14.6	(NA)	
	1989.. (NA)	79.2	36.4	37.1	5.7	(NA)	
	1988.. (NA)	70.4	29.5	25.7	15.2	(NA)	
Washington .....	1992.. 195.3	186.7	101.5	41.5	43.7	8.5	
	1991.. (NA)	389.0	86.2	283.5	19.3	(NA)	
	1990.. (NA)	127.4	30.7	61.4	35.2	(NA)	
	1989.. (NA)	104.9	30.9	45.4	28.6	(NA)	
	1988.. (NA)	56.6	20.4	21.7	14.5	(NA)	
West Virginia .....	1992.. 90.4	85.1	21.5	33.6	30.0	5.3	
	1991.. (NA)	51.3	27.4	18.8	5.1	(NA)	
	1990.. (NA)	51.5	20.8	27.0	3.7	(NA)	
	1989.. (NA)	40.4	11.2	22.3	6.9	(NA)	
	1988.. (NA)	69.9	20.1	28.4	20.4	(NA)	
Wisconsin .....	1992.. 147.3	136.9	63.2	52.2	21.5	10.4	
	1991.. (NA)	201.1	120.2	50.2	30.7	(NA)	
	1990.. (NA)	164.2	97.2	40.0	27.0	(NA)	
	1989.. (NA)	119.2	62.6	28.5	28.1	(NA)	
	1988.. (NA)	73.9	35.7	15.3	22.9	(NA)	
Wyoming .....	1992.. (D)	11.8	(D)	6.3	(D)	(D)	
	1991.. (NA)	13.9	8.7	2.8	2.4	(NA)	
	1990.. (NA)	13.9	(D)	(D)	(D)	(NA)	
	1989.. (NA)	5.0	(D)	3.0	(D)	(NA)	
	1988.. (NA)	(D)	(D)	1.2	.5	(NA)	

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.<sup>2</sup>PACENM denotes pollution abatement capital expenditures, including the nonmedia and other.<sup>3</sup>PAOCNM denotes pollution abatement operating costs, including the nonmedia and other.

establishments with 20 or more employees. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols ]

Pollution abatement operating costs (PAOC) <sup>1</sup>						Standard error of change (percent)		Standard error of estimate (percent)		State and year
Total PAOCNM <sup>2</sup>	Media				Nonmedia and other	PACE	PAOC	PACE	PAOC	
	Total	Air	Water	Solid/contained waste						
1 170.0	1 030.8	271.6	365.9	393.4	139.2	10	4	5	4	1992 OH
(NA)	1 031.9	271.0	373.3	387.6	(NA)	11	5	9	3	1991
(NA)	1 115.4	283.8	415.0	416.6	(NA)	9	4	7	5	1990
(NA)	984.0	280.0	362.3	341.7	(NA)	11	8	5	4	1989
(NA)	946.7	255.1	376.5	315.0	(NA)	(X)	(X)	7	7	1988
122.6	117.0	37.5	42.8	36.7	5.7	18	11	15	9	1992 OK
(NA)	110.0	31.8	40.6	37.6	(NA)	38	7	23	6	1991
(NA)	84.8	22.8	33.0	29.0	(NA)	11	5	7	7	1990
(NA)	82.7	18.6	30.0	34.1	(NA)	40	11	9	9	1989
(NA)	88.2	18.9	36.5	32.8	(NA)	(X)	(X)	23	8	1988
182.9	170.3	48.3	76.8	45.2	12.6	40	17	14	8	1992 OR
(NA)	200.4	53.5	70.4	76.5	(NA)	38	21	26	19	1991
(NA)	159.4	47.5	55.1	56.8	(NA)	17	5	10	11	1990
(NA)	141.9	49.5	47.3	45.1	(NA)	26	20	12	10	1989
(NA)	181.1	47.4	61.6	72.1	(NA)	(X)	(X)	22	23	1988
952.1	890.9	256.9	295.4	338.6	51.3	9	6	8	5	1992 PA
(NA)	867.6	175.8	275.5	416.2	(NA)	19	6	8	5	1991
(NA)	880.3	268.8	271.5	340.0	(NA)	11	4	9	4	1990
(NA)	833.4	264.6	258.5	310.2	(NA)	13	6	8	5	1989
(NA)	778.2	270.6	260.5	247.1	(NA)	(X)	(X)	6	4	1988
33.7	31.0	5.9	12.1	13.0	2.8	12	17	23	13	1992 RI
(NA)	34.4	3.9	14.3	16.1	(NA)	15	5	21	15	1991
(NA)	62.4	8.9	25.6	27.9	(NA)	35	1	28	14	1990
(NA)	63.1	8.5	22.4	32.1	(NA)	19	18	17	15	1989
(NA)	59.5	8.6	26.7	24.2	(NA)	(X)	(X)	13	10	1988
379.2	360.1	104.1	140.7	115.9	19.1	18	12	14	7	1992 SC
(NA)	344.4	65.0	141.7	137.7	(NA)	7	16	5	9	1991
(NA)	346.2	85.1	146.5	114.5	(NA)	19	3	8	16	1990
(NA)	329.1	81.2	133.7	114.2	(NA)	38	22	16	15	1989
(NA)	236.2	52.4	109.4	74.4	(NA)	(X)	(X)	9	5	1988
16.6	16.5	2.9	6.3	7.3	(Z)	(D)	80	(D)	33	1992 SD
(NA)	9.0	1.0	4.8	3.1	(NA)	629	17	60	29	1991
(NA)	6.4	.1	3.5	2.8	(NA)	(X)	25	(X)	25	1990
(NA)	4.9	.2	2.3	2.5	(NA)	(X)	21	(X)	22	1989
(NA)	8.7	4.0	2.9	1.8	(NA)	(X)	(X)	(X)	29	1988
474.7	441.0	99.0	189.8	152.2	33.7	20	8	12	6	1992 TN
(NA)	420.8	92.1	183.5	145.2	(NA)	12	8	7	6	1991
(NA)	398.6	91.4	179.9	127.4	(NA)	18	3	9	6	1990
(NA)	353.0	82.6	153.5	116.9	(NA)	5	7	8	6	1989
(NA)	356.0	95.2	149.7	111.0	(NA)	(X)	(X)	4	4	1988
2 700.2	2 092.2	791.7	753.7	546.8	608.0	11	4	8	2	1992 TX
(NA)	2 054.6	739.5	695.3	619.8	(NA)	5	4	4	3	1991
(NA)	1 888.0	709.7	606.4	571.9	(NA)	4	3	3	2	1990
(NA)	1 584.7	603.3	553.6	427.8	(NA)	3	3	2	3	1989
(NA)	1 474.8	594.9	541.5	398.4	(NA)	(X)	(X)	2	2	1988
129.7	123.4	52.4	31.8	39.1	6.3	73	38	49	22	1992 UT
(NA)	90.7	45.4	18.1	27.1	(NA)	92	20	20	18	1991
(NA)	94.7	29.0	17.8	48.0	(NA)	28	11	46	31	1990
(NA)	82.7	29.6	20.7	32.4	(NA)	38	48	34	27	1989
(NA)	48.7	18.7	15.6	14.5	(NA)	(X)	(X)	8	12	1988
19.8	17.5	2.9	5.9	8.8	2.2	170	37	38	24	1992 VT
(NA)	14.7	1.5	6.0	7.2	(NA)	28	15	5	20	1991
(NA)	16.6	5.2	4.8	6.7	(NA)	(X)	10	(X)	27	1990
(NA)	13.8	5.3	3.8	4.7	(NA)	97	29	58	31	1989
(NA)	17.3	3.0	7.3	7.1	(NA)	(X)	(X)	28	19	1988
361.9	334.4	93.5	139.3	101.6	27.4	58	11	26	8	1992 VA
(NA)	271.1	69.3	115.0	86.7	(NA)	29	3	19	5	1991
(NA)	271.9	68.8	119.3	83.7	(NA)	6	6	4	5	1990
(NA)	259.8	59.4	119.2	81.2	(NA)	11	8	8	8	1989
(NA)	268.4	76.6	111.7	80.1	(NA)	(X)	(X)	7	5	1988
394.3	368.2	124.1	132.2	111.9	26.1	26	8	14	6	1992 WA
(NA)	387.0	113.4	136.0	137.6	(NA)	134	8	52	6	1991
(NA)	374.4	102.8	150.2	121.4	(NA)	21	5	6	6	1990
(NA)	328.3	106.2	134.1	88.0	(NA)	33	9	17	7	1989
(NA)	313.6	107.0	129.5	77.0	(NA)	(X)	(X)	8	6	1988
306.6	283.6	75.9	124.1	83.5	23.1	21	24	12	17	1992 WV
(NA)	328.0	78.6	118.7	130.7	(NA)	3	3	5	2	1991
(NA)	208.9	49.7	94.1	65.1	(NA)	7	2	5	3	1990
(NA)	180.6	41.1	89.3	60.3	(NA)	6	9	6	4	1989
(NA)	137.5	34.6	64.8	38.1	(NA)	(X)	(X)	7	5	1988
404.3	394.1	83.1	176.1	134.9	10.2	16	13	22	10	1992 WI
(NA)	354.0	84.7	142.8	126.5	(NA)	14	10	8	7	1991
(NA)	348.4	75.9	150.0	122.5	(NA)	10	9	9	7	1990
(NA)	343.8	68.9	146.3	128.5	(NA)	23	12	7	10	1989
(NA)	301.4	51.2	146.6	103.7	(NA)	(X)	(X)	13	4	1988
28.8	28.7	15.5	9.8	3.3	.1	48	38	29	17	1992 WY
(NA)	19.9	6.2	7.0	6.7	(NA)	27	1	48	21	1991
(NA)	18.5	4.3	(D)	(D)	(NA)	78	15	31	20	1990
(NA)	12.9	5.5	4.2	3.2	(NA)	(X)	25	(X)	28	1989
(NA)	31.2	25.4	3.4	2.5	(NA)	(X)	(X)	(X)	52	1988

Table 3. Capital Expenditures by Industries for All Media: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
	<b>All Industries<sup>1</sup></b>	<b>7 866.9</b>	<b>4 403.1</b>	<b>2 509.8</b>	<b>954.0</b>	<b>3</b>
<b>20</b>	<b>Food and kindred products</b>	<b>316.8</b>	<b>85.1</b>	<b>202.6</b>	<b>29.1</b>	<b>7</b>
201	Meat products	46.8	3.7	37.1	6.0	12
2011	Meat packing plants	10.5	1.5	8.3	.7	22
2013	Sausages and other prepared meats	5.6	.1	2.0	3.5	67
2015	Poultry slaughtering and processing	30.8	2.0	26.9	1.8	11
202	Dairy products	36.7	3.8	23.5	9.3	25
2021	Creamery butter	1.5	-	-	1.5	83
2022	Cheese, natural and processed	12.7	.3	12.2	.2	50
2023	Dry, condensed, and evaporated dairy products	4.5	.4	(D)	(D)	11
2024	Ice cream and frozen desserts	6.9	.1	(D)	(D)	80
2026	Fluid milk	11.1	3.0	7.0	1.1	25
203	Preserved fruits and vegetables	46.9	3.8	40.7	2.3	10
2032	Canned specialties	1.3	(D)	.3	(D)	14
2033	Canned fruits and vegetables	19.9	2.2	16.7	1.0	15
2034	Dehydrated fruits, vegetables, and soups	4.0	(Z)	(D)	(D)	29
2035	Pickles, sauces, and salad dressings	1.0	(D)	(D)	(Z)	45
2037	Frozen fruits and vegetables	18.4	.7	17.3	.5	15
2038	Frozen specialties, n.e.c.	2.2	.1	1.7	.5	49
204	Grain mill products	52.9	32.3	17.1	3.5	7
2041	Flour and other grain mill products	1.5	1.3	(Z)	.1	56
2043	Cereal breakfast foods	9.0	6.5	(D)	(D)	11
2046	Wet corn milling	31.4	21.0	5.4	.8	1
2047	Dog and cat food	8.6	2.4	5.4	.8	33
2048	Prepared feeds, n.e.c.	1.8	1.0	.8	(Z)	54
205	Bakery products	18.2	7.0	9.0	2.2	25
2051	Bread, cake, and related products	11.5	3.4	6.1	2.0	34
2052	Cookies and crackers	5.8	3.6	1.9	.3	36
2053	Frozen bakery products, except bread	1.0	-	1.0	-	77
206	Sugar and confectionery products	27.7	6.3	20.5	.9	22
2061	Raw cane sugar	7.5	.5	6.7	.3	50
2063	Beet sugar	12.7	4.5	8.3	(Z)	37
2064	Candy and other confectionery products	(D)	(D)	(D)	.1	(X)
2068	Salted and roasted nuts and seeds	(D)	(D)	(D)	.1	(X)
207	Fats and oils	20.4	15.9	3.5	1.0	54
2074	Cottonseed oil mills	11.5	10.3	1.1	-	95
2075	Soybean oil mills	4.8	3.5	.5	.8	16
2077	Animal and marine fats and oils	1.3	1.1	.1	-	96
2079	Edible fats and oils, n.e.c.	2.9	1.0	1.7	.2	21
208	Beverages	27.6	7.7	17.5	2.5	5
2082	Malt beverages	(D)	(D)	(D)	(D)	(X)
2086	Bottled and canned soft drinks	(D)	.7	3.4	(D)	(X)
2087	Flavoring extracts and syrups, n.e.c.	1.7	(D)	(D)	-	58
209	Miscellaneous food and kindred products	39.7	4.5	33.8	1.4	34
2091	Canned and cured fish and seafoods	(D)	-	(D)	-	(X)
2095	Roasted coffee	1.5	(D)	(Z)	(D)	39
2096	Potato chips and similar snacks	(D)	(D)	(D)	(D)	(X)
2099	Food preparations, n.e.c.	18.5	1.0	17.0	.5	46
21	Tobacco products	14.5	12.9	(D)	(D)	15
211	Cigarettes	9.7	9.5	(D)	(D)	22
2111	Cigarettes	9.7	9.5	(D)	(D)	22
214	Tobacco stemming and redrying	4.5	3.2	(D)	(D)	3
2141	Tobacco stemming and redrying	4.5	3.2	(D)	(D)	3
22	Textile mill products	34.3	11.8	18.7	3.9	10
221	Broadwoven fabrics mills, cotton	5.0	1.5	2.7	.8	30
2211	Broadwoven fabrics mills, cotton	5.0	1.5	2.7	.8	30
222	Broadwoven fabrics mills, manmade fiber and silk	3.4	1.5	1.4	.5	17
2221	Broadwoven fabrics mills, manmade fiber and silk	3.4	1.5	1.4	.5	17
223	Broadwoven fabrics mills, wool	1.3	(D)	1.0	(D)	22
2231	Broadwoven fabrics mills, wool	1.3	(D)	1.0	(D)	22
225	Knitting mills	5.4	3.1	2.1	.3	12
2257	Weft knit fabrics mills	1.8	(D)	(D)	.2	11
2258	Lace and warp knit fabrics mills	2.1	(D)	(D)	(Z)	27
226	Textile finishing, except wool	12.0	2.2	9.0	.8	21
2261	Finishing plants, cotton	6.9	(D)	5.7	(D)	30
2262	Finishing plants, manmade	4.5	(D)	3.2	(D)	32
228	Yarn and thread mills	3.1	1.8	.7	.6	23
2281	Yarn spinning mills	2.1	1.1	(D)	(D)	26
2282	Throwing and winding mills	1.0	.7	(D)	(D)	45
229	Miscellaneous textile goods	3.5	(D)	1.4	(D)	9
2295	Coated fabrics, not rubberized	.5	(D)	(D)	-	58
2297	Nonwoven fabrics	2.9	1.1	(D)	(D)	4
24	Lumber and wood products	94.5	50.7	18.9	24.9	12
241	Logging	1.0	(Z)	.9	.1	44
2411	Logging	1.0	(Z)	.9	.1	44
242	Sawmills and planing mills	24.6	9.0	4.7	10.9	6
2421	Sawmills and planing mills, general	22.9	8.1	4.4	10.4	5
2426	Hardwood dimension and flooring mills	1.8	.9	.4	.5	31

See footnotes at end of table.

Table 3. Capital Expenditures by Industries for All Media: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	Industry	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
24	Lumber and wood products—Con.					
243	Millwork, plywood, and structural members	23.5	10.3	3.4	9.7	29
2431	Millwork	5.8	1.1		4.3	64
2434	Wood kitchen cabinets	7.3	2.8	.4		64
2435	Hardwood veneer and plywood	4.1	4.1	.1	4.4	56
2436	Softwood veneer and plywood	6.0	2.1	(2)	-	73
245	Wood buildings and mobile homes	(D)	(D)	2.8	1.0	39
2451	Mobile homes	(D)	(D)	.1	.2	(X)
249	Miscellaneous wood products	(D)	(D)	-	(2)	(X)
2491	Wood preserving	10.0	(D)	9.7	3.9	(X)
2493	Reconstituted wood products	16.8	4	6.9	2.8	11
2499	Wood products, n.e.c.	(D)	(D)	2.8	1.0	11
25	Furniture and fixtures	17.9	14.3	(2)	.1	(X)
251	Household furniture	11.0	9.7	.8	2.8	15
2511	Wood household furniture	9.7	8.6	.1	1.1	22
252	Office furniture	3.4	2.3		1.1	25
2521	Wood office furniture	2.0	1.7	.3	.8	30
2522	Office furniture, except wood	1.5	.7	.1	.2	50
254	Partitions and fixtures	2.6	1.7	.2	.6	11
2542	Partitions and fixtures, except wood	2.3	1.4	.3	.6	27
26	Paper and allied products	1 004.6	396.7	373.4	234.5	30
261	Pulp mills	147.1	82.9	42.6	21.6	6
2611	Pulp mills	147.1	82.9	42.6	21.6	5
262	Paper mills	611.0	158.1	266.4	186.6	8
2621	Paper mills	611.0	158.1	266.4	186.6	8
263	Paperboard mills	203.9	129.7	57.1	17.1	8
2631	Paperboard mills	203.9	129.7	57.1	17.1	8
265	Paperboard containers and boxes	7.9	4.4	1.5	1.9	24
2653	Corrugated and solid fiber boxes	3.0	.7	.9	1.3	35
2657	Folding paperboard boxes	3.6	2.5	.5	.6	35
267	Miscellaneous converted paper products	34.8	21.7	5.8	7.3	13
2671	Paper coated and laminated, packaging	6.0	3.6	1.4	1.0	44
2672	Paper coated and laminated, n.e.c.	14.2	11.4	1.6	1.2	19
2673	Bags; plastics, laminated, and coated	4.0	3.0	.5	.5	36
2676	Sanitary paper products	5.8	(D)	1.2	(D)	15
2677	Envelopes	1.6	-	.1	1.6	70
2679	Converted paper products, n.e.c.	1.6	(D)	.8	(D)	37
27	Printing and publishing	41.8	32.9	4.5	4.4	13
271	Newspapers	2.3	.3	1.7	.2	32
2711	Newspapers	2.3	.3	1.7	.2	32
273	Books	3.7	3.4	.2	.2	19
2732	Book printing	3.3	3.0	.1	.2	22
275	Commercial printing	28.9	24.8	1.7	2.4	14
2752	Commercial printing, lithographic	17.0	14.7	1.1	1.2	12
2754	Commercial printing, gravure	8.0	7.5	(D)	(D)	38
2759	Commercial printing, n.e.c.	3.9	2.6	(D)	(D)	44
276	Manifold business forms	1.5	(D)	.3	(D)	38
2761	Manifold business forms	1.5	(D)	.3	(D)	38
278	Blankbooks and bookbinding	3.7	(D)	-	(D)	84
2789	Bookbinding and related work	3.5	(D)	-	(D)	88
28	Chemicals and allied products	2 120.9	774.5	1 017.3	329.1	3
281	Industrial inorganic chemicals	230.9	77.7	110.9	42.3	9
2812	Alkalies and chlorine	62.0	(D)	50.5	(D)	4
2813	Industrial gases	3.5	(D)	1.0	(D)	-
2816	Inorganic pigments	26.9	17.2	6.1	3.6	3
2819	Industrial inorganic chemicals, n.e.c.	138.6	50.8	53.4	34.4	14
282	Plastics materials and synthetics	370.7	192.1	136.4	42.1	5
2821	Plastics materials and resins	205.0	98.2	76.6	30.2	6
2822	Synthetic rubber	61.6	37.0	17.4	7.3	25
2823	Cellulosic manmade fibers	(D)	(D)	(D)	(D)	(X)
2824	Organic fibers, noncellulosic	(D)	(D)	(D)	(D)	(X)
283	Drugs	190.4	68.7	88.1	33.7	5
2833	Medicinals and botanicals	83.1	31.5	(D)	(D)	1
2834	Pharmaceutical preparations	103.3	36.4	42.7	24.3	9
2835	Diagnostic substances	2.7	(D)	2.1	(D)	20
2836	Biological products, except diagnostic	1.3	(D)	(D)	(D)	4
284	Soaps, cleaners, and toilet goods	48.0	19.3	24.4	4.3	8
2841	Soap and other detergents	22.1	7.2	12.4	2.5	13
2842	Polishes and sanitation goods	4.1	(D)	1.2	(D)	17
2843	Surface active agents	17.8	9.0	7.8	1.0	11
2844	Toilet preparations	3.9	(D)	3.0	(D)	22
285	Paints and allied products	14.6	5.9	6.8	2.0	17
2851	Paints and allied products	14.6	5.9	6.8	2.0	17
286	Industrial organic chemicals	1 013.4	332.8	529.0	151.7	4
2861	Gum and wood chemicals	4.4	(D)	3.0	(D)	-
2865	Cyclic crudes and intermediates	134.1	(D)	64.8	(D)	6
2869	Industrial organic chemicals, n.e.c.	874.9	292.7	461.2	121.0	4
287	Agricultural chemicals	210.6	57.7	108.0	44.9	1
2873	Nitrogenous fertilizers	23.7	18.0	(D)	(D)	5
2874	Phosphatic fertilizers	80.7	19.7	(D)	(D)	1
2879	Agricultural chemicals, n.e.c.	105.3	19.7	58.0	27.6	1

See footnotes at end of table.

Table 3. Capital Expenditures by Industries for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code	Industry	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
28	Chemicals and allied products—Con.	42.2	20.3	13.7	8.2	6
289	Miscellaneous chemical products	6.2	2.0	1.0	3.2	21
2891	Adhesives and sealants	7.3	(D)	(D)	2.6	3
2892	Explosives	1.2	1.1	(Z)	-	86
2893	Printing ink	1.1	(D)	(D)	.3	37
2895	Carbon black	26.5	12.4	12.0	2.0	6
2899	Chemical preparations, n.e.c.					6
		2 685.0	2 079.8	492.6	112.6	6
29	Petroleum and coal products	2 674.6	2 074.8	488.0	111.7	6
291	Petroleum refining	2 674.6	2 074.8	488.0	111.7	6
2911	Petroleum refining					7
295	Asphalt paving and roofing materials	3.4	2.6	.5	.2	4
2952	Asphalt felts and coatings	2.7	2.2	.3	.2	9
299	Miscellaneous petroleum and coal products	7.0	2.4	4.1	.6	12
2992	Lubricating oils and greases	5.0	1.0	(D)	(D)	9
2999	Petroleum and coal products, n.e.c.	2.0	1.4	(D)	(D)	27
		96.7	71.1	18.2	7.3	9
30	Rubber and miscellaneous plastics products	3.8	2.4	1.1	.3	9
301	Tires and inner tubes	3.8	2.4	1.1	.3	9
3011	Tires and inner tubes					16
305	Hose and belting and gaskets and packing	4.6	2.6	(D)	(D)	18
3052	Rubber and plastics hose and belting	4.1	2.2	(D)	(D)	20
306	Fabricated rubber products, n.e.c.	10.6	7.7	(D)	(D)	60
3061	Mechanical rubber goods	3.4	2.2	.2	(D)	4
3069	Fabricated rubber products, n.e.c.	7.2	5.6	(D)	(D)	34
308	Miscellaneous plastics products, n.e.c.	77.3	58.3	13.5	5.5	20
3081	Unsupported plastics film and sheet	23.3	17.8	3.8	1.7	45
3083	Laminated plastics plate, sheet, and profile shapes	1.2	.2	1.0	.1	86
		1.0	.6	.2	.2	82
3084	Plastics pipe	30.9	27.6	2.7	.6	33
3086	Plastics foam products					21
3087	Custom compounding of purchased plastics	4.9	1.9	2.2	.8	43
3089	resins	14.7	10.0	3.1	1.6	45
31	Leather and leather products	8.1	.8	6.6	.7	45
311	Leather tanning and finishing	8.1	.8	6.6	.7	15
3111	Leather tanning and finishing					46
32	Stone, clay, and glass products	1.6	1.1	(Z)	.5	46
321	Flat glass	1.6	1.1	(Z)	.5	10
3211	Flat glass					21
322	Glass and glassware, pressed or blown	14.1	8.7	4.5	1.0	10
3221	Glass containers	4.2	1.2	2.5	.4	8
3229	Pressed and blown glass, n.e.c.	10.0	7.4	2.0	.5	8
323	Products of purchased glass	18.2	(D)	(D)	(D)	22
3231	Products of purchased glass	18.2	(D)	(D)	(D)	22
324	Cement, hydraulic	34.5	29.9	3.0	1.6	31
3241	Cement, hydraulic					63
325	Structural clay products	5.8	(D)	(D)	(D)	82
3253	Ceramic wall and floor tile	1.6	(D)	(D)	(D)	11
3255	Clay refractories	2.3	1.2	(Z)	-	66
3259	Structural clay products, n.e.c.	1.2	1.2	-	-	31
326	Pottery and related products	1.5	.9	.3	.3	83
327	Concrete, gypsum, and plaster products	27.7	8.2	2.2	17.2	41
3272	Concrete products, n.e.c.	1.5	.8	.6	.1	17
3273	Ready-mixed concrete	21.8	4.5	1.4	15.9	12
3274	Lime	1.8	1.4	(D)	(D)	48
3275	Gypsum products	2.6	1.5	(D)	(D)	12
329	Miscellaneous nonmetallic mineral products	35.4	27.6	4.4	3.4	6
3291	Abrasive products	11.1	9.1	(D)	(D)	12
3295	Minerals, ground or treated	7.7	5.5	(D)	(D)	36
3296	Mineral wool	14.0	11.2	1.9	1.0	5
3297	Nonclay refractories	2.1	1.5	.4	.3	8
		525.7	342.6	123.5	59.5	8
33	Primary metal industries	276.7	199.2	59.6	17.8	9
331	Blast furnace and basic steel products	254.1	189.0	54.9	10.2	36
3312	Blast furnaces and steel mills	13.6	7.2	.2	6.3	29
3313	Electrometallurgical products	1.7	.9	.4	.3	4
3315	Steel wire and related products	4.2	(D)	3.5	(D)	27
3316	Cold finishing of steel shapes	3.1	(D)	.6	(D)	13
3317	Steel pipe and tubes					15
332	Iron and steel foundries	58.5	33.4	6.6	18.5	2
3321	Gray and ductile iron foundries	46.7	24.5	5.2	17.0	17
3324	Steel investment foundries	2.7	2.3	.4	(Z)	4
3325	Steel foundries, n.e.c.	8.6	6.2	1.0	1.4	5
333	Primary nonferrous metals	108.5	71.9	21.6	15.1	7
3331	Primary copper	49.2	41.4	(D)	(D)	9
3334	Primary aluminum	36.5	26.0	6.3	4.1	7
3339	Primary nonferrous metals, n.e.c.	22.8	4.4	(D)	(D)	7
334	Secondary nonferrous metals	11.1	10.1	(D)	(D)	6
3341	Secondary nonferrous metals	11.1	10.1	(D)	(D)	13
335	Nonferrous rolling and drawing	53.6	17.3	30.3	6.0	3
3351	Copper rolling and drawing	13.2	(D)	10.1	(D)	35
3353	Aluminum sheet, plate, and foil	27.2	12.0	14.1	1.1	21
3354	Aluminum extruded products	3.9	.2	2.0	1.7	42
3356	Nonferrous rolling and drawing, n.e.c.	4.4	(D)	2.8	(D)	
3357	Nonferrous wire drawing and insulating	4.7	1.1	1.1	2.5	

See footnotes at end of table.

Table 3. Capital Expenditures by Industries for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code	Industry	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
33	Primary metal industries—Con.					
336	Nonferrous foundries (castings) .....	8.8	3.8	(D)	(D)	14
3363	Aluminum die-castings .....	4.3	1.0	1.9	1.5	13
3364	Nonferrous die-castings, except aluminum .....	1.9	.9	1.0	.1	42
3365	Aluminum foundries .....	1.5	1.0	(D)	(D)	10
339	Miscellaneous primary metal products .....	8.6	6.8	1.8	.1	36
3398	Metal heat treating .....	1.2	.5	.6	(Z)	27
3399	Primary metal products, n.e.c. ....	7.4	6.2	1.1	(Z)	42
34	Fabricated metal products .....	103.3	42.4	42.4	18.5	7
341	Metal cans and shipping containers .....	17.3	10.6	6.4	.3	23
3411	Metal cans .....	16.6	10.0	6.4	.3	24
342	Cutlery, handtools, and hardware .....	21.6	6.3	(D)	(D)	9
3421	Cutlery .....	(D)	(D)	(D)	.3	(X)
3423	Hand and edge tools, n.e.c. ....	3.9	2.3	.8	.8	36
3429	Hardware, n.e.c. ....	(D)	(D)	1.5	(D)	(X)
343	Plumbing and heating, except electric .....	2.3	.8	(D)	(D)	3
3432	Plumbing fixture fittings and trim .....	1.6	.2	(D)	(D)	4
344	Fabricated structural metal products .....	6.7	2.6	2.3	1.8	21
3443	Fabricated plate work (boiler shops) .....	2.0	1.0	.6	.4	18
3444	Sheet metal work .....	3.2	1.4	.9	.9	39
345	Screw machine products, bolts, etc. ....	4.5	1.6	2.2	.7	14
3451	Screw machine products .....	1.6	.4	.6	.3	37
3452	Bolts, nuts, rivets, and washers .....	2.9	1.1	1.3	.4	9
346	Metal forgings and stampings .....	6.8	1.9	4.0	.9	21
3462	Iron and steel forgings .....	2.6	.2	2.2	.2	41
3465	Automotive stampings .....	2.4	1.0	1.0	.4	31
3469	Metal stampings, n.e.c. ....	1.6	.7	.8	.2	39
347	Metal services, n.e.c. ....	14.6	5.0	7.6	2.0	19
3471	Plating and polishing .....	11.1	2.8	6.9	1.4	24
3479	Metal coating and allied services .....	3.5	2.2	.8	.6	23
348	Ordnance and accessories, n.e.c. ....	10.6	2.3	7.8	.5	6
3482	Small arms ammunition .....	4.2	.2	(D)	(D)	8
3483	Ammunition, except for small arms, n.e.c. ....	1.8	(D)	.7	(D)	21
3484	Small arms .....	1.3	.8	.4	.1	19
3489	Ordnance and accessories, n.e.c. ....	3.3	(D)	(D)	(D)	-
349	Miscellaneous fabricated metal products .....	18.9	11.3	5.8	1.8	25
3491	Industrial valves .....	4.5	2.9	1.1	.5	24
3494	Valves and pipe fittings, n.e.c. ....	2.5	1.1	1.2	.2	36
3495	Miscellaneous fabricated wire products .....	1.1	(Z)	1.0	-	93
3497	Metal foil and leaf .....	4.9	4.6	.1	.2	76
3498	Fabricated pipe and fittings .....	1.7	1.6	-	.1	81
3499	Fabricated metal products, n.e.c. ....	2.8	.4	2.1	.3	59
35	Industrial machinery and equipment .....	150.3	88.8	31.7	29.8	7
351	Engines and turbines .....	9.4	1.4	5.6	2.4	20
3511	Turbines and turbine generator sets .....	7.5	1.1	4.9	1.5	24
3519	Internal combustion engines, n.e.c. ....	1.9	.3	.7	.9	24
352	Farm and garden machinery .....	9.5	1.9	(D)	(D)	12
3523	Farm machinery and equipment .....	(D)	(D)	2.1	.5	(X)
3524	Lawn and garden equipment .....	(D)	(D)	(D)	(D)	(X)
353	Construction and related machinery .....	16.7	5.4	10.2	1.2	19
3531	Construction machinery .....	10.9	.6	9.6	.7	14
3535	Conveyors and conveying equipment .....	3.0	2.9	.1	(Z)	84
3537	Industrial trucks and tractors .....	1.2	1.2	-	(Z)	92
354	Metalworking machinery .....	6.8	4.9	1.0	.9	16
3541	Machine tools, metal cutting types .....	(D)	(D)	(Z)	(D)	(X)
3544	Special dies, tools, jigs, and fixtures .....	1.6	1.0	.2	.4	58
3545	Machine tool accessories .....	1.2	.7	.5	(Z)	32
3548	Welding apparatus .....	(D)	(D)	.1	(D)	(X)
355	Special industry machinery .....	1.6	.6	.4	.6	19
356	General industrial machinery .....	16.8	2.0	3.0	11.8	14
3561	Pumps and pumping equipment .....	3.9	.3	1.1	2.6	50
3562	Ball and roller bearings .....	2.0	.5	1.0	.5	37
3565	Packaging machinery .....	(D)	-	-	(D)	(X)
3569	General industrial machinery, n.e.c. ....	(D)	.9	.2	(D)	(X)
357	Computer and office equipment .....	11.8	5.2	(D)	(D)	10
3571	Electronic computers .....	3.9	2.0	1.7	.2	18
3572	Computer storage devices .....	6.7	2.6	(D)	(D)	14
3577	Computer peripheral equipment, n.e.c. ....	1.1	.6	(D)	(D)	24
358	Refrigeration and service machinery .....	63.1	56.6	4.0	2.5	9
3585	Refrigeration and heating equipment .....	61.8	55.8	3.8	2.3	9
359	Industrial machinery, n.e.c. ....	14.5	10.8	2.8	.9	44
3592	Carburetors, pistons, rings, and valves .....	4.6	3.9	.3	.4	62
3593	Fluid power cylinders and actuators .....	1.1	.2	.7	.1	62
3599	Industrial machinery, n.e.c. ....	8.7	6.5	1.8	.3	65
36	Electronic and other electric equipment .....	126.6	63.0	45.6	17.9	6
361	Electric distribution equipment .....	3.2	2.0	.7	.4	22
3613	Switchgear and switchboard apparatus .....	2.3	1.6	.2	.4	30
362	Electrical industrial apparatus .....	9.0	2.1	5.0	1.8	20
3621	Motors and generators .....	4.5	.8	2.0	1.6	20
3624	Carbon and graphite products .....	2.7	.9	1.8	(Z)	56
3625	Relays and industrial controls .....	1.8	.5	1.2	.1	13
363	Household appliances .....	7.4	2.7	2.7	2.0	14
3632	Household refrigerators and freezers .....	3.8	1.3	(D)	(D)	18
3633	Household laundry equipment .....	1.4	(Z)	(D)	(D)	8

See footnotes at end of table.

Table 3. Capital Expenditures by Industries for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
36	<b>Electronic and other electric equipment—</b>					
	<b>Con.</b>	10.8	5.4	4.5	.9	23
364	Electric lighting and wiring equipment	3.6	2.0	(D)	(D)	48
3641	Electric lamp bulbs and tubes	2.1	.5	1.2	(D)	38
3643	Current-carrying wiring devices	2.0	1.1	(D)	(D)	17
3644	Noncurrent-carrying wiring devices	1.1	1.1	—	(Z)	96
3646	Commercial lighting fixtures	1.7	.4	1.2	(Z)	64
3648	Lighting equipment, n.e.c.					
365	Household audio and video equipment	1.3	.5	.6	.2	3
3651	Household audio and video equipment	1.1	.5	.6	.1	3
366	Communications equipment	5.7	2.6	1.5	1.6	27
3661	Telephone and telegraph apparatus	3.1	(D)	.3	(D)	14
3663	Radio and television communications equipment	2.6	(D)	1.3	(D)	55
367	Electronic components and accessories	69.2	33.8	27.0	8.4	8
3671	Electron tubes	2.0	(D)	(D)	(Z)	45
3672	Printed circuit boards	9.9	1.7	5.3	2.9	14
3674	Semiconductors and related devices	49.8	28.7	17.6	3.6	9
3678	Electronic connectors	1.3	(D)	(D)	—	83
3679	Electronic components, n.e.c.	5.6	.9	2.9	1.8	38
369	Miscellaneous electrical equipment and supplies	20.0	13.8	3.6	2.6	13
3691	Storage batteries	4.3	3.1	.9	.3	38
3692	Primary batteries, dry and wet	(D)	(D)	(D)	.5	(X)
3694	Engine electrical equipment	5.5	3.2	.7	1.7	35
3695	Magnetic and optical recording media	(D)	(D)	(D)	.1	(X)
37	<b>Transportation equipment</b>	281.0	179.4	69.2	32.5	10
371	Motor vehicles and equipment	173.8	141.4	23.8	8.6	16
3711	Motor vehicles and car bodies	122.3	113.9	4.1	4.2	22
3714	Motor vehicle parts and accessories	50.4	26.5	19.6	4.3	9
372	Aircraft and parts	77.3	27.6	33.0	16.7	7
3721	Aircraft	24.4	13.3	4.5	6.6	11
3724	Aircraft engines and engine parts	22.5	(D)	11.9	(D)	12
3728	Aircraft parts and equipment, n.e.c.	30.4	(D)	16.5	(D)	10
373	Ship and boat building and repairing	2.6	.5	.7	1.4	19
3731	Ship building and repairing	2.4	.5	.7	1.2	20
374	Railroad equipment	(D)	.2	(D)	(D)	(X)
3743	Railroad equipment	(D)	.2	(D)	(D)	(X)
375	Motorcycles, bicycles, and parts	(D)	(D)	(D)	(D)	(X)
3751	Motorcycles, bicycles, and parts	(D)	(D)	(D)	(D)	(X)
376	Guided missiles, space vehicles, parts	17.7	6.4	7.4	3.9	13
3761	Guided missiles and space vehicles	11.3	4.4	4.0	2.9	9
3764	Space propulsion units and parts	4.2	1.9	1.3	1.0	32
3769	Space vehicle equipment, n.e.c.	2.1	—	2.1	—	66
379	Miscellaneous transportation equipment	(D)	(D)	(D)	.5	(X)
3795	Tanks and tank components	(D)	(Z)	(D)	(D)	(X)
3799	Transportation equipment, n.e.c.	1.4	(D)	1.1	(D)	8
38	<b>Instruments and related products</b>	89.1	52.7	18.8	17.5	11
381	Search and navigation equipment	12.0	7.7	2.8	1.5	5
3812	Search and navigation equipment	12.0	7.7	2.8	1.5	5
382	Measuring and controlling devices	(D)	(D)	(D)	3.6	(X)
3821	Laboratory apparatus and furniture	1.6	.1	1.5	—	89
3822	Environmental controls	1.1	.5	.2	.4	48
3824	Fluid meters and counting devices	(D)	(D)	(Z)	(Z)	(X)
3825	Instruments to measure electricity	1.4	.9	.4	(Z)	22
3826	Analytical instruments	1.1	.5	.5	.1	43
3829	Measuring and controlling devices, n.e.c.	6.5	(D)	(D)	3.0	68
384	Medical instruments and supplies	9.3	4.8	2.7	1.8	20
3841	Surgical and medical instruments	3.3	2.3	.3	.7	17
3842	Surgical appliances and supplies	3.1	2.1	.3	.7	25
3844	X-ray apparatus and tubes	1.1	.4	.4	.3	39
3845	Electromedical equipment	1.7	—	1.6	(Z)	91
385	Ophthalmic goods	(D)	(D)	(D)	(Z)	(X)
3851	Ophthalmic goods	(D)	(D)	(D)	(Z)	(X)
386	Photographic equipment and supplies	52.2	34.7	7.0	10.5	15
3861	Photographic equipment and supplies	52.2	34.7	7.0	10.5	15
39	<b>Miscellaneous manufacturing industries</b>	16.6	10.2	(D)	(D)	7
393	Musical instruments	1.2	1.1	.2	(Z)	44
3931	Musical instruments	1.2	1.1	.2	(Z)	44
394	Toys and sporting goods	2.1	.9	.8	.4	26
3949	Sporting and athletic goods, n.e.c.	1.9	.9	.8	.3	27
395	Pens, pencils, office, and art supplies	1.3	(D)	(D)	(D)	31
3951	Pens and mechanical pencils	1.0	(D)	(D)	(D)	38
396	Costume jewelry and notions	2.4	.3	1.3	.7	30
3965	Fasteners, buttons, needles, and pins	2.1	.3	1.1	.7	34
399	Miscellaneous manufactures	8.8	(D)	(D)	1.0	3
3995	Burial caskets	(D)	(D)	(D)	(D)	(X)
3996	Hard surface floor coverings, n.e.c.	(D)	6.3	(D)	(D)	(X)

\*Excludes Major Group 23, Apparel and Other Textile Products.



Table 4a. Capital Expenditures by Major Groups for the Media Air: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	Major group	Total PACE	Air							Standard error of estimate (PACE) (percent)
			Total	Type of pollutant abated			Abatement technique			
				Hazardous	Nonhazardous		End of line	Production process enhancements		
					Total	Particulates, etc. <sup>1</sup>			Other	
	<b>All Industries<sup>2</sup></b>	<b>7 866.9</b>	<b>4 403.1</b>	<b>959.1</b>	<b>3 444.0</b>	<b>3 033.8</b>	<b>410.4</b>	<b>2 533.7</b>	<b>1 869.5</b>	<b>3</b>
20	Food and kindred products	316.8	85.1	2.0	83.1	58.0	25.2	69.9	15.1	7
21	Tobacco products	14.5	12.9	(2)	12.9	5.5	7.3	5.8	7.1	15
22	Textile mill products	34.3	11.8	1.6	10.2	5.4	4.7	8.4	3.3	10
24	Lumber and wood products	94.5	50.7	2.3	48.4	24.0	24.4	42.0	8.7	12
25	Furniture and fixtures	17.9	14.3	1.8	12.5	7.6	4.8	7.8	6.5	15
26	Paper and allied products	1 004.6	396.7	61.7	334.9	215.6	119.3	263.0	133.7	6
27	Printing and publishing	41.8	32.9	3.8	29.1	26.8	2.3	19.1	13.8	13
28	Chemicals and allied products	2 120.9	774.5	323.4	451.0	374.2	76.8	532.4	242.0	3
29	Petroleum and coal products	2 685.0	2 079.8	328.5	1 751.3	1 713.2	38.1	930.3	1 149.4	6
30	Rubber and miscellaneous plastics products	96.7	71.1	39.9	31.3	24.6	6.7	59.4	11.7	27
31	Leather and leather products	8.5	.9	(Z)	.9	.5	.4	.6	.3	43
32	Stone, clay, and glass products	138.8	93.4	16.0	77.4	60.5	16.9	72.9	20.5	15
33	Primary metal industries	525.7	342.6	69.3	273.4	249.1	24.2	249.5	93.1	5
34	Fabricated metal products	103.3	42.4	9.9	32.5	25.5	6.9	33.8	8.6	7
35	Industrial machinery and equipment	150.3	88.8	19.5	69.3	43.4	25.9	31.2	57.6	7
36	Electronic and other electric equipment	126.6	63.0	27.7	35.3	27.6	7.8	41.1	21.9	6
37	Transportation equipment	281.0	179.4	19.9	159.5	146.1	13.3	131.0	48.4	10
38	Instruments and related products	89.1	52.7	30.8	21.9	17.8	4.1	28.0	24.7	11
39	Miscellaneous manufacturing industries	16.6	10.2	.8	9.4	8.4	1.0	7.3	2.9	7

<sup>1</sup>Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead.

<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 4b. Capital Expenditures by Major Groups for the Media Water: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	Major group	Total PACE	Water					Standard error of estimate (PACE) (percent)
			Total	Type of pollutant abated		Abatement technique		
				Hazardous	Nonhazardous	End of line	Production process enhancements	
	<b>All Industries<sup>1</sup></b>	<b>7 866.9</b>	<b>2 509.8</b>	<b>886.5</b>	<b>1 623.3</b>	<b>1 867.9</b>	<b>641.9</b>	<b>3</b>
20	Food and kindred products	316.8	202.6	8.2	194.4	162.3	40.3	7
21	Tobacco products	14.5	(D)	(D)	(D)	(D)	(Z)	15
22	Textile mill products	34.3	18.7	.6	18.1	15.3	3.4	10
24	Lumber and wood products	94.5	18.9	7.8	11.1	10.5	8.4	12
25	Furniture and fixtures	17.9	.8	.2	.6	.3	.5	15
26	Paper and allied products	1 004.6	373.4	61.3	312.1	169.3	204.1	6
27	Printing and publishing	41.8	4.5	3.1	1.4	3.0	1.5	13
28	Chemicals and allied products	2 120.9	1 017.3	390.2	627.1	845.4	172.0	3
29	Petroleum and coal products	2 685.0	492.6	267.2	225.4	391.6	101.0	6
30	Rubber and miscellaneous plastics products	96.7	16.2	3.9	14.3	12.4	5.8	27
31	Leather and leather products	8.5	6.7	.5	6.2	6.4	.3	43
32	Stone, clay, and glass products	138.8	20.2	5.3	14.8	12.0	8.2	15
33	Primary metal industries	525.7	123.5	33.3	90.3	99.3	24.2	5
34	Fabricated metal products	103.3	42.4	23.5	18.9	28.3	14.1	7
35	Industrial machinery and equipment	150.3	31.7	6.0	25.7	16.9	14.8	7
36	Electronic and other electric equipment	126.6	45.6	22.9	22.7	28.9	16.7	6
37	Transportation equipment	281.0	69.2	40.5	28.7	53.0	16.2	10
38	Instruments and related products	89.1	18.8	10.9	7.9	10.1	8.7	11
39	Miscellaneous manufacturing industries	16.6	(D)	(D)	(D)	(D)	1.7	7

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 4c. Capital Expenditures by Major Groups for the Media Solid/Contained Waste: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	Major group	Total PACE	Solid/contained waste				Standard error of estimate (PACE) (percent)	
			Total	Type of pollutant abated		Abatement technique		
				Hazardous	Nonhazardous	End of line		Production process enhancements
	<b>All industries<sup>1</sup></b>	<b>7 866.9</b>	<b>954.0</b>	<b>333.5</b>	<b>620.4</b>	<b>620.0</b>	<b>334.0</b>	<b>3</b>
20	Food and kindred products	316.8	29.1	1.5	27.6	22.0	7.1	7
21	Tobacco products	14.5	(D)	-	(D)	.5	(D)	15
22	Textile mill products	34.3	3.9	.6	3.3	2.3	1.5	10
24	Lumber and wood products	94.5	24.9	4.7	20.3	13.9	11.0	12
25	Furniture and fixtures	17.9	2.8	.7	2.1	1.8	1.0	15
26	Paper and allied products	1 004.6	234.5	12.9	221.7	133.3	101.2	6
27	Printing and publishing	41.8	4.4	1.1	3.3	2.4	2.0	13
28	Chemicals and allied products	2 120.9	329.1	174.0	155.1	239.7	89.4	3
29	Petroleum and coal products	2 685.0	112.6	60.2	52.3	56.3	56.2	6
30	Rubber and miscellaneous plastics products	96.7	7.3	2.8	4.5	4.3	3.1	27
31	Leather and leather products	8.5	.9	(Z)	.9	.5	.4	43
32	Stone, clay, and glass products	138.8	25.3	2.6	22.7	20.1	5.2	15
33	Primary metal industries	525.7	59.5	12.7	46.9	42.4	17.1	5
34	Fabricated metal products	103.3	18.5	7.4	11.0	12.9	5.6	7
35	Industrial machinery and equipment	150.3	29.8	11.2	18.6	17.3	12.5	7
36	Electronic and other electric equipment	126.6	17.9	10.4	7.5	10.8	7.1	6
37	Transportation equipment	281.0	32.5	19.9	12.6	27.6	4.9	10
38	Instruments and related products	89.1	17.5	9.5	8.1	10.3	7.2	11
39	Miscellaneous manufacturing industries	16.6	(D)	1.3	(D)	1.6	(D)	7

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
	<b>United States<sup>1</sup></b>	<b>7 866.9</b>	<b>4 403.1</b>	<b>2 509.8</b>	<b>954.0</b>	<b>3</b>
20	Food and kindred products	316.8	85.1	202.6	29.1	7
21	Tobacco products	14.5	12.9	(D)	(D)	15
22	Textile mill products	34.3	11.8	18.7	3.9	10
24	Lumber and wood products	94.5	50.7	18.9	24.9	12
25	Furniture and fixtures	17.9	14.3	.8	2.8	15
26	Paper and allied products	1 004.6	396.7	373.4	234.5	6
27	Printing and publishing	41.8	32.9	4.5	4.4	13
28	Chemicals and allied products	2 120.9	774.5	1 017.3	329.1	3
29	Petroleum and coal products	2 685.0	2 079.8	492.6	112.6	6
30	Rubber and miscellaneous plastics products	96.7	71.1	18.2	7.3	27
31	Leather and leather products	8.5	.9	6.7	.9	43
32	Stone, clay, and glass products	138.8	93.4	20.2	25.3	15
33	Primary metal industries	525.7	342.6	123.5	59.5	5
34	Fabricated metal products	103.3	42.4	42.4	18.5	7
35	Industrial machinery and equipment	150.3	88.8	31.7	29.8	7
36	Electronic and other electric equipment	126.6	63.0	45.6	17.9	6
37	Transportation equipment	281.0	179.4	69.2	32.5	10
38	Instruments and related products	89.1	52.7	18.8	17.5	11
39	Miscellaneous manufacturing industries	16.6	10.2	(D)	(D)	7
	<b>Alabama</b>	<b>119.4</b>	<b>54.3</b>	<b>48.2</b>	<b>16.9</b>	<b>7</b>
20	Food and kindred products	4.9	1.8	2.6	.5	50
22	Textile mill products	1.8	.6	1.1	.1	21
24	Lumber and wood products	6.6	.6	.5	5.4	57
26	Paper and allied products	37.0	11.3	17.2	8.5	1
28	Chemicals and allied products	21.7	5.1	15.5	1.1	12
30	Rubber and miscellaneous plastics products	1.1	(D)	(D)	(D)	18
32	Stone, clay, and glass products	2.6	(D)	-	(D)	46
33	Primary metal industries	31.7	21.0	(D)	(D)	11
34	Fabricated metal products	1.7	1.4	.1	.2	44
35	Industrial machinery and equipment	8.6	8.3	.4	-	62
	<b>Alaska</b>	<b>15.3</b>	<b>2.1</b>	<b>11.4</b>	<b>1.8</b>	<b>67</b>
20	Food and kindred products	11.0	-	(D)	(D)	92
26	Paper and allied products	3.8	1.7	(D)	(D)	39
	<b>Arizona</b>	<b>30.8</b>	<b>13.6</b>	<b>16.2</b>	<b>1.1</b>	<b>14</b>
26	Paper and allied products	7.3	.1	7.2	-	45
33	Primary metal industries	(D)	(D)	(D)	(Z)	(X)
34	Fabricated metal products	3.1	1.7	1.4	-	79
36	Electronic and other electric equipment	(D)	(D)	(D)	(Z)	(X)
37	Transportation equipment	2.0	.8	(D)	(D)	16
38	Instruments and related products	1.7	1.3	(D)	(D)	22

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
	<b>Arkansas</b>	<b>75.6</b>	<b>28.3</b>	<b>41.2</b>	<b>6.0</b>	<b>16</b>
20	Food and kindred products	(D)	(D)	(D)	(D)	(X)
24	Lumber and wood products	2.3	1.2	.5	.6	18
26	Paper and allied products	25.2	11.9	(D)	(D)	3
28	Chemicals and allied products	24.0	8.1	11.9	4.0	47
29	Petroleum and coal products	3.9	3.9	-	-	99
38	Instruments and related products	(D)	(D)	-	-	(X)
	<b>California</b>	<b>547.9</b>	<b>418.7</b>	<b>88.5</b>	<b>40.7</b>	<b>8</b>
20	Food and kindred products	27.6	11.5	11.1	5.0	16
22	Textile mill products	1.7	.1	1.4	.3	81
24	Lumber and wood products	5.7	(D)	1.0	(D)	1
26	Paper and allied products	12.5	3.6	6.5	2.4	26
27	Printing and publishing	5.1	3.6	.9	.6	26
28	Chemicals and allied products	24.1	8.7	13.6	1.8	15
29	Petroleum and coal products	394.4	352.9	34.0	7.4	10
30	Rubber and miscellaneous plastics products	4.2	3.1	.3	.7	38
32	Stone, clay, and glass products	6.9	5.2	.9	.8	44
33	Primary metal industries	10.7	2.6	2.2	5.9	33
34	Fabricated metal products	6.6	3.1	1.5	2.0	16
35	Industrial machinery and equipment	5.2	(D)	.9	(D)	7
36	Electronic and other electric equipment	17.5	8.6	5.9	3.0	14
37	Transportation equipment	17.7	6.8	6.8	4.1	12
38	Instruments and related products	5.5	3.4	1.0	1.1	20
39	Miscellaneous manufacturing industries	1.8	.8	.4	.6	36
	<b>Colorado</b>	<b>13.7</b>	<b>6.5</b>	<b>5.9</b>	<b>1.2</b>	<b>13</b>
20	Food and kindred products	2.9	(D)	(D)	(D)	2
35	Industrial machinery and equipment	3.3	2.1	1.1	.1	32
37	Transportation equipment	(D)	.8	1.9	(D)	(X)
38	Instruments and related products	(D)	(D)	(D)	(Z)	(X)
	<b>Connecticut</b>	<b>29.3</b>	<b>7.9</b>	<b>13.2</b>	<b>8.2</b>	<b>9</b>
28	Chemicals and allied products	3.6	1.6	1.9	.1	34
32	Stone, clay, and glass products	2.0	.5	1.5	-	73
33	Primary metal industries	1.4	.3	1.0	(Z)	53
34	Fabricated metal products	3.1	2.0	1.0	.1	28
36	Electronic and other electric equipment	(D)	(D)	(D)	(D)	(X)
37	Transportation equipment	(D)	(D)	(D)	(D)	(X)
	<b>Delaware</b>	<b>59.8</b>	<b>43.9</b>	<b>(D)</b>	<b>(D)</b>	<b>16</b>
28	Chemicals and allied products	(D)	(D)	7.3	(D)	(X)
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(X)
	<b>Florida</b>	<b>105.9</b>	<b>24.5</b>	<b>74.0</b>	<b>7.4</b>	<b>5</b>
20	Food and kindred products	22.1	2.0	19.4	.7	18
26	Paper and allied products	19.4	9.3	6.3	3.8	3
28	Chemicals and allied products	52.5	6.9	44.9	.8	2
32	Stone, clay, and glass products	5.5	3.2	1.7	.6	31
35	Industrial machinery and equipment	1.3	1.2	.1	(Z)	67
36	Electronic and other electric equipment	1.5	.5	.4	.6	24
37	Transportation equipment	1.2	.5	.1	.6	56
	<b>Georgia</b>	<b>173.3</b>	<b>146.9</b>	<b>15.8</b>	<b>10.6</b>	<b>16</b>
20	Food and kindred products	2.7	.8	1.5	.5	11
22	Textile mill products	3.0	1.3	1.1	.5	24
24	Lumber and wood products	2.7	1.6	.9	.2	2
26	Paper and allied products	104.3	96.2	4.3	3.8	11
27	Printing and publishing	1.8	1.7	(Z)	.1	50
28	Chemicals and allied products	17.5	12.6	3.6	1.2	15
30	Rubber and miscellaneous plastics products	27.4	26.1	.6	.7	92
32	Stone, clay, and glass products	4.1	2.5	(D)	(D)	9
33	Primary metal industries	2.3	(D)	(D)	(Z)	10
34	Fabricated metal products	1.8	.2	1.3	.3	40
37	Transportation equipment	2.8	(D)	.1	(D)	10
38	Instruments and related products	1.4	1.0	.2	.2	31
	<b>Hawaii</b>	<b>2.8</b>	<b>.5</b>	<b>2.3</b>	<b>-</b>	<b>53</b>
29	Petroleum and coal products	2.4	.2	2.2	-	61
	<b>Idaho</b>	<b>25.0</b>	<b>14.3</b>	<b>10.3</b>	<b>.4</b>	<b>23</b>
20	Food and kindred products	7.4	.2	(D)	(D)	77
24	Lumber and wood products	1.6	1.6	-	(Z)	25
26	Paper and allied products	(D)	(D)	(Z)	(D)	(X)
28	Chemicals and allied products	(D)	(D)	(D)	(Z)	(X)
	<b>Illinois</b>	<b>350.5</b>	<b>250.1</b>	<b>81.3</b>	<b>19.1</b>	<b>3</b>
20	Food and kindred products	19.6	6.2	11.4	2.0	18
24	Lumber and wood products	(D)	-	(D)	(D)	(X)
26	Paper and allied products	4.0	(D)	(D)	(Z)	55
27	Printing and publishing	3.2	2.5	.3	.3	43
28	Chemicals and allied products	39.2	17.9	16.6	4.7	13
29	Petroleum and coal products	229.9	(D)	34.5	(D)	1
30	Rubber and miscellaneous plastics products	3.3	2.9	.2	.2	41
32	Stone, clay, and glass products	3.0	2.5	(D)	(D)	30
33	Primary metal industries	19.4	13.3	3.9	2.2	21
34	Fabricated metal products	6.4	3.8	1.6	1.0	19
35	Industrial machinery and equipment	14.6	4.8	(D)	(D)	18
36	Electronic and other electric equipment	2.1	.8	1.2	.1	53
38	Instruments and related products	1.8	.3	1.5	-	80
39	Miscellaneous manufacturing industries	(D)	1.4	(D)	(D)	(X)

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
	<b>Indiana</b>	<b>330.9</b>	<b>220.6</b>	<b>94.3</b>	<b>16.0</b>	<b>6</b>
20	Food and kindred products	10.6	3.3	6.8	.4	6
25	Furniture and fixtures	2.5	2.3	(D)	(D)	40
26	Paper and allied products	2.8	2.2	(D)	(D)	49
27	Printing and publishing	(D)	(D)	(Z)	.2	(X)
28	Chemicals and allied products	75.9	(D)	41.8	(D)	4
29	Petroleum and coal products	(D)	(D)	26.6	3.1	(X)
30	Rubber and miscellaneous plastics products	4.1	2.9	.6	.6	50
32	Stone, clay, and glass products	5.3	5.3	(Z)	(Z)	19
33	Primary metal industries	53.7	42.2	10.0	1.5	4
34	Fabricated metal products	4.8	1.5	2.8	.5	23
35	Industrial machinery and equipment	6.3	4.9	1.4	(Z)	49
36	Electronic and other electric equipment	3.3	1.4	1.6	.3	41
37	Transportation equipment	7.2	3.4	1.2	2.5	8
38	Instruments and related products	1.5	.2	.8	.6	46
	<b>Iowa</b>	<b>46.9</b>	<b>27.0</b>	<b>14.2</b>	<b>5.7</b>	<b>9</b>
20	Food and kindred products	24.3	15.7	8.1	.4	4
28	Chemicals and allied products	5.3	1.6	2.6	1.2	3
30	Rubber and miscellaneous plastics products	1.4	.8	.1	.5	32
33	Primary metal industries	6.5	4.9	(D)	(D)	50
35	Industrial machinery and equipment	1.2	.1	(D)	(D)	37
36	Electronic and other electric equipment	3.7	.6	1.6	1.5	52
37	Transportation equipment	2.0	1.9	(Z)	(Z)	80
	<b>Kansas</b>	<b>186.1</b>	<b>153.7</b>	<b>23.5</b>	<b>8.9</b>	<b>35</b>
20	Food and kindred products	1.6	.2	1.3	.1	15
28	Chemicals and allied products	17.5	3.5	11.9	2.2	12
29	Petroleum and coal products	148.7	142.3	3.1	3.3	44
30	Rubber and miscellaneous plastics products	(D)	(D)	(D)	(D)	(X)
32	Stone, clay, and glass products	(D)	(D)	(D)	(D)	(X)
35	Industrial machinery and equipment	1.9	(Z)	1.8	.1	57
37	Transportation equipment	7.1	2.0	2.9	2.2	37
	<b>Kentucky</b>	<b>180.9</b>	<b>132.4</b>	<b>25.7</b>	<b>22.8</b>	<b>6</b>
24	Lumber and wood products	(D)	(D)	(D)	.6	(X)
26	Paper and allied products	19.9	(D)	(D)	10.0	31
27	Printing and publishing	2.1	(D)	(Z)	(D)	1
28	Chemicals and allied products	34.2	9.9	17.5	6.8	25
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(X)
32	Stone, clay, and glass products	2.9	(D)	.4	(D)	15
33	Primary metal industries	47.6	(D)	(D)	3.4	6
36	Electronic and other electric equipment	1.3	.6	.2	.4	29
37	Transportation equipment	(D)	(D)	(Z)	(Z)	(X)
	<b>Louisiana</b>	<b>1 057.2</b>	<b>477.6</b>	<b>430.8</b>	<b>148.8</b>	<b>2</b>
24	Lumber and wood products	4.1	(D)	2.9	(D)	50
26	Paper and allied products	34.2	14.6	(D)	(D)	1
28	Chemicals and allied products	639.7	166.5	362.4	110.8	3
29	Petroleum and coal products	374.2	293.7	56.4	24.2	2
37	Transportation equipment	3.9	(D)	(D)	-	37
	<b>Maine</b>	<b>62.2</b>	<b>23.8</b>	<b>26.8</b>	<b>11.6</b>	<b>8</b>
26	Paper and allied products	49.9	20.5	18.8	10.6	8
30	Rubber and miscellaneous plastics products	1.3	.3	1.0	.1	43
34	Fabricated metal products	1.9	(Z)	1.8	(Z)	85
35	Industrial machinery and equipment	(D)	(D)	(D)	(D)	(X)
36	Electronic and other electric equipment	2.1	1.1	1.1	-	81
37	Transportation equipment	(D)	(D)	(D)	(D)	(X)
	<b>Maryland</b>	<b>38.1</b>	<b>16.4</b>	<b>16.2</b>	<b>5.5</b>	<b>19</b>
20	Food and kindred products	9.1	1.5	5.6	2.0	57
27	Printing and publishing	4.1	3.6	.1	.4	77
28	Chemicals and allied products	15.0	8.2	4.8	2.0	19
32	Stone, clay, and glass products	(D)	(D)	(D)	(D)	(X)
33	Primary metal industries	4.5	1.7	2.5	.3	30
37	Transportation equipment	(D)	(D)	(D)	(D)	(X)
	<b>Massachusetts</b>	<b>59.5</b>	<b>18.4</b>	<b>35.6</b>	<b>5.5</b>	<b>11</b>
20	Food and kindred products	5.0	(Z)	4.8	.2	77
22	Textile mill products	4.9	1.0	3.8	.1	36
26	Paper and allied products	6.0	(Z)	5.8	.1	65
28	Chemicals and allied products	10.0	1.9	4.8	3.3	23
30	Rubber and miscellaneous plastics products	5.8	5.1	.3	.3	5
33	Primary metal industries	(D)	.6	(D)	.4	(X)
34	Fabricated metal products	4.8	.2	4.3	.3	14
36	Electronic and other electric equipment	4.2	2.9	1.1	.2	22
37	Transportation equipment	(D)	-	(D)	(Z)	(X)
38	Instruments and related products	9.3	5.9	3.1	.3	8
	<b>Michigan</b>	<b>159.3</b>	<b>99.4</b>	<b>37.9</b>	<b>22.0</b>	<b>7</b>
20	Food and kindred products	5.9	1.3	4.0	.6	30
26	Paper and allied products	(D)	1.5	(D)	(D)	(X)
28	Chemicals and allied products	48.1	35.9	6.9	5.2	13
30	Rubber and miscellaneous plastics products	5.3	4.8	.3	.2	84
33	Primary metal industries	33.8	19.1	12.7	2.0	5
34	Fabricated metal products	10.5	(D)	1.4	(D)	8
35	Industrial machinery and equipment	1.4	.5	.4	.4	37
37	Transportation equipment	44.7	31.7	10.8	2.2	15
38	Instruments and related products	(D)	(D)	(D)	(Z)	(X)

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
	<b>Indiana</b>	<b>330.9</b>	<b>220.6</b>	<b>94.3</b>	<b>16.0</b>	<b>6</b>
	Food and kindred products	10.6	3.3	6.8	.4	6
20	Furniture and fixtures	2.5	2.3	(D)	(D)	40
25	Paper and allied products	2.8	2.2	(D)	(D)	49
26	Printing and publishing	(D)	(D)	(Z)	.2	(X)
27	Chemicals and allied products	75.9	(D)	41.8	(D)	4
28	Petroleum and coal products	(D)	(D)	26.6	3.1	(X)
29	Rubber and miscellaneous plastics products	4.1	2.9	.6	.6	50
30	Stone, clay, and glass products	5.3	5.3	(Z)	(Z)	19
32	Primary metal industries	53.7	42.2	10.0	1.5	4
33	Fabricated metal products	4.8	1.5	2.8	.5	23
34	Industrial machinery and equipment	6.3	4.9	1.4	(Z)	49
35	Electronic and other electric equipment	3.3	1.4	1.6	.3	41
36	Transportation equipment	7.2	3.4	1.2	2.5	8
37	Instruments and related products	1.5	.2	.8	.6	46
	<b>Iowa</b>	<b>46.9</b>	<b>27.0</b>	<b>14.2</b>	<b>5.7</b>	<b>9</b>
	Food and kindred products	24.3	15.7	8.1	.4	4
20	Chemicals and allied products	5.3	1.6	2.6	1.2	3
28	Rubber and miscellaneous plastics products	1.4	.8	.1	.5	32
30	Primary metal industries	6.5	4.9	(D)	(D)	50
33	Industrial machinery and equipment	1.2	.1	(D)	(D)	37
35	Electronic and other electric equipment	3.7	.6	1.6	1.5	52
36	Transportation equipment	2.0	1.9	(Z)	(Z)	80
37						
	<b>Kansas</b>	<b>186.1</b>	<b>153.7</b>	<b>23.5</b>	<b>8.9</b>	<b>35</b>
	Food and kindred products	1.6	.2	1.3	.1	15
20	Chemicals and allied products	17.5	3.5	11.9	2.2	12
28	Petroleum and coal products	148.7	142.3	3.1	3.3	44
29	Rubber and miscellaneous plastics products	(D)	(D)	(D)	(D)	(X)
30	Stone, clay, and glass products	(D)	(D)	(D)	(D)	(X)
32	Primary metal industries	1.9	(Z)	1.8	.1	57
35	Industrial machinery and equipment	7.1	2.0	2.9	2.2	37
37	Transportation equipment					
	<b>Kentucky</b>	<b>180.9</b>	<b>132.4</b>	<b>25.7</b>	<b>22.8</b>	<b>6</b>
	Lumber and wood products	(D)	(D)	(D)	.6	(X)
24	Paper and allied products	19.9	(D)	(D)	10.0	31
26	Printing and publishing	2.1	(D)	(Z)	(D)	1
27	Chemicals and allied products	34.2	9.9	17.5	6.8	25
28	Petroleum and coal products	(D)	(D)	(D)	(D)	(X)
29	Stone, clay, and glass products	2.9	(D)	.4	(D)	15
32	Primary metal industries	47.6	(D)	(D)	3.4	6
33	Electronic and other electric equipment	1.3	.6	.2	.4	29
36	Transportation equipment	(D)	(D)	(D)	(Z)	(X)
37						
	<b>Louisiana</b>	<b>1 057.2</b>	<b>477.6</b>	<b>430.8</b>	<b>148.8</b>	<b>2</b>
	Lumber and wood products	4.1	(D)	2.9	(D)	50
24	Paper and allied products	34.2	14.6	(D)	(D)	1
26	Chemicals and allied products	639.7	166.5	362.4	110.8	3
28	Petroleum and coal products	374.2	293.7	56.4	24.2	2
29	Transportation equipment	3.9	(D)	(D)	-	37
37						
	<b>Maine</b>	<b>62.2</b>	<b>23.8</b>	<b>26.8</b>	<b>11.6</b>	<b>8</b>
	Paper and allied products	49.9	20.5	18.8	10.6	8
26	Rubber and miscellaneous plastics products	1.3	.3	1.0	.1	43
30	Fabricated metal products	1.9	(Z)	1.8	(Z)	85
34	Industrial machinery and equipment	(D)	(D)	(D)	(D)	(X)
35	Electronic and other electric equipment	2.1	1.1	1.1	-	81
36	Transportation equipment	(D)	(D)	(D)	(D)	(X)
37						
	<b>Maryland</b>	<b>38.1</b>	<b>16.4</b>	<b>16.2</b>	<b>5.5</b>	<b>19</b>
	Food and kindred products	9.1	1.5	5.6	2.0	57
20	Printing and publishing	4.1	3.6	.1	.4	77
27	Chemicals and allied products	15.0	8.2	4.8	2.0	19
28	Stone, clay, and glass products	(D)	(D)	(D)	(D)	(X)
32	Primary metal industries	4.5	1.7	2.5	.3	30
33	Transportation equipment	(D)	(D)	(D)	(D)	(X)
37						
	<b>Massachusetts</b>	<b>59.5</b>	<b>18.4</b>	<b>35.6</b>	<b>5.5</b>	<b>11</b>
	Food and kindred products	5.0	(Z)	4.8	.2	77
20	Textile mill products	4.9	1.0	3.8	.1	36
22	Paper and allied products	6.0	(Z)	5.8	.1	65
26	Chemicals and allied products	10.0	1.9	4.8	3.3	23
28	Rubber and miscellaneous plastics products	5.8	5.1	.3	.3	5
30	Primary metal industries	(D)	.6	(D)	.4	(X)
33	Fabricated metal products	4.8	.2	4.3	.3	14
34	Electronic and other electric equipment	4.2	2.9	1.1	.2	22
36	Transportation equipment	(D)	(D)	(D)	(Z)	(X)
37	Instruments and related products	9.3	5.9	3.1	.3	8
38						
	<b>Michigan</b>	<b>159.3</b>	<b>99.4</b>	<b>37.9</b>	<b>22.0</b>	<b>7</b>
	Food and kindred products	5.9	1.3	4.0	.6	30
20	Paper and allied products	(D)	1.5	(D)	(D)	(X)
26	Chemicals and allied products	48.1	35.9	6.9	5.2	13
28	Rubber and miscellaneous plastics products	5.3	4.8	.3	.2	84
30	Primary metal industries	33.8	19.1	12.7	2.0	5
33	Fabricated metal products	10.5	(D)	1.4	(D)	8
34	Industrial machinery and equipment	1.4	.5	.4	.4	37
35	Transportation equipment	44.7	31.7	10.8	2.2	15
37	Instruments and related products	(D)	(D)	(D)	(Z)	(X)
38						

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.)

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
<b>Minnesota</b>						
	-----	133.1	91.8	29.7	11.6	7
20	Food and kindred products .....	4.4				
24	Lumber and wood products .....	1.2	1.1	3.1	.2	33
26	Paper and allied products .....	32.2	.7	(D)	(D)	-
27	Printing and publishing .....	2.4	(D)	(D)	5.9	3
28	Chemicals and allied products .....	2.9	1.6	(Z)	.8	40
29	Petroleum and coal products .....	(D)	(D)	1.5	(D)	27
32	Stone, clay, and glass products .....	(D)	(D)	(D)	(D)	(X)
33	Primary metal industries .....	1.7	(D)	(D)	.2	(X)
34	Fabricated metal products .....	1.1	.3	.1	1.4	32
35	Industrial machinery and equipment .....	1.9	.5	.1	.6	25
36	Electronic and other electric equipment .....		1.2	(D)	(D)	44
37	Transportation equipment .....	2.7	(D)	(D)		
38	Instruments and related products .....	25.7	24.3	(D)	1.3	26
	-----	1.1	1.0	(D)	(D)	35
	<b>Mississippi</b> .....	<b>112.8</b>	<b>88.3</b>	<b>15.8</b>	<b>8.8</b>	<b>77</b>
20	Food and kindred products .....	1.7				6
24	Lumber and wood products .....	(D)	(Z)	1.5	.2	4
26	Paper and allied products .....	15.0	.7	(D)	(Z)	(X)
28	Chemicals and allied products .....	30.3	(D)	(D)	5.2	5
29	Petroleum and coal products .....	(D)	20.8	6.7	2.8	21
33	Primary metal industries .....	1.3	(D)	.7	.1	(X)
36	Electronic and other electric equipment .....	2.7	1.0	.3	(Z)	59
	-----		1.2	1.4	.2	36
	<b>Missouri</b> .....	<b>65.2</b>	<b>28.5</b>	<b>25.5</b>	<b>11.2</b>	<b>8</b>
20	Food and kindred products .....	6.6				6
24	Lumber and wood products .....	(D)	3.0	(D)	(D)	(X)
25	Furniture and fixtures .....	2.1	(Z)	(D)	(Z)	(X)
27	Printing and publishing .....	(D)	2.1	-	(Z)	95
28	Chemicals and allied products .....	27.6	1.2	(D)	(Z)	(X)
32	Stone, clay, and glass products .....	2.8	8.7	12.7	6.2	13
33	Primary metal industries .....	8.9	2.4	(D)	(D)	16
34	Fabricated metal products .....	5.3	6.0	2.4	.6	19
36	Electronic and other electric equipment .....	4.2	(D)	(D)	(Z)	3
37	Transportation equipment .....	3.5	3.2	(D)	(D)	42
	-----		(D)	(D)	(D)	-
	<b>Montana</b> .....	<b>7.1</b>	<b>2.2</b>	<b>(D)</b>	<b>(D)</b>	<b>9</b>
28	Chemicals and allied products .....	(D)	(D)	.1	(D)	(X)
33	Primary metal industries .....	(D)	(D)	(D)	-	(X)
	-----					
	<b>Nebraska</b> .....	<b>8.0</b>	<b>3.7</b>	<b>2.6</b>	<b>1.7</b>	<b>11</b>
20	Food and kindred products .....	(D)	(D)	1.5		(X)
36	Electronic and other electric equipment .....	(D)	(D)	.2	-	(X)
	-----					
	<b>Nevada</b> .....	<b>5.3</b>	<b>2.1</b>	<b>2.5</b>	<b>.8</b>	<b>45</b>
26	Paper and allied products .....	(D)	1.6	(D)	(D)	(X)
28	Chemicals and allied products .....	(D)	.3	(D)	(D)	(X)
	-----					
	<b>New Hampshire</b> .....	<b>(D)</b>	<b>(D)</b>	<b>2.2</b>	<b>(D)</b>	<b>(X)</b>
26	Paper and allied products .....	(D)	(D)	.4	(D)	(X)
	-----					
	<b>New Jersey</b> .....	<b>154.0</b>	<b>65.6</b>	<b>70.3</b>	<b>18.0</b>	<b>12</b>
20	Food and kindred products .....	17.4	4.5	12.8	.2	22
26	Paper and allied products .....	20.2	6.1	.4	13.7	65
28	Chemicals and allied products .....	57.3	10.9	44.1	2.3	16
29	Petroleum and coal products .....	30.6	24.3	5.9	.4	19
30	Rubber and miscellaneous plastics products .....	(D)	(D)	3.0	.1	(X)
32	Stone, clay, and glass products .....	2.6	1.0	1.5		30
33	Primary metal industries .....	7.4	7.0	(D)	.1	11
34	Fabricated metal products .....	7.9	6.8	.7	.3	49
38	Instruments and related products .....	2.0	1.6	(D)	(D)	5
39	Miscellaneous manufacturing industries .....	(D)	(D)	-	-	(X)
	-----					
	<b>New Mexico</b> .....	<b>44.3</b>	<b>36.2</b>	<b>(D)</b>	<b>(D)</b>	<b>70</b>
29	Petroleum and coal products .....	34.6	34.3	.3	(Z)	90
33	Primary metal industries .....	(D)	(D)	(D)	(D)	(X)
36	Electronic and other electric equipment .....	(D)	(D)	(D)	(D)	(X)
	-----					
	<b>New York</b> .....	<b>128.8</b>	<b>72.9</b>	<b>29.0</b>	<b>26.8</b>	<b>8</b>
20	Food and kindred products .....	7.1	1.0	5.0	1.1	31
26	Paper and allied products .....	12.3	1.0	3.6	7.8	30
27	Printing and publishing .....	1.7	1.3	(Z)	.4	31
28	Chemicals and allied products .....	18.7	(D)	6.7	(D)	19
30	Rubber and miscellaneous plastics products .....	1.5	.9	.1	.6	27
32	Stone, clay, and glass products .....	4.6	3.9	.5	.2	22
33	Primary metal industries .....	13.2	10.1	1.3	1.8	28
34	Fabricated metal products .....	3.3	2.0	1.1	.2	10
35	Industrial machinery and equipment .....	23.3	(D)	(D)	1.5	4
36	Electronic and other electric equipment .....	4.9	1.4	1.4	2.1	23
37	Transportation equipment .....	2.2	1.0	.8	.4	34
38	Instruments and related products .....	34.2	21.0	(D)	(D)	22
	-----					
	<b>North Carolina</b> .....	<b>259.8</b>	<b>97.3</b>	<b>132.2</b>	<b>30.3</b>	<b>4</b>
20	Food and kindred products .....	5.8	1.1	3.3	1.4	26
21	Tobacco products .....	10.0	9.6	(D)	(D)	22
22	Textile mill products .....	11.1	5.6	3.9	1.6	15
24	Lumber and wood products .....	12.7	11.2	.7	.9	66
25	Furniture and fixtures .....	3.4	3.2	.1	.1	36

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
<b>North Carolina—Con.</b>						
26	Paper and allied products	(D)	(D)	(D)	4.7	(X)
27	Printing and publishing	4.5	4.3	(Z)	.2	66
28	Chemicals and allied products	50.6	14.8	19.9	16.0	5
30	Rubber and miscellaneous plastics products	3.7	2.2	1.3	.2	20
32	Stone, clay, and glass products	(D)	(D)	3.2	1.0	(X)
33	Primary metal industries	1.3	.3	.8	.2	20
34	Fabricated metal products	1.9	1.1	.4	.4	26
35	Industrial machinery and equipment	2.0	.2	1.3	.5	54
36	Electronic and other electric equipment	3.9	1.1	2.2	.6	11
37	Transportation equipment	1.0	.9	(Z)	(Z)	61
38	Instruments and related products	3.1	.7	(D)	(D)	12
		3.7	1.1	2.2	.3	32
<b>North Dakota</b>						
20	Food and kindred products	3.0	1.0	1.9	-	35
		309.1	142.7	127.4	39.0	5
<b>Ohio</b>						
20	Food and kindred products	10.8	5.6	4.7	.5	32
25	Furniture and fixtures	3.4	(D)	(Z)	(D)	20
26	Paper and allied products	(D)	(D)	(D)	(Z)	(X)
27	Printing and publishing	1.4	1.3	.1	.1	40
28	Chemicals and allied products	64.5	24.3	30.9	9.3	10
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(X)
30	Rubber and miscellaneous plastics products	9.5	7.4	1.1	(D)	24
32	Stone, clay, and glass products	8.5	6.1	1.1	1.3	19
33	Primary metal industries	54.0	18.5	27.7	7.8	14
34	Fabricated metal products	6.1	2.7	2.8	.6	25
35	Industrial machinery and equipment	40.5	(D)	(D)	11.6	5
36	Electronic and other electric equipment	4.3	1.7	2.1	.5	18
37	Transportation equipment	6.8	4.5	1.6	.7	3
		41.1	13.9	10.8	16.4	15
<b>Oklahoma</b>						
26	Paper and allied products	1.0	.2	.7	(Z)	38
29	Petroleum and coal products	(D)	(D)	(D)	(D)	(X)
30	Rubber and miscellaneous plastics products	(D)	(D)	(D)	(D)	(X)
32	Stone, clay, and glass products	1.1	(D)	(D)	-	3
33	Primary metal industries	3.4	.3	.4	2.7	48
34	Fabricated metal products	1.2	.3	.6	.3	31
		105.8	37.0	63.2	5.6	14
<b>Oregon</b>						
20	Food and kindred products	14.4	.2	14.0	.3	32
24	Lumber and wood products	9.4	6.9	1.4	1.1	16
26	Paper and allied products	43.3	3.3	37.5	2.5	28
28	Chemicals and allied products	1.4	.8	.3	.2	28
33	Primary metal industries	6.9	3.0	3.9	(Z)	7
35	Industrial machinery and equipment	6.1	4.4	1.5	.2	86
36	Electronic and other electric equipment	(D)	(D)	(D)	1.0	(X)
38	Instruments and related products	(D)	(D)	(D)	(Z)	(X)
		272.4	140.5	63.0	68.9	8
<b>Pennsylvania</b>						
20	Food and kindred products	17.9	3.4	6.4	8.0	35
24	Lumber and wood products	3.9	.1	.1	3.7	95
26	Paper and allied products	19.1	(D)	4.3	(D)	10
27	Printing and publishing	2.4	2.2	.1	.1	29
28	Chemicals and allied products	87.2	42.8	21.9	22.5	19
29	Petroleum and coal products	55.6	(D)	11.4	(D)	1
30	Rubber and miscellaneous plastics products	2.7	1.8	.2	.7	32
32	Stone, clay, and glass products	4.6	2.5	1.2	.9	16
33	Primary metal industries	43.9	29.6	8.4	5.8	16
34	Fabricated metal products	6.6	4.2	1.4	1.0	27
35	Industrial machinery and equipment	2.2	1.5	.4	.3	8
36	Electronic and other electric equipment	7.6	3.3	2.6	1.7	21
37	Transportation equipment	(D)	2.0	3.5	(D)	(X)
38	Instruments and related products	(D)	(D)	.5	.6	(X)
39	Miscellaneous manufacturing industries	2.9	(D)	.3	(D)	7
		2.2	.8	1.3	.2	23
<b>Rhode Island</b>						
<b>South Carolina</b>						
22	Textile mill products	8.1	2.1	5.1	.9	14
24	Lumber and wood products	1.3	.3	(D)	(D)	16
26	Paper and allied products	11.9	6.0	5.4	.5	7
28	Chemicals and allied products	69.7	21.5	43.0	5.3	23
30	Rubber and miscellaneous plastics products	3.6	2.7	.8	.1	1
32	Stone, clay, and glass products	3.3	(D)	-	(D)	9
33	Primary metal industries	(D)	1.9	(D)	(D)	(X)
34	Fabricated metal products	6.5	3.8	2.7	(Z)	59
35	Industrial machinery and equipment	6.4	.7	(D)	(D)	10
36	Electronic and other electric equipment	2.9	.7	2.2	(Z)	52
37	Transportation equipment	(D)	(D)	(Z)	(Z)	(X)
		(D)	(D)	1.1	.5	(X)
<b>South Dakota</b>						
24	Lumber and wood products	(D)	(D)	-	.2	(X)
<b>Tennessee</b>						
20	Food and kindred products	5.8	2.0	2.9	.9	17
22	Textile mill products	1.0	(D)	(D)	.1	11
24	Lumber and wood products	9.0	(D)	(D)	(D)	29
26	Paper and allied products	2.1	.8	.7	.6	18
28	Chemicals and allied products	118.0	85.3	21.1	11.6	2

See footnotes at end of table.

Table 5. Capital Expenditures by States and Major Groups for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	Total PACE	Air	Water	Solid/contained waste	Standard error of estimate (PACE) (percent)
<b>Tennessee—Con.</b>						
29	Petroleum and coal products .....	17.7	16.5	(D)	(D)	54
30	Rubber and miscellaneous plastics products .....	3.2	1.7	1.5	(D)	1
32	Stone, clay, and glass products .....	3.0	1.8	1.2	(Z)	68
33	Primary metal industries .....	13.8	(D)	1.1	(D)	5
34	Fabricated metal products .....	1.3	.7	.4	.2	31
35	Industrial machinery and equipment .....	6.6	3.3	1.6	1.7	11
36	Electronic and other electric equipment .....	1.1	.4	.4	.2	17
37	Transportation equipment .....	33.3	33.0	.3	.1	66
39	Miscellaneous manufacturing industries .....	1.4	.1	.6	.7	26
<b>Texas</b>						
20	Food and kindred products .....	1 446.0	777.2	483.5	185.3	6
24	Lumber and wood products .....	18.8	11.5	6.4	.9	59
26	Paper and allied products .....	4.2	1.4	2.3	.4	45
28	Chemicals and allied products .....	141.0	17.7	41.5	81.8	24
29	Petroleum and coal products .....	389.6	158.7	185.0	45.9	7
30	Rubber and miscellaneous plastics products .....	785.8	524.8	227.7	33.3	13
32	Stone, clay, and glass products .....	4.2	2.3	1.6	.3	33
33	Primary metal industries .....	28.1	10.8	1.8	15.4	65
34	Fabricated metal products .....	47.7	36.3	6.5	4.9	7
35	Industrial machinery and equipment .....	5.9	.9	4.4	.7	15
36	Electronic and other electric equipment .....	1.6	1.1	.4	.2	12
37	Transportation equipment .....	9.2	5.7	3.4	.1	31
38	Instruments and related products .....	(D)	(D)	(D)	.9	(X)
		(D)	(D)	(D)	.2	(X)
<b>Utah</b>						
29	Petroleum and coal products .....	66.4	74.8	10.0	1.6	49
33	Primary metal industries .....	48.8	47.1	1.7	-	86
35	Industrial machinery and equipment .....	(D)	(D)	(D)	(D)	(X)
37	Transportation equipment .....	2.1	1.9	.1	.1	89
		(D)	(D)	(D)	(D)	(X)
<b>Vermont</b>						
36	Electronic and other electric equipment .....	13.7	1.5	9.0	3.2	38
37	Transportation equipment .....	(D)	(D)	(D)	(Z)	(X)
38	Instruments and related products .....	(D)	(D)	(D)	.2	(X)
		6.2	.2	3.0	2.9	72
<b>Virginia</b>						
20	Food and kindred products .....	217.6	128.0	65.1	24.4	26
21	Tobacco products .....	8.4	1.9	6.2	.2	33
24	Lumber and wood products .....	(D)	(D)	(D)	(D)	(X)
26	Paper and allied products .....	4.1	3.5	(D)	(D)	72
28	Chemicals and allied products .....	49.5	(D)	17.3	(D)	3
		41.4	21.1	16.5	3.9	4
29	Petroleum and coal products .....	67.3	40.6	19.6	7.1	82
30	Rubber and miscellaneous plastics products .....	1.9	.8	.7	.4	49
33	Primary metal industries .....	4.3	.9	.3	3.1	44
34	Fabricated metal products .....	1.2	(Z)	1.0	.2	39
35	Industrial machinery and equipment .....	2.4	1.0	.9	.5	39
36	Electronic and other electric equipment .....	(D)	.1	(D)	.4	(X)
37	Transportation equipment .....	29.7	28.4	.6	.7	30
<b>Washington</b>						
20	Food and kindred products .....	186.7	101.5	41.5	43.7	14
24	Lumber and wood products .....	9.3	(Z)	9.2	.1	58
26	Paper and allied products .....	11.0	(D)	(D)	(D)	9
28	Chemicals and allied products .....	42.4	24.2	5.4	12.8	29
29	Petroleum and coal products .....	(D)	(Z)	(D)	(D)	(X)
		36.9	24.4	9.3	3.2	28
32	Stone, clay, and glass products .....	11.5	9.1	2.3	.1	63
33	Primary metal industries .....	35.4	27.7	5.5	2.2	49
34	Fabricated metal products .....	1.0	.4	.5	.1	36
36	Electronic and other electric equipment .....	3.8	1.3	1.1	1.4	78
37	Transportation equipment .....	(D)	(D)	5.8	(D)	(X)
<b>West Virginia</b>						
28	Chemicals and allied products .....	85.1	21.5	33.6	30.0	12
33	Primary metal industries .....	66.2	11.6	28.8	25.8	10
34	Fabricated metal products .....	15.1	8.4	2.8	3.8	51
		1.0	1.0	-	(Z)	42
<b>Wisconsin</b>						
20	Food and kindred products .....	136.9	63.2	52.2	21.5	22
26	Paper and allied products .....	3.7	.5	2.6	.6	14
27	Printing and publishing .....	91.5	37.1	37.6	16.9	32
28	Chemicals and allied products .....	(D)	(D)	.5	(D)	(X)
31	Leather and leather products .....	5.5	3.5	1.6	.3	14
		5.6	.2	4.9	.5	65
32	Stone, clay, and glass products .....	(D)	(D)	(D)	.5	(X)
33	Primary metal industries .....	4.3	3.6	.6	.1	12
34	Fabricated metal products .....	2.4	.8	1.3	.4	27
35	Industrial machinery and equipment .....	1.0	.3	.2	.5	18
36	Electronic and other electric equipment .....	1.8	1.6	.1	.1	16
37	Transportation equipment .....	7.2	5.1	(D)	(D)	35
38	Instruments and related products .....	1.3	.2	.3	.8	38
<b>Wyoming</b>						
20	Food and kindred products .....	11.8	(D)	8.3	(D)	29
28	Chemicals and allied products .....	4.7	.2	4.5	-	6
29	Petroleum and coal products .....	4.9	(D)	1.1	(D)	65
		2.0	1.3	.6	-	79

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.



Table 6a. Capital Expenditures by States for the Media Air: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

State	Air								Standard error of estimate (PACE) (percent)
	Total PACE	Type of pollutant abated					Abatement technique		
		Total	Hazardous	Nonhazardous		End of line	Production process enhancements		
				Total	Particulates, etc. <sup>1</sup>			Other	
<b>United States<sup>2</sup></b>	<b>7 866.9</b>	<b>4 403.1</b>	<b>959.1</b>	<b>3 444.0</b>	<b>3 033.8</b>	<b>410.4</b>	<b>2 533.7</b>	<b>1 869.5</b>	<b>3</b>
Alabama	119.4	54.3	10.7	43.6	21.2	22.5	45.8	8.5	7
Alaska	15.3	2.1	(D)	(D)	(D)	(Z)	(D)	(D)	67
Arizona	30.8	13.6	1.3	12.2	9.1	3.1	3.3	10.2	14
Arkansas	75.6	28.3	7.2	21.0	12.3	8.7	16.2	12.1	16
California	547.9	418.7	94.6	324.1	311.9	12.3	215.8	202.9	8
Colorado	13.7	6.5	3.3	3.2	1.5	1.7	2.2	4.3	13
Connecticut	29.3	7.9	2.8	5.1	3.8	1.3	5.3	2.6	9
Delaware	59.8	43.9	5.1	38.7	38.1	.6	20.3	23.5	16
Florida	105.9	24.5	1.6	22.9	18.2	4.7	21.6	2.9	5
Georgia	173.3	146.9	36.2	110.7	59.6	51.1	111.8	35.1	16
Hawaii	2.8	.5	-	.5	.5	-	(Z)	.5	53
Idaho	25.0	14.3	(D)	6.2	6.2	(D)	7.9	6.4	23
Illinois	350.5	250.1	15.7	234.4	221.6	12.7	(D)	(D)	3
Indiana	330.9	220.6	25.7	194.9	183.9	11.0	81.9	138.7	6
Iowa	46.9	27.0	1.3	25.7	16.9	8.8	23.4	3.5	9
Kansas	186.1	153.7	4.7	148.9	141.9	7.1	14.2	139.5	35
Kentucky	180.9	132.4	8.7	123.7	119.1	4.6	(D)	(D)	6
Louisiana	1 057.2	477.6	169.4	308.2	288.7	19.5	244.9	232.7	2
Maine	62.2	23.8	11.1	12.7	(D)	(D)	20.2	3.6	8
Maryland	38.1	16.4	1.8	14.6	10.8	3.8	9.6	6.8	19
Massachusetts	59.5	18.4	3.8	14.6	12.9	1.7	9.9	8.5	11
Michigan	159.3	99.4	19.6	79.8	70.5	9.3	61.6	37.8	7
Minnesota	133.1	91.8	3.2	88.6	83.4	5.2	(D)	(D)	7
Mississippi	112.8	88.3	(D)	(D)	72.6	(D)	25.6	62.7	6
Missouri	65.2	28.5	5.3	23.3	21.5	1.8	19.0	9.6	8
Montana	7.1	2.2	(D)	(D)	2.0	(D)	2.2	(Z)	9
Nebraska	8.0	3.7	.4	3.3	2.6	.7	1.5	2.2	11
Nevada	5.3	2.1	.2	1.9	1.9	(Z)	.3	1.8	45
New Hampshire	(D)	(D)	.5	(D)	1.2	(D)	(D)	(D)	(X)
New Jersey	154.0	65.6	19.6	46.0	37.8	8.2	38.0	27.5	12
New Mexico	44.3	36.2	(D)	(D)	(D)	(Z)	15.5	20.7	70
New York	128.8	72.9	33.5	39.4	23.0	16.4	33.5	39.4	8
North Carolina	258.8	97.3	14.7	82.6	50.5	32.1	73.2	24.0	4
North Dakota	3.7	1.1	-	1.1	(Z)	1.1	1.1	-	32
Ohio	309.1	142.7	26.4	116.2	89.5	26.7	95.8	46.8	5
Oklahoma	41.1	13.9	4.5	9.4	9.0	.4	7.8	6.1	15
Oregon	105.8	37.0	16.6	20.4	12.7	7.7	30.6	6.4	14
Pennsylvania	272.4	140.5	39.4	101.1	93.3	7.8	92.1	48.5	8
Rhode Island	2.2	.8	.1	.7	.7	.1	.6	.2	23
South Carolina	119.9	44.1	14.0	30.2	23.1	7.1	32.2	12.0	14
South Dakota	(D)	(D)	(Z)	(D)	(D)	(D)	(D)	(D)	(X)
Tennessee	218.3	163.9	29.5	134.3	115.1	19.2	128.9	34.9	12
Texas	1 446.0	777.2	191.0	586.1	539.9	46.3	521.5	255.7	8
Utah	86.4	74.8	10.7	64.1	(D)	(D)	62.2	12.6	49
Vermont	13.7	1.5	1.2	.3	.3	(Z)	1.1	.4	38
Virginia	217.6	128.0	39.5	88.5	76.9	11.7	97.0	31.1	26
Washington	186.7	101.5	34.1	67.4	65.2	2.2	58.3	43.2	14
West Virginia	85.1	21.5	5.2	16.3	15.3	1.1	17.7	3.9	12
Wisconsin	136.9	63.2	22.7	40.5	32.1	8.4	27.6	35.5	22
Wyoming	11.8	(D)	(D)	4.2	3.7	.5	(D)	3.8	29

<sup>1</sup>Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead.  
<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 6b. Capital Expenditures by States for the Media Water: 1992

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

State	Water						Standard error of estimate (PACE) (percent)
	Total PACE	Type of pollutant abated			Abatement technique		
		Total	Hazardous	Nonhazardous	End of line	Production process enhancements	
<b>United States<sup>1</sup></b>	<b>7 866.9</b>	<b>2 509.8</b>	<b>886.5</b>	<b>1 623.3</b>	<b>1 867.9</b>	<b>641.9</b>	<b>3</b>
Alabama	119.4	48.2	10.3	37.8	40.9	7.3	7
Alaska	15.3	11.4	(D)	(D)	(D)	(D)	67
Arizona	30.8	16.2	1.6	14.6	10.2	6.0	14
Arkansas	75.6	41.2	.5	40.7	(D)	(D)	16
California	547.9	88.5	32.5	56.0	59.2	29.3	8
Colorado	13.7	5.9	1.0	4.9	1.9	4.1	13
Connecticut	29.3	13.2	8.4	4.8	11.5	1.7	9
Delaware	59.8	(D)	(D)	6.6	7.2	(D)	16
Florida	105.9	74.0	2.5	71.5	71.5	2.4	5
Georgia	173.3	15.8	3.4	12.3	11.0	4.8	16

See footnotes at end of table.

Table 6b. Capital Expenditures by States for the Media Water: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PACE	Water					Standard error of estimate (PACE) (percent)
		Total	Type of pollutant abated		Abatement technique		
			Hazardous	Nonhazardous	End of line	Production process enhancements	
Hawaii	2.8	2.3	.9	1.4	2.2	.1	53
Idaho	25.0	10.3	(D)	(D)	9.7	.6	23
Illinois	350.5	81.3	24.0	57.3	59.9	21.4	3
Indiana	330.9	94.3	34.1	60.2	78.3	16.0	6
Iowa	46.9	14.2	3.1	11.2	10.0	4.2	9
Kansas	186.1	23.5	14.2	9.4	7.4	16.1	35
Kentucky	180.9	25.7	17.0	8.7	15.9	9.8	6
Louisiana	1 057.2	430.8	183.8	247.0	383.8	47.0	2
Maine	62.2	26.8	4.0	22.8	10.1	16.7	8
Maryland	38.1	16.2	3.0	13.2	6.1	10.1	19
Massachusetts	59.5	35.6	14.4	21.2	21.8	13.8	11
Michigan	159.3	37.9	14.1	23.9	31.4	6.5	7
Minnesota	133.1	29.7	.9	28.8	28.0	1.7	7
Mississippi	112.8	15.8	5.2	10.6	12.8	3.0	6
Missouri	65.2	25.5	11.0	14.5	19.9	5.6	8
Montana	7.1	(D)	(D)	.2	(D)	.1	9
Nebraska	8.0	2.6	.6	2.1	2.4	.2	11
Nevada	5.3	2.5	.9	1.6	(D)	(D)	45
New Hampshire	17.1	2.2	.7	1.5	1.8	.4	4
New Jersey	154.0	70.3	15.2	55.1	58.7	11.6	12
New Mexico	44.3	(D)	-	(D)	(D)	(D)	70
New York	128.8	29.0	10.3	18.7	20.7	8.3	8
North Carolina	259.8	132.2	10.4	121.8	(D)	(D)	4
North Dakota	3.7	2.2	.2	2.1	2.2	-	32
Ohio	309.1	127.4	27.2	100.2	110.2	17.2	5
Oklahoma	41.1	10.8	3.8	7.0	10.1	.7	15
Oregon	105.8	63.2	41.6	21.6	45.3	17.9	14
Pennsylvania	272.4	63.0	16.5	46.5	42.5	20.5	8
Rhode Island	2.2	1.3	1.1	.1	.4	.9	23
South Carolina	119.9	64.7	11.3	53.4	54.8	9.9	14
South Dakota	4.2	1.1	(D)	(D)	(D)	(D)	19
Tennessee	218.3	33.5	6.4	27.1	27.1	6.4	12
Texas	1 446.0	483.5	284.5	199.0	329.8	153.7	8
Utah	86.4	10.0	.5	9.5	9.5	.6	49
Vermont	13.7	9.0	2.9	6.1	6.8	2.2	38
Virginia	217.6	65.1	28.6	36.5	42.6	22.6	26
Washington	186.7	41.5	16.9	24.6	27.0	14.5	14
West Virginia	85.1	33.6	3.8	29.8	23.6	10.0	12
Wisconsin	136.9	52.2	2.1	50.1	39.0	13.2	22
Wyoming	11.8	6.3	.6	5.6	(D)	(D)	29

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 6c. Capital Expenditures by States for the Media Solid/Contained Waste: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PACE	Solid/contained waste					Standard error of estimate (PACE) (percent)
		Total	Type of pollutant abated		Abatement technique		
			Hazardous	Nonhazardous	End of line	Production process enhancements	
United States <sup>1</sup>	7 866.9	954.0	333.5	620.4	620.0	334.0	3
Alabama	119.4	16.9	2.6	14.3	14.2	2.8	7
Alaska	15.3	1.8	.8	1.0	.7	1.1	67
Arizona	30.8	1.1	.7	.4	.2	.9	14
Arkansas	75.6	6.0	2.0	4.1	5.4	.6	16
California	547.9	40.7	20.4	20.3	22.1	18.6	8
Colorado	13.7	1.2	.9	.4	1.0	.2	13
Connecticut	29.3	8.2	7.1	1.1	7.7	.5	9
Delaware	59.8	(D)	(D)	.2	(D)	(D)	16
Florida	105.9	7.4	1.2	6.2	6.2	1.2	5
Georgia	173.3	10.6	3.3	7.4	8.7	1.9	16
Hawaii	2.8	-	-	-	-	-	53
Idaho	25.0	.4	(Z)	-	-	-	23
Illinois	350.5	19.1	9.6	9.5	4.4	-	3
Indiana	330.9	16.0	10.6	5.4	11.3	7.9	6
Iowa	46.9	5.7	2.6	3.1	14.3	1.7	9
Kansas	186.1	8.9	3.9	5.0	2.8	2.9	35
Kentucky	180.9	22.8	4.0	18.8	19.7	3.0	6
Louisiana	1 057.2	148.8	55.2	93.6	128.9	19.9	2
Maine	62.2	11.6	1.9	9.7	8.2	3.3	8
Maryland	38.1	5.5	1.1	4.4	2.4	3.1	19
Massachusetts	59.5	5.5	4.1	1.4	2.7	2.8	11
Michigan	159.3	22.0	4.1	17.9	18.6	3.5	7
Minnesota	133.1	11.6	2.9	8.7	9.3	2.3	7
Mississippi	112.8	8.8	1.9	6.8	4.4	4.4	6
Missouri	65.2	11.2	6.0	5.1	10.0	1.2	8

See footnotes at end of table.

Table 6c. Capital Expenditures by States for the Media Solid/Contained Waste: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Solid/contained waste							Standard error of estimate (PACE) (percent)
	Total PACE	Type of pollutant abated		Abatement technique		Production process enhancements		
		Total	Hazardous	Nonhazardous	End of line			
Montana	7.1	(D)	(Z)	(D)	(D)	(Z)	9	
Nebraska	8.0	1.7	1.5	.2	.3	1.4	11	
Nevada	5.3	.8	—	.8	(D)	(D)	45	
New Hampshire	(D)	(D)	(D)	.1	(D)	(Z)	(X)	
New Jersey	154.0	18.0	1.9	16.2	5.5	12.5	12	
New Mexico	44.3	(D)	(D)	(D)	(D)	.1	70	
New York	126.8	26.8	12.1	14.7	19.7	7.1	8	
North Carolina	259.8	30.3	14.2	16.1	23.4	7.0	4	
North Dakota	3.7	.3	.1	.2	—	.3	32	
Ohio	309.1	39.0	11.9	27.1	33.5	5.5	5	
Oklahoma	41.1	16.4	9.2	7.2	2.3	14.1	15	
Oregon	105.8	5.6	2.6	3.1	4.7	.9	14	
Pennsylvania	272.4	68.9	21.2	47.6	29.4	39.4	8	
Rhode Island	2.2	.2	.1	.1	.1	(Z)	23	
South Carolina	119.9	11.1	2.7	8.4	7.3	3.8	14	
South Dakota	(D)	.5	—	.5	.5	(Z)	(X)	
Tennessee	218.3	21.0	6.8	14.1	13.6	7.4	12	
Texas	1 446.0	185.3	56.9	128.5	92.9	92.4	8	
Utah	86.4	1.6	.3	1.2	1.2	.4	49	
Vermont	13.7	3.2	.2	2.9	1.1	2.0	38	
Virginia	217.6	24.4	6.4	18.0	20.6	3.8	26	
Washington	186.7	43.7	4.7	39.0	(D)	(D)	14	
West Virginia	85.1	30.0	24.8	5.3	(D)	(D)	12	
Wisconsin	136.9	21.5	1.2	20.3	18.9	2.6	22	
Wyoming	11.8	(D)	(Z)	(D)	(D)	(D)	29	

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 7. Operating Costs and Cost Offsets by Industries for All Media: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/contained waste	Total	Air	Water	Solid/contained waste	
	All Industries <sup>1</sup>	17 466.4	5 395.0	6 576.9	5 494.4	1 907.3	910.9	331.3	665.0	2
20	Food and kindred products	1 312.0	162.7	835.7	313.6	62.2	19.6	21.8	40.8	3
201	Meat products	222.2	11.1	166.4	44.6	8.9	1.0	4.9	2.9	6
2011	Meat packing plants	65.4	4.4	46.0	14.9	2.5	.2	1.5	.8	11
2013	Sausages and other prepared meats	31.2	.4	20.9	10.0	.8	(Z)	.1	.7	23
2015	Poultry slaughtering and processing	125.5	6.3	99.5	19.7	5.6	.8	3.3	1.5	6
202	Dairy products	146.2	3.9	111.8	30.5	9.2	1.4	.8	7.1	11
2021	Creamery butter	4.0	—	2.5	1.5	(Z)	—	(Z)	(Z)	57
2022	Cheese, natural and processed	49.0	.6	39.5	8.9	6.6	(Z)	.6	6.0	18
2023	Dry, condensed, and evaporated dairy products	12.9	.9	8.0	4.1	.6	.2	.2	.2	17
2024	Ice cream and frozen desserts	14.3	—	11.1	3.2	.2	—	—	.2	48
2026	Fluid milk	66.0	2.4	50.8	12.9	1.9	1.2	.1	.6	14
203	Preserved fruits and vegetables	212.5	5.6	142.5	64.4	13.2	.4	2.7	10.1	8
2032	Canned specialties	23.0	(D)	15.1	(D)	(D)	—	—	(D)	18
2033	Canned fruits and vegetables	77.5	1.2	50.5	25.9	(D)	(D)	.4	4.9	15
2034	Dehydrated fruits, vegetables, and soups	8.2	(D)	4.3	(D)	.1	—	(Z)	.1	34
2035	Pickles, sauces, and salad dressings	23.0	.6	15.3	7.1	.5	(Z)	.1	.3	30
2037	Frozen fruits and vegetables	49.5	1.3	38.2	10.1	4.5	(D)	2.0	(D)	6
2038	Frozen specialties, n.e.c.	31.3	.6	19.0	11.7	.7	(Z)	.1	.5	16
204	Grain mill products	164.7	62.5	69.0	33.2	11.4	7.0	2.4	2.1	6
2041	Flour and other grain mill products	13.7	11.2	1.0	1.5	.9	.8	(Z)	.1	30
2043	Cereal breakfast foods	27.1	10.0	9.2	7.9	2.8	1.4	(Z)	1.4	4
2044	Rice milling	2.8	2.5	.2	.1	.2	.2	—	—	58
2045	Prepared flour mixes and doughs	6.0	—	2.3	2.8	.4	.1	.1	.3	27
2046	Wet corn milling	75.3	26.9	40.9	7.6	6.6	(D)	2.1	(D)	5
2047	Dog and cat food	20.0	1.9	9.6	8.4	.2	(D)	—	(D)	21
2048	Prepared feeds, n.e.c.	19.7	9.2	5.7	4.9	.4	.3	.1	.1	27
205	Bakery products	53.6	3.7	28.2	21.6	3.3	.1	.1	3.1	15
2051	Bread, cake, and related products	32.7	2.2	20.7	9.7	4	(Z)	(Z)	.4	24
2052	Cookies and crackers	17.6	1.5	5.3	10.9	2.7	(Z)	.1	2.6	15
2053	Frozen bakery products, except bread	3.3	(Z)	2.2	1.0	.1	—	(Z)	.1	40
206	Sugar and confectionery products	80.4	14.5	43.0	23.0	1.5	.1	.4	1.0	13
2061	Raw cane sugar	9.6	3.6	3.5	2.6	—	—	—	—	40
2062	Cane sugar refining	7.7	.6	3.9	3.2	(Z)	—	—	(Z)	—
2063	Beet sugar	28.6	6.1	17.2	5.3	(D)	.1	(D)	(Z)	32
2064	Candy and other confectionery products	21.4	2.1	12.6	6.7	.2	(Z)	(D)	.2	10
2066	Chocolate and cocoa products	7.8	1.1	4.2	2.5	(D)	—	(D)	(D)	7
2067	Chewing gum	(D)	(D)	(D)	(D)	(D)	—	—	(D)	(X)
2068	Salted and roasted nuts and seeds	(D)	(D)	(D)	(D)	.5	—	—	.5	(X)
207	Fats and oils	72.3	34.8	28.4	9.1	6.4	(D)	(D)	.9	20
2074	Cottonseed oil mills	11.4	9.2	1.4	.8	—	—	—	—	82
2075	Soybean oil mills	27.0	12.4	10.6	3.9	4.0	(D)	(D)	.4	6
2077	Animal and marine fats and oils	11.4	7.4	3.7	.3	.1	(Z)	(Z)	(Z)	89
2079	Edible fats and oils, n.e.c.	22.1	5.6	12.7	3.8	2.3	.5	1.3	.5	16

Table 7. Operating Costs and Cost Offsets by Industries for All Media: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.)

SIC code	Industry	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/contained waste	Total	Air	Water	Solid/contained waste	
20	<b>Food and kindred products—Con.</b>									
208	Beverages	231.8	12.3	174.4	45.1					
2082	Malt beverages	158.4	8.2	129.8	20.4	18.2	(D)	(D)	8.6	4
2083	Malt	4.4	(D)	2.6	(D)	(D)	(D)	(D)	(Z)	4
2084	Wines, brandy, and brandy spirits	3.8	.1	1.8	(D)	(Z)	(Z)	(Z)	(Z)	25
2085	Distilled and blended liquors	6.7	1.9	3.5	1.9	.1	-	-	.1	32
2086	Bottled and canned soft drinks	52.5	.4	32.4	1.3	.1	(Z)	(Z)	(Z)	36
2087	Flavoring extracts and syrups, n.e.c.	6.0	(D)	4.3	(D)	1.7	(Z)	(Z)	1.2	11
209	Miscellaneous food and kindred products	128.3	14.3	71.9	42.1	10.0	1.7	3.4	5.0	32
2091	Canned and cured fish and seafoods	3.3	.2	1.9	1.2	.7	.1	.1	.4	13
2092	Fresh or frozen prepared fish	24.1	1.6	13.5	9.1	.9	.4	.2	.6	53
2095	Roasted coffee	17.2	6.3	5.8	5.0	1.9	.9	.3	.6	23
2096	Potato chips and similar snacks	22.4	1.8	15.6	4.9	2.6	.2	1.7	.6	28
2098	Macaroni and spaghetti	1.1	.2	.2	.7	(Z)	-	-	.9	12
2099	Food preparations, n.e.c.	60.2	4.1	34.9	21.2	3.7	.1	1.1	2.5	13
21	<b>Tobacco products</b>	33.5	11.2	10.8	11.5	.4	(Z)	(Z)	.3	24
211	Cigarettes	20.1	7.9	5.2	7.1	(D)	-	-	(D)	6
2111	Cigarettes	20.1	7.9	5.2	7.1	(D)	-	-	(D)	8
213	Chewing and smoking tobacco	1.1	(D)	(D)	.5	(Z)	-	-	(D)	8
2131	Chewing and smoking tobacco	1.1	(D)	(D)	.5	(Z)	-	-	(D)	8
214	Tobacco stemming and redrying	11.5	(D)	(D)	3.5	(D)	-	-	(D)	32
2141	Tobacco stemming and redrying	11.5	(D)	(D)	3.5	(D)	-	-	(D)	32
22	<b>Textile mill products</b>	256.2	38.1	152.5	65.7	19.7	2.4	5.4	11.9	7
221	Broadwoven fabrics mills, cotton	34.6	7.6	21.0	6.0	1.6	(Z)	(D)	(D)	4
2211	Broadwoven fabrics mills, cotton	34.6	7.6	21.0	6.0	1.6	(Z)	(D)	(D)	7
222	Broadwoven fabrics mills, manmade fiber and silk	18.8	4.1	8.6	6.1	2.9	.2	.2	2.5	7
2221	Broadwoven fabrics mills, manmade fiber and silk	18.8	4.1	8.6	6.1	2.9	.2	.2	2.5	10
223	Broadwoven fabrics mills, wool	9.6	.5	7.8	1.3	(Z)	(Z)	(Z)	(Z)	10
2231	Broadwoven fabrics mills, wool	9.6	.5	7.8	1.3	(Z)	(Z)	(Z)	(Z)	9
224	Narrow fabrics mills	2.9	.7	1.1	1.1	.2	(Z)	-	.1	9
2241	Narrow fabrics mills	2.9	.7	1.1	1.1	.2	(Z)	-	.1	9
225	Knitting mills	67.6	7.8	49.0	10.7	4.1	.6	1.2	2.3	22
2251	Women's hosiery, except socks	4.0	.4	2.7	.9	.3	-	-	.2	10
2252	Hosiery, n.e.c.	6.5	.5	4.9	1.1	.4	.2	.1	.2	31
2253	Knit outerwear mills	11.2	.8	9.2	1.2	1.5	.1	.1	.6	20
2254	Knit underwear mills	1.7	(Z)	.7	.9	(D)	(Z)	(Z)	(D)	27
2257	Weft knit fabrics mills	29.0	3.3	21.4	4.3	1.6	.1	.1	1.3	20
2258	Lace and warp knit fabrics mills	14.4	2.7	9.8	1.9	(D)	.1	.1	(D)	16
226	Textile finishing, except wool	45.7	4.9	33.6	7.2	1.4	(D)	(D)	.8	12
2261	Finishing plants, cotton	19.1	1.6	14.6	2.8	.5	(Z)	(Z)	.5	14
2262	Finishing plants, manmade	17.1	2.3	11.5	3.2	.7	(D)	(D)	.3	18
2269	Finishing plants, n.e.c.	9.5	.9	7.4	1.2	.1	(Z)	(Z)	.3	31
227	Carpets and rugs	16.9	1.1	9.3	6.6	.2	(Z)	(Z)	.2	10
2273	Carpets and rugs	16.9	1.1	9.3	6.6	.2	(Z)	(Z)	.2	10
228	Yarn and thread mills	21.5	3.6	9.5	8.3	5.8	.2	3.0	2.6	10
2281	Yarn spinning mills	14.8	3.2	5.9	5.8	2.6	.1	.1	2.3	13
2282	Throwing and winding mills	3.7	.2	1.7	1.8	(D)	-	-	(D)	16
2284	Thread mills	2.9	.2	1.9	.8	(D)	(Z)	(Z)	(D)	17
229	Miscellaneous textile goods	38.7	7.8	12.5	18.4	3.5	(D)	.2	(D)	10
2295	Coated fabrics, not rubberized	11.0	3.2	2.4	5.4	.8	(D)	(Z)	(D)	21
2296	Tire cord and fabrics	1.7	(D)	(D)	.7	(D)	(D)	(Z)	(D)	5
2297	Nonwoven fabrics	18.0	3.2	7.5	7.4	2.5	.4	.1	2.0	7
2298	Cordage and twine	3.4	(Z)	1.0	2.3	(Z)	(Z)	(Z)	(Z)	77
2299	Textile goods, n.e.c.	4.7	(D)	(D)	2.6	(D)	(Z)	.1	(Z)	25
24	<b>Lumber and wood products</b>	243.0	89.3	49.5	104.2	18.3	5.9	3.7	8.7	5
241	Logging	8.1	.5	3.0	4.6	(Z)	-	-	(Z)	11
2411	Logging	8.1	.5	3.0	4.6	(Z)	-	-	(Z)	11
242	Sawmills and planing mills	53.7	18.5	10.9	24.2	7.0	2.2	.5	4.3	9
2421	Sawmills and planing mills, general	41.1	12.4	9.9	18.9	5.3	1.9	.5	2.9	8
2426	Hardwood dimension and flooring mills	12.2	6.1	1.0	5.1	1.7	.3	-	1.4	25
243	Millwork, plywood, and structural members	77.8	32.4	11.0	34.4	4.1	2.0	.4	1.7	13
2431	Millwork	21.4	8.6	2.2	10.6	2.6	1.6	.2	.8	12
2434	Wood kitchen cabinets	14.5	.5	.5	8.4	.3	.1	.1	.1	27
2435	Hardwood veneer and plywood	13.9	6.7	1.8	5.3	.4	(Z)	(Z)	.2	53
2436	Softwood veneer and plywood	21.4	8.8	5.2	7.5	.1	(Z)	(Z)	(Z)	18
2439	Structural wood members, n.e.c.	6.5	2.8	1.2	2.5	.7	.1	.1	.4	36
244	Wood containers	7.3	1.1	.5	5.6	(D)	1.3	(Z)	(D)	15
2441	Nailed wood boxes and shooks	1.0	.7	(Z)	.3	1.6	1.3	(Z)	(D)	56
2448	Wood pallets and skids	4.3	.4	.4	3.5	(D)	(Z)	(Z)	(D)	13
2449	Wood containers, n.e.c.	2.0	(Z)	.2	1.8	(Z)	(Z)	(Z)	(D)	40
245	Wood buildings and mobile homes	14.7	.7	.6	13.4	(D)	(Z)	(Z)	(D)	7
2451	Mobile homes	11.1	.3	.2	10.7	(Z)	(Z)	(Z)	(D)	6
2452	Prefabricated wood buildings	3.5	.4	.4	2.7	(Z)	(Z)	(Z)	(D)	19
249	Miscellaneous wood products	81.5	36.0	23.4	22.1	5.1	.4	2.7	1.9	7
2491	Wood preserving	19.2	1.2	11.5	6.4	.8	(Z)	(D)	(D)	25
2493	Reconstituted wood products	49.7	29.0	10.9	9.7	3.2	(Z)	(D)	(D)	5
2499	Wood products, n.e.c.	12.6	5.8	1.0	5.9	1.1	(Z)	(Z)	.9	15













Table 7. Operating Costs and Cost Offsets by Industries for All Media: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/contained waste	Total	Air	Water	Solid/contained waste	
39	Miscellaneous manufacturing industries—Con.									
395	Pens, pencils, office, and art supplies	7.1	.7	1.7	4.7	.2	(Z)	(Z)	.1	10
3951	Pens and mechanical pencils	3.6	.5	1.1	1.9	.1	(Z)	(Z)	.1	13
3952	Lead pencils and art goods	1.8	(Z)	.5	1.3	(Z)			(Z)	10
3955	Carbon paper and inked ribbons	1.6	.1	.2	1.3	.1	(Z)	(Z)	.1	30
396	Costume jewelry and notions	13.4	1.9	6.2	5.3	2.5	.2	.2	2.2	14
3961	Costume jewelry	3.8	.6	1.8	1.4	.5	.2	.1	.1	24
3965	Fasteners, buttons, needles, and pins	9.6	1.3	4.4	3.9	2.1	(Z)	(Z)	2.0	17
399	Miscellaneous manufactures	36.9	11.1	4.8	21.0	2.6	(D)	(D)	1.9	5
3991	Brooms and brushes	1.2	(Z)	.1	1.1	(Z)			(Z)	26
3993	Signs and advertising specialties	6.5	1.0	.7	4.8	.1	(Z)		.1	15
3995	Burial caskets	2.6	.5	.9	1.2	.2	(Z)		(Z)	30
3996	Hard surface floor coverings, n.e.c.	19.9	8.4	1.1	10.3	.2	(D)	(D)	(D)	3
3999	Manufacturing industries, n.e.c.	6.8	1.2	2.1	3.5	(D)	(D)	.2	(D)	16

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 8a. Operating Costs by Major Groups for the Media Air: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Total PAOC	Air				Standard error of estimate (PAOC) (percent)
			Total	Type of pollutant abated			
				Hazardous	Nonhazardous		
	<b>All Industries<sup>1</sup></b>	<b>17 466.4</b>	<b>5 395.0</b>	<b>1 610.2</b>	<b>3 784.8</b>	<b>2</b>	
20	Food and kindred products	1 312.0	162.7	13.4	149.2	3	
21	Tobacco products	33.5	11.2	(Z)	11.2	6	
22	Textile mill products	256.2	38.1	5.0	33.1	4	
24	Lumber and wood products	243.0	89.3	13.8	75.5	5	
25	Furniture and fixtures	118.5	43.0	16.7	24.3	6	
26	Paper and allied products	1 860.7	535.6	65.2	470.4	4	
27	Printing and publishing	239.0	85.6	47.9	37.7	4	
28	Chemicals and allied products	4 425.1	1 026.9	403.2	623.7	3	
29	Petroleum and coal products	2 585.4	1 428.9	348.8	1 080.1	4	
30	Rubber and miscellaneous plastics products	379.6	105.7	36.9	66.8	5	
31	Leather and leather products	53.5	3.7	1.4	2.3	13	
32	Stone, clay, and glass products	491.2	248.5	44.4	204.1	4	
33	Primary metal industries	1 993.4	933.1	256.1	677.0	3	
34	Fabricated metal products	761.2	130.4	66.3	64.0	4	
35	Industrial machinery and equipment	463.7	65.4	23.8	41.5	4	
36	Electronic and other electric equipment	657.1	117.9	65.9	52.1	5	
37	Transportation equipment	1 171.7	298.5	158.2	140.3	4	
38	Instruments and related products	331.9	48.0	31.5	16.5	4	
39	Miscellaneous manufacturing industries	89.7	22.7	7.7	15.0	5	

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 8b. Operating Costs by Major Groups for the Media Water: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Total PAOC	Water					Standard error of estimate (PAOC) (percent)
			Total	Type of pollutant abated				
				Hazardous	Nonhazardous			
					Nonhazardous	Payments to industry		
	<b>All industries<sup>1</sup></b>	<b>17 466.4</b>	<b>6 576.9</b>	<b>1 701.5</b>	<b>4 875.3</b>	<b>3 618.5</b>	<b>1 256.9</b>	<b>2</b>
20	Food and kindred products	1 312.0	835.7	30.0	805.7	386.4	419.3	3
21	Tobacco products	33.5	10.8	(Z)	10.8	6.5	4.2	6
22	Textile mill products	256.2	152.5	4.2	148.3	53.6	94.7	4
24	Lumber and wood products	243.0	49.5	10.9	38.6	32.4	6.2	5
25	Furniture and fixtures	118.5	14.3	3.7	10.6	4.0	6.5	6
26	Paper and allied products	1 860.7	822.7	39.4	783.3	632.2	151.1	4
27	Printing and publishing	239.0	36.5	11.6	24.9	8.5	16.4	4
28	Chemicals and allied products	4 425.1	1 946.8	691.5	1 255.3	1 081.0	174.3	3
29	Petroleum and coal products	2 585.4	742.8	203.3	539.6	513.7	25.8	4
30	Rubber and miscellaneous plastics products	379.6	73.3	9.5	63.9	31.4	32.5	5
31	Leather and leather products	53.5	30.6	1.9	28.6	18.1	10.5	13
32	Stone, clay, and glass products	491.2	94.6	12.4	82.3	60.7	21.6	4
33	Primary metal industries	1 993.4	575.0	132.7	442.3	400.5	41.8	3
34	Fabricated metal products	761.2	284.3	128.4	156.0	95.7	60.3	4
35	Industrial machinery and equipment	463.7	160.5	55.5	105.0	68.1	36.9	4

Table 8b. Operating Costs by Major Groups for the Media Water: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Water						Standard error of estimate (PAOC) (percent)
		Total PAOC	Type of pollutant abated					
			Total	Nonhazardous			Sewage services payments to government	
				Hazardous	Nonhazardous	Payments to industry		
36	Electronic and other electric equipment .....	657.1	288.8	153.8	135.0	73.9	61.1	5
37	Transportation equipment .....	1 171.7	347.0	156.5	190.5	125.1	65.4	4
38	Instruments and related products .....	331.9	89.4	47.9	41.5	19.5	22.0	4
39	Miscellaneous manufacturing industries .....	89.7	21.7	8.4	13.3	7.1	6.2	5

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 8c. Operating Costs by Major Groups for the Media Solid/Contained Waste: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Solid/contained waste						Standard error of estimate (PAOC) (percent)
		Total PAOC	Type of pollutant abated					
			Total	Nonhazardous			Solid/contained waste collection payments to government	
				Hazardous	Nonhazardous	Payments to industry		
	<b>All industries<sup>1</sup> .....</b>	<b>17 466.4</b>	<b>5 494.4</b>	<b>2 157.1</b>	<b>3 337.4</b>	<b>2 965.0</b>	<b>372.4</b>	<b>2</b>
20	Food and kindred products .....	1 312.0	313.6	25.8	287.8	230.5	57.2	3
21	Tobacco products .....	33.5	11.5	1.7	9.8	9.1	.7	6
22	Textile mill products .....	256.2	65.7	9.6	56.1	44.1	12.0	4
24	Lumber and wood products .....	243.0	104.2	22.7	81.5	68.3	13.3	5
25	Furniture and fixtures .....	118.5	61.2	19.9	41.3	33.4	7.8	6
26	Paper and allied products .....	1 860.7	502.4	50.0	452.3	403.2	49.2	4
27	Printing and publishing .....	239.0	117.0	33.9	83.0	70.7	12.4	4
28	Chemicals and allied products .....	4 425.1	1 451.3	715.3	736.1	691.1	45.0	3
29	Petroleum and coal products .....	2 585.4	413.7	239.8	173.9	162.5	11.4	4
30	Rubber and miscellaneous plastics products .....	379.6	200.5	46.3	154.2	115.3	36.8	5
31	Leather and leather products .....	53.5	19.2	4.7	14.6	12.9	1.6	13
32	Stone, clay, and glass products .....	491.2	148.1	25.4	122.7	109.3	13.4	4
33	Primary metal industries .....	1 993.4	485.3	200.2	285.1	268.4	16.7	3
34	Fabricated metal products .....	761.2	346.6	161.7	184.9	160.4	24.5	4
35	Industrial machinery and equipment .....	463.7	237.9	101.4	136.5	119.1	17.4	4
36	Electronic and other electric equipment .....	657.1	250.4	129.7	120.7	106.3	14.5	5
37	Transportation equipment .....	1 171.7	526.2	271.3	254.9	232.7	22.2	4
38	Instruments and related products .....	331.9	194.5	81.9	112.6	104.1	8.4	4
39	Miscellaneous manufacturing industries .....	89.7	45.3	15.8	29.5	23.6	5.8	5

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 9. Operating Costs and Cost Offsets by States and Major Groups for All Media: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/contained waste	Total	Air	Water	Solid/contained waste	
20	Food and kindred products .....	1 312.0	162.7	835.7	313.6	82.2	19.6	21.8	40.8	3
21	Tobacco products .....	33.5	11.2	10.8	11.5	.4	(Z)	(Z)	.3	6
22	Textile mill products .....	256.2	38.1	152.5	65.7	19.7	2.4	5.4	11.9	4
24	Lumber and wood products .....	243.0	89.3	49.5	104.2	18.3	5.9	3.7	8.7	5
25	Furniture and fixtures .....	118.5	43.0	14.3	61.2	10.3	3.6	.6	6.1	6
26	Paper and allied products .....	1 860.7	535.6	822.7	502.4	254.6	131.7	33.0	89.9	4
27	Printing and publishing .....	239.0	85.6	36.5	117.0	47.9	14.3	2.3	31.4	4
28	Chemicals and allied products .....	4 425.1	1 026.9	1 946.8	1 451.3	511.2	198.3	130.6	182.3	3
29	Petroleum and coal products .....	2 585.4	1 428.9	742.8	413.7	475.9	352.9	76.6	46.4	4
30	Rubber and miscellaneous plastics products .....	379.6	105.7	73.3	200.5	26.7	8.8	2.1	15.8	5
31	Leather and leather products .....	53.5	3.7	30.6	19.2	1.1	.3	.7	.2	13
32	Stone, clay, and glass products .....	491.2	248.5	94.6	148.1	90.3	39.4	3.9	47.1	4
33	Primary metal industries .....	1 993.4	933.1	575.0	485.3	164.2	106.3	13.2	44.7	3
34	Fabricated metal products .....	761.2	130.4	284.3	346.6	45.4	3.8	15.1	26.5	4
35	Industrial machinery and equipment .....	463.7	65.4	160.5	237.9	32.2	5.8	4.7	21.6	4
36	Electronic and other electric equipment .....	657.1	117.9	288.8	250.4	36.4	8.6	4.4	23.4	5
37	Transportation equipment .....	1 171.7	298.5	347.0	526.2	68.7	5.3	9.7	53.6	4
38	Instruments and related products .....	331.9	48.0	89.4	194.5	13.3	2.0	2.2	9.1	4
39	Miscellaneous manufacturing industries .....	89.7	22.7	21.7	45.3	8.5	1.9	1.4	5.1	5









Table 9. Operating Costs and Cost Offsets by States and Major Groups for All Media: 1992 - Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols)

Table with 11 columns: SIC code, State and major group, PAOC (Total, Air, Water, Solid/contained waste), Cost offsets (Total, Air, Water, Solid/contained waste), and Standard error of estimate (PAOC) (percent). Rows include Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, and New Jersey, each with a list of major product groups.





Table 9. Operating Costs and Cost Offsets by States and Major Groups for All Media: 1992

-Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/ contained waste	Total	Air	Water	Solid/ contained waste	
<b>Oregon—Con.</b>										
30	Rubber and miscellaneous plastics products ----	1.8	.2	.4	1.1	-	-	-	-	55
32	Stone, clay, and glass products ----	2.0	.9	.2	.9	.1	(Z)	-	.1	33
33	Primary metal industries ----	29.2	6.3	12.2	10.7	.6	(Z)	(D)	(D)	20
34	Fabricated metal products ----	4.6	.8	1.5	2.3	.3	(Z)	(Z)	.2	45
35	Industrial machinery and equipment ----	7.9	1.9	2.3	3.7	.2	(Z)	(Z)	.2	39
36	Electronic and other electric equipment ----	15.9	4.9	7.5	3.5	1.3	(Z)	(Z)	1.2	41
37	Transportation equipment ----	1.1	(Z)	.1	1.0	(Z)	-	(Z)	(Z)	40
38	Instruments and related products ----	6.4	1.0	3.5	1.9	.1	(Z)	(Z)	(Z)	46
	<b>Pennsylvania</b> ----	<b>890.9</b>	<b>256.9</b>	<b>295.4</b>	<b>338.6</b>	<b>97.1</b>	<b>21.1</b>	<b>33.1</b>	<b>42.9</b>	<b>5</b>
20	Food and kindred products ----	59.0	3.9	34.2	20.9	1.9	(Z)	.5	1.3	12
22	Textile mill products ----	11.0	.4	8.0	2.6	.3	.1	(Z)	.2	36
24	Lumber and wood products ----	8.0	2.3	1.8	3.9	.3	.1	.1	.1	19
25	Furniture and fixtures ----	7.5	3.1	.8	3.6	1.1	(D)	(Z)	(D)	24
26	Paper and allied products ----	91.0	24.8	29.7	36.4	19.0	(D)	(D)	10.4	14
27	Printing and publishing ----	14.5	5.3	2.4	6.8	2.6	.3	.2	2.1	12
28	Chemicals and allied products ----	160.7	39.1	64.2	57.3	(D)	(D)	(D)	7.7	12
29	Petroleum and coal products ----	77.9	34.9	20.6	22.5	20.2	(D)	10.6	(D)	2
30	Rubber and miscellaneous plastics products ----	14.0	1.7	3.6	8.7	1.5	.2	.5	.8	19
31	Leather and leather products ----	11.4	1.1	4.8	5.6	(Z)	(Z)	-	(Z)	45
32	Stone, clay, and glass products ----	47.4	23.4	8.6	15.4	5.2	1.9	.8	2.4	8
33	Primary metal industries ----	233.6	85.6	68.2	79.7	11.9	2.0	3.4	6.5	11
34	Fabricated metal products ----	42.8	7.8	14.0	21.0	1.4	.3	.3	.9	12
35	Industrial machinery and equipment ----	19.2	1.6	7.0	10.6	.7	(Z)	.1	.5	15
36	Electronic and other electric equipment ----	32.3	3.9	15.5	12.9	1.5	.1	.5	.9	8
37	Transportation equipment ----	25.7	6.6	6.8	12.2	7.9	.1	.1	7.7	15
38	Instruments and related products ----	17.1	4.9	2.8	9.4	.8	(D)	(Z)	(D)	13
39	Miscellaneous manufacturing industries ----	17.8	6.4	2.3	9.1	(D)	(Z)	(Z)	(D)	7
	<b>Rhode Island</b> ----	<b>31.0</b>	<b>5.9</b>	<b>12.1</b>	<b>13.0</b>	<b>.7</b>	<b>.2</b>	<b>.2</b>	<b>.3</b>	<b>13</b>
22	Textile mill products ----	2.4	.4	1.6	.5	(Z)	-	-	(Z)	28
26	Paper and allied products ----	4.2	.9	.2	3.1	-	-	-	-	66
28	Chemicals and allied products ----	(D)	(D)	(D)	1.8	(Z)	(Z)	(Z)	(Z)	(X)
32	Stone, clay, and glass products ----	(D)	(D)	(D)	.3	(Z)	-	-	-	(X)
33	Primary metal industries ----	2.2	.4	.4	1.4	.1	(Z)	(Z)	.1	31
34	Fabricated metal products ----	3.1	.9	1.4	.7	.1	(Z)	(Z)	(Z)	25
36	Electronic and other electric equipment ----	2.8	.6	1.1	1.1	.1	(Z)	(Z)	.1	63
39	Miscellaneous manufacturing industries ----	5.8	.9	2.5	2.4	.4	.1	.1	.1	18
	<b>South Carolina</b> ----	<b>360.1</b>	<b>104.1</b>	<b>140.7</b>	<b>115.3</b>	<b>26.7</b>	<b>14.3</b>	<b>2.1</b>	<b>10.3</b>	<b>7</b>
20	Food and kindred products ----	6.9	1.0	4.5	1.4	.4	.1	.1	.2	32
22	Textile mill products ----	36.1	4.8	22.7	8.6	2.1	.2	.4	1.5	11
24	Lumber and wood products ----	3.5	1.3	1.1	1.1	.8	(Z)	(D)	(D)	10
25	Furniture and fixtures ----	(D)	(D)	(D)	.6	.5	(Z)	-	.5	(X)
26	Paper and allied products ----	64.4	20.1	16.9	27.4	15.7	10.6	(D)	(D)	4
27	Printing and publishing ----	(D)	(D)	(D)	.2	-	-	-	-	(X)
28	Chemicals and allied products ----	149.4	39.4	71.7	38.3	3.0	1.4	.6	1.0	13
30	Rubber and miscellaneous plastics products ----	9.9	3.3	2.8	3.8	(D)	.1	(D)	.1	9
32	Stone, clay, and glass products ----	11.8	6.7	3.0	2.2	(D)	(D)	(D)	(D)	4
33	Primary metal industries ----	19.4	9.0	2.8	7.6	.2	.1	(Z)	(Z)	17
34	Fabricated metal products ----	6.4	1.1	2.3	3.1	(Z)	(Z)	(Z)	(Z)	29
35	Industrial machinery and equipment ----	9.5	.9	3.2	5.4	.1	(Z)	(Z)	(Z)	16
36	Electronic and other electric equipment ----	16.3	4.4	6.4	5.5	5	.2	(Z)	.3	26
37	Transportation equipment ----	21.2	9.9	2.1	9.2	.3	(D)	(Z)	(D)	71
39	Miscellaneous manufacturing industries ----	1.3	(Z)	.7	.5	(Z)	-	-	(Z)	42
	<b>South Dakota</b> ----	<b>16.5</b>	<b>2.9</b>	<b>6.3</b>	<b>7.3</b>	<b>.2</b>	<b>.1</b>	<b>.1</b>	<b>.1</b>	<b>33</b>
20	Food and kindred products ----	6.7	.7	4.0	2.1	-	-	-	-	45
33	Primary metal industries ----	1.4	.3	.7	.4	-	-	-	-	81
34	Fabricated metal products ----	4.1	.2	(D)	(D)	.1	(Z)	(Z)	(Z)	98
38	Instruments and related products ----	2.3	1.2	(D)	(D)	-	-	-	-	50
	<b>Tennessee</b> ----	<b>441.0</b>	<b>99.0</b>	<b>189.8</b>	<b>152.2</b>	<b>62.1</b>	<b>19.1</b>	<b>22.1</b>	<b>20.9</b>	<b>6</b>
20	Food and kindred products ----	32.7	6.6	18.0	8.1	2.1	-	1.5	.6	8
22	Textile mill products ----	10.8	1.4	5.8	3.6	5	.3	(Z)	.2	8
24	Lumber and wood products ----	3.3	.3	.3	2.7	.4	(D)	(Z)	(D)	41
25	Furniture and fixtures ----	3.8	1.3	.3	2.1	.2	-	-	.2	29
26	Paper and allied products ----	41.7	7.3	18.8	15.5	8.1	5.1	.4	2.6	14
27	Printing and publishing ----	14.5	8.6	1.6	4.4	4.3	(D)	(Z)	(D)	20
28	Chemicals and allied products ----	174.7	26.2	87.5	61.0	21.0	(D)	(D)	1.9	2
29	Petroleum and coal products ----	10.4	6.4	2.1	1.9	1.3	.6	.7	(Z)	53
30	Rubber and miscellaneous plastics products ----	11.8	2.4	2.9	6.5	.9	(D)	(Z)	(D)	16
32	Stone, clay, and glass products ----	14.3	8.7	2.5	3.0	(D)	-	-	(D)	35
33	Primary metal industries ----	37.1	11.1	14.4	11.6	(D)	(D)	.1	(D)	11
34	Fabricated metal products ----	15.3	1.8	8.3	5.3	.3	(Z)	(Z)	.2	28
35	Industrial machinery and equipment ----	11.4	1.1	4.2	6.1	1.9	(D)	.2	(D)	9
36	Electronic and other electric equipment ----	10.3	2.3	3.5	4.4	.2	(Z)	(Z)	.2	16
37	Transportation equipment ----	43.5	12.7	17.6	13.2	5.3	(D)	(D)	(D)	44
39	Miscellaneous manufacturing industries ----	4.0	.4	1.5	2.1	.1	(Z)	(Z)	.1	26
	<b>Texas</b> ----	<b>2 092.2</b>	<b>791.7</b>	<b>753.7</b>	<b>546.8</b>	<b>319.8</b>	<b>221.1</b>	<b>34.3</b>	<b>64.3</b>	<b>2</b>
20	Food and kindred products ----	79.6	16.5	47.1	16.0	6.0	1.2	2.1	2.8	15
22	Textile mill products ----	1.0	(D)	.6	(D)	(Z)	-	-	(Z)	2
24	Lumber and wood products ----	13.1	4.8	5.1	3.3	.3	.1	(Z)	.2	31
25	Furniture and fixtures ----	2.3	.7	.2	1.4	.1	(Z)	(Z)	(Z)	36
26	Paper and allied products ----	68.1	20.7	21.4	26.0	8.8	6.6	.2	2.0	14



Table 9. Operating Costs and Cost Offsets by States and Major Groups for All Media: 1992  
- Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major group are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	PAOC				Cost offsets				Standard error of estimate (PAOC) (percent)
		Total	Air	Water	Solid/contained waste	Total	Air	Water	Solid/contained waste	
<b>Wisconsin - Con.</b>										
34	Fabricated metal products.....	23.6	7.3	9.1	7.3	.7	(Z)	.1	.6	13
35	Industrial machinery and equipment.....	24.9	3.0	6.9	15.1	.9	(Z)	(Z)	.7	34
36	Electronic and other electric equipment.....	10.5	2.3	3.4	4.8	.1	(Z)	(Z)	.1	15
37	Transportation equipment.....	8.5	2.5	2.2	3.8	2.8	(D)	(D)	(D)	23
38	Instruments and related products.....	4.3	.5	.9	2.9	.1	(Z)	(Z)	(Z)	26
39	Miscellaneous manufacturing industries.....	1.7	(D)	.4	(D)	(D)	(Z)	(Z)	(Z)	23
<b>Wyoming</b>										
	.....	28.7	15.5	9.8	3.3	4.9	1.4	3.4	(Z)	17
20	Food and kindred products.....	4.1	.3	2.8	1.1	-	-	-	-	75
28	Chemicals and allied products.....	(D)	(D)	(D)	.4	1.1	1.1	-	(Z)	(X)
29	Petroleum and coal products.....	4.6	1.4	2.1	1.2	3.8	.3	3.4	(Z)	(X)
32	Stone, clay, and glass products.....	(D)	(D)	(D)	.2	(Z)	(Z)	(Z)	(Z)	79

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 10a. Operating Costs by States for the Media Air: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PAOC	Air		Standard error of estimate (PAOC) (percent)	
		Total	Type of pollutant abated		
			Hazardous		Nonhazardous
<b>United States<sup>1</sup></b> .....	<b>17 466.4</b>	<b>5 395.0</b>	<b>1 610.2</b>	<b>3 784.8</b>	<b>2</b>
Alabama.....	380.0	136.2	31.3	104.9	6
Alaska.....	31.4	8.2	(D)	(D)	21
Arizona.....	129.4	66.4	44.1	22.2	10
Arkansas.....	208.1	56.2	18.1	38.1	11
California.....	1 492.6	490.3	156.2	334.2	4
Colorado.....	83.5	11.3	5.6	5.8	12
Connecticut.....	168.5	23.6	11.4	12.1	5
Delaware.....	145.5	67.9	5.4	62.5	15
District of Columbia.....	1.4	.3	(Z)	.3	40
Florida.....	304.3	81.6	12.6	69.0	5
Georgia.....	375.7	118.4	38.0	80.4	6
Hawaii.....	12.8	3.3	.7	2.6	33
Idaho.....	60.4	21.3	2.9	18.4	13
Illinois.....	896.1	322.5	88.6	233.9	6
Indiana.....	706.6	255.2	68.1	189.2	3
Iowa.....	186.9	53.3	7.3	46.0	7
Kansas.....	107.3	29.0	8.9	20.1	11
Kentucky.....	324.8	138.4	34.2	104.3	5
Louisiana.....	920.0	317.3	92.1	225.2	5
Maine.....	123.5	21.2	3.2	18.0	10
Maryland.....	205.6	55.4	9.6	45.8	6
Massachusetts.....	246.2	34.3	15.2	19.1	7
Michigan.....	763.0	220.2	75.8	144.4	3
Minnesota.....	254.5	72.2	11.7	60.5	6
Mississippi.....	269.1	120.9	23.5	97.4	7
Missouri.....	287.6	79.2	28.6	50.6	4
Montana.....	25.5	17.3	(D)	(D)	12
Nebraska.....	60.0	12.8	3.9	8.9	12
Nevada.....	11.0	3.4	1.0	2.4	20
New Hampshire.....	44.1	5.8	2.1	3.6	15
New Jersey.....	673.8	146.6	50.3	96.3	13
New Mexico.....	63.4	34.2	(D)	(D)	42
New York.....	650.6	115.5	38.5	77.1	5
North Carolina.....	554.4	185.5	30.0	155.5	3
North Dakota.....	19.3	4.4	2.8	1.6	52
Ohio.....	1 030.8	271.6	56.6	215.0	4
Oklahoma.....	117.0	37.5	10.4	27.1	9
Oregon.....	170.3	48.3	10.7	37.6	8
Pennsylvania.....	890.9	256.9	73.4	183.5	5
Rhode Island.....	31.0	5.9	3.5	2.4	13
South Carolina.....	360.1	104.1	37.2	68.9	7
South Dakota.....	16.5	2.9	.3	2.6	33
Tennessee.....	441.0	99.0	35.3	63.7	6
Texas.....	2 092.2	791.7	328.9	462.8	2
Utah.....	123.4	52.4	16.1	36.3	22
Vermont.....	17.5	2.9	1.6	1.3	24
Virginia.....	334.4	93.5	24.9	68.6	8
Washington.....	368.2	124.1	31.7	92.4	6
West Virginia.....	283.6	75.9	13.5	62.4	17
Wisconsin.....	384.1	83.1	18.1	65.1	10
Wyoming.....	28.7	15.5	.3	15.2	17

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 10b. Operating Costs by States for the Media Water: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Water						Standard error of estimate (PAOC) (percent)
	Total PAOC	Type of pollutant abated					
		Total	Hazardous	Nonhazardous			
				Total	Payments to industry	Sewage services payments to government	
United States <sup>1</sup>	17 466.4	6 576.9	1 701.5	4 875.3	3 618.5	1 256.9	2
Alabama	380.0	146.7	33.0	113.7	97.6	18.0	6
Alaska	31.4	14.7	(D)	(D)	11.5	(D)	21
Arizona	129.4	36.0	13.8	22.2	14.6	7.5	10
Arkansas	208.1	92.3	12.2	80.1	65.9	14.2	11
California	1 492.6	584.1	179.5	404.6	263.8	140.8	4
Colorado	83.5	44.5	15.1	29.4	23.4	6.0	12
Connecticut	168.5	52.8	25.6	27.2	21.1	6.1	5
Delaware	145.5	54.1	4.8	49.3	42.0	7.3	15
District of Columbia	1.4	.4	(Z)	.4	.1	.3	40
Florida	304.3	125.4	20.3	105.1	84.1	21.0	5
Georgia	375.7	152.3	26.8	125.5	94.0	31.5	6
Hawaii	12.8	4.6	1.5	3.1	2.5	.6	33
Idaho	60.4	29.9	3.3	20.6	17.5	3.2	13
Illinois	896.1	297.0	68.1	228.9	155.6	73.3	6
Indiana	706.6	253.2	72.5	180.7	135.2	45.5	3
Iowa	166.9	60.0	9.5	50.5	33.3	17.2	7
Kansas	107.3	37.0	8.6	28.4	22.4	6.1	11
Kentucky	324.8	102.2	34.6	67.6	49.2	18.4	5
Louisiana	920.0	347.6	107.7	239.9	235.3	4.6	5
Maine	123.5	60.7	3.4	57.3	50.7	6.7	10
Maryland	205.6	80.5	10.1	70.4	49.1	21.3	6
Massachusetts	246.2	106.9	38.0	68.9	37.5	31.3	7
Michigan	763.0	290.8	72.1	218.7	154.3	64.4	3
Minnesota	254.5	102.5	12.9	89.5	52.4	37.1	6
Mississippi	269.1	86.1	28.0	58.1	51.2	6.9	7
Missouri	287.6	111.6	38.9	72.7	44.9	27.8	4
Montana	25.5	4.8	.7	4.0	4.0	(Z)	12
Nebraska	60.0	23.6	6.8	16.9	9.3	7.6	12
Nevada	11.0	4.6	(D)	(D)	2.7	(D)	20
New Hampshire	44.1	20.6	3.9	16.7	13.0	3.7	15
New Jersey	673.8	285.7	70.5	215.2	120.7	94.5	13
New Mexico	63.4	11.4	5.8	5.5	5.0	.5	42
New York	850.6	235.6	68.4	167.2	112.5	54.7	5
North Carolina	554.4	213.2	33.7	179.6	115.7	63.9	3
North Dakota	19.3	6.8	3.6	3.3	2.9	.4	52
Ohio	1 030.8	365.9	81.4	284.5	197.3	87.2	4
Oklahoma	117.0	42.8	12.5	30.3	23.9	6.4	9
Oregon	170.3	76.8	18.0	58.7	46.2	12.6	8
Pennsylvania	890.9	295.4	80.8	214.6	155.6	59.0	5
Rhode Island	31.0	12.1	3.4	8.7	5.8	2.9	13
South Carolina	360.1	140.7	35.5	105.2	81.9	23.3	7
South Dakota	16.5	6.3	.8	5.5	2.6	2.9	33
Tennessee	441.0	189.8	48.6	141.2	104.0	37.2	6
Texas	2 092.2	753.7	268.4	485.3	417.0	68.3	2
Utah	123.4	31.8	15.0	16.8	11.5	5.3	22
Vermont	17.5	5.9	1.4	4.5	2.7	1.8	24
Virginia	334.4	139.3	24.5	114.7	84.3	30.4	8
Washington	368.2	132.2	19.6	112.6	90.5	22.1	6
West Virginia	283.6	124.1	37.1	87.0	82.2	4.8	17
Wisconsin	394.1	176.1	14.4	161.7	110.1	51.6	10
Wyoming	28.7	9.8	1.8	8.0	7.9	.1	17

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 10c. Operating Costs by States for the Media Solid/Contained Waste: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Solid/contained waste						Standard error of estimate (PAOC) (percent)
	Total PAOC	Type of pollutant abated					
		Total	Hazardous	Nonhazardous			
				Total	Payments to industry	Solid/contained waste collection payments to government	
United States <sup>1</sup>	17 466.4	5 494.4	2 157.1	3 337.4	2 965.0	372.4	2
Alabama	380.0	97.1	32.4	64.7	58.5	6.1	6
Alaska	31.4	8.5	2.1	6.5	6.0	.4	21
Arizona	129.4	27.1	12.6	14.5	12.9	1.6	10
Arkansas	208.1	59.5	12.8	46.8	39.6	7.2	11
California	1 492.6	418.2	208.1	210.1	164.3	45.8	4
Colorado	83.5	27.7	13.7	13.9	12.0	1.9	12
Connecticut	168.5	92.1	48.2	43.9	40.8	3.1	5
Delaware	145.5	23.5	8.8	14.7	12.8	1.9	15
District of Columbia	1.4	.7	.1	.6	.6	(Z)	40
Florida	304.3	97.3	25.2	72.1	59.0	13.1	5

Table 10c. Operating Costs by States for the Media Solid/Contained Waste: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Solid/contained waste							Standard error of estimate (PAOC) (percent)
	Total PAOC	Type of pollutant abated						
		Total	Hazardous	Nonhazardous				
				Total	Payments to industry	Solid/contained waste collection payments to government		
Georgia	375.7	105.0	30.3	74.6	65.3	9.4	6	
Hawaii	12.8	4.9	.9	3.9	3.9	.1	33	
Idaho	60.4	15.2	1.6	13.6	12.7	.9	13	
Illinois	896.1	276.7	90.4	186.3	175.5	10.8	6	
Indiana	706.6	198.2	66.2	132.0	123.9	8.2	3	
Iowa	166.9	53.6	16.4	37.2	30.2	7.1	7	
Kansas	107.3	41.3	18.8	22.5	19.0	3.5	11	
Kentucky	324.8	84.1	31.1	53.0	48.6	4.4	5	
Louisiana	920.0	255.1	115.5	199.5	136.1	3.5	5	
Maine	123.5	41.5	6.1	35.4	34.2	1.2	10	
Maryland	205.6	69.7	22.9	46.8	43.6	3.2	6	
Massachusetts	246.2	105.1	45.9	59.2	51.7	7.5	7	
Michigan	763.0	252.0	93.9	158.1	146.7	11.4	3	
Minnesota	254.5	79.8	20.3	59.5	52.0	7.5	6	
Mississippi	269.1	62.1	20.8	41.3	39.7	1.6	7	
Missouri	287.6	96.8	40.5	56.2	51.4	4.8	4	
Montana	25.5	3.4	2.1	1.3	1.2	.1	12	
Nebraska	60.0	23.5	9.7	13.8	12.0	1.8	12	
Nevada	11.0	3.0	.8	2.2	1.6	.6	20	
New Hampshire	44.1	17.7	9.6	8.1	7.4	.8	15	
New Jersey	673.8	241.5	114.0	127.5	100.9	26.6	13	
New Mexico	63.4	17.8	5.2	12.6	12.3	.3	42	
New York	650.6	299.4	96.9	202.5	183.0	19.5	5	
North Carolina	554.4	155.6	53.8	101.8	86.1	15.7	3	
North Dakota	19.3	8.1	4.5	3.6	3.3	.3	52	
Ohio	1 030.8	393.4	186.1	207.3	184.9	22.4	4	
Oklahoma	117.0	36.7	16.7	20.0	17.0	3.0	9	
Oregon	170.3	45.2	15.1	30.1	23.9	6.2	8	
Pennsylvania	890.9	338.6	125.1	213.4	191.8	21.7	5	
Rhode Island	31.0	13.0	7.0	6.0	5.0	1.1	13	
South Carolina	360.1	115.3	39.8	75.5	70.8	4.7	7	
South Dakota	16.5	7.3	3.3	4.0	3.7	.3	33	
Tennessee	441.0	162.2	36.6	115.6	105.6	10.0	6	
Texas	2 092.2	546.8	270.9	276.0	251.1	24.9	2	
Utah	123.4	39.1	24.4	14.7	13.3	1.3	22	
Vermont	17.5	8.8	5.5	3.2	2.7	.5	24	
Virginia	334.4	101.6	34.9	66.7	58.1	8.6	8	
Washington	368.2	111.9	50.6	61.3	45.6	15.8	6	
West Virginia	283.6	83.5	31.3	52.3	49.8	2.5	17	
Wisconsin	394.1	134.9	27.0	107.9	90.5	17.4	10	
Wyoming	28.7	3.3	.3	3.0	2.9	.2	17	

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 11a. Operating Costs by Industries for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Kind of cost for all media							Standard error of estimate (PAOC) (percent)
		Total PAOC	Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous	Payments to government	
	All industries <sup>1</sup>	17 466.4	2 550.8	2 987.5	2 390.0	3 408.3	4 500.4	1 629.3	2
20	Food and kindred products	1 312.0	132.6	152.7	142.0	208.9	199.3	476.5	3
201	Meat products	222.2	27.2	27.5	20.1	28.7	46.1	72.6	6
2011	Meat packing plants	65.4	8.6	7.9	5.5	9.8	10.8	22.7	11
2013	Sausages and other prepared meats	31.2	1.3	1.8	2.1	8.5	2.9	14.6	23
2015	Poultry slaughtering and processing	125.5	17.2	17.8	12.4	10.4	32.5	35.2	6
202	Dairy products	146.2	8.9	11.0	10.1	26.1	20.2	69.9	11
2021	Creamery butter	4.0	.5	.2	.2	(2)	.6	2.5	57
2022	Cheese, natural and processed	49.0	3.9	4.8	3.9	12.4	9.7	14.2	18
2023	Dry, condensed, and evaporated dairy products	12.9	1.4	2.0	.7	2.8	2.0	4.1	17
2024	Ice cream and frozen desserts	14.3	.3	.6	1.1	2.1	1.7	8.5	48
2026	Fluid milk	66.0	2.8	3.5	4.3	8.7	6.2	40.6	14
203	Preserved fruits and vegetables	212.5	17.3	26.0	21.8	38.2	25.1	84.1	8
2032	Canned specialties	23.0	(D)	2.6	2.0	3.6	(D)	11.5	18
2033	Canned fruits and vegetables	77.5	3.2	7.9	8.5	14.9	8.7	34.2	15
2034	Dehydrated fruits, vegetables, and soups	8.2	(D)	.7	.4	3.4	(D)	2.3	34
2035	Pickles, sauces, and salad dressings	23.0	2.6	2.7	2.7	2.0	2.6	10.4	30
2037	Frozen fruits and vegetables	49.5	7.3	7.3	6.3	7.5	8.6	12.5	6
2038	Frozen specialties, n.e.c.	31.3	1.7	4.9	1.9	6.7	2.9	13.2	16
204	Grain mill products	164.7	23.1	15.5	37.8	22.5	24.8	41.1	6
2041	Flour and other grain mill products	13.7	2.5	1.5	5.2	1.5	2.0	1.1	30
2043	Cereal breakfast foods	27.1	3.6	4.5	2.9	4.0	4.4	7.8	4
2044	Rice milling	2.8	.7	.2	1.8	.1	.1	.8	58
2045	Prepared flour mixes and doughs	6.0	.3	1.3	.4	1.3	1.0	1.8	27
2046	Wet corn milling	75.3	11.1	5.1	18.2	5.1	13.3	22.5	5
2047	Dog and cat food	20.0	.9	1.8	2.8	7.3	2.6	4.7	21
2048	Prepared feeds, n.e.c.	19.7	4.1	1.2	6.5	3.3	1.5	3.1	27

Table 11a. Operating Costs by Industries for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Kind of cost for all media							Standard error of estimate (PAOC) (percent)
		Total PAOC	Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous	Payments to government	
<b>20</b>	<b>Food and kindred products—Con.</b>								
205	Bakery products	53.6	7.1	6.6	1.6	14.6	10.3	13.4	15
2051	Bread, cake, and related products	32.7	6.5	3.1	.8	7.7	5.9	8.6	24
2052	Cookies and crackers	17.6	.5	3.2	.6	5.8	3.9	3.8	15
2053	Frozen bakery products, except bread	3.3	.1	.3	.2	1.1	.5	1.0	40
206	Sugar and confectionery products	80.4	8.4	12.7	7.6	18.5	15.1	18.1	13
2061	Raw cane sugar	9.6	1.0	2.7	1.1	.9	3.7	.1	40
2062	Cane sugar refining	7.7	(D)	1.0	.6	2.8	(D)	2.0	-
2063	Beet sugar	28.6	5.1	4.1	4.1	5.4	6.2	3.6	32
2064	Candy and other confectionery products	21.4	1.5	2.7	1.0	5.8	1.9	8.5	10
2066	Chocolate and cocoa products	7.8	(D)	1.3	(D)	2.1	1.0	2.3	7
2067	Chewing gum	(D)	.1	(D)	(D)	(D)	(D)	.3	(X)
2068	Salted and roasted nuts and seeds	(D)	.1	(D)	(Z)	(D)	.5	1.1	(X)
207	Fats and oils	72.3	12.5	11.3	14.3	7.1	14.1	12.9	20
2074	Cottonseed oil mills	11.4	1.4	3.4	2.5	.7	3.1	.3	82
2075	Soybean oil mills	27.0	3.3	3.8	7.2	3.2	4.6	4.9	6
2077	Animal and marine fats and oils	11.4	5.5	.5	1.6	.1	1.6	2.1	89
2079	Edible fats and oils, n.e.c.	22.1	2.3	3.6	3.0	3.1	4.8	5.4	16
208	Beverages	231.8	13.5	26.2	19.3	25.0	27.2	120.6	4
2082	Malt beverages	158.4	7.9	17.7	13.6	11.5	20.2	87.5	4
2083	Malt	4.4	.6	.2	1.0	.5	.3	1.9	25
2084	Wines, brandy, and brandy spirits	3.8	.3	.2	.4	1.8	.5	.7	32
2085	Distilled and blended liquors	6.7	.5	1.1	1.5	1.6	.5	1.5	36
2086	Bottled and canned soft drinks	52.5	3.0	5.8	2.9	9.2	4.8	26.8	11
2087	Flavoring extracts and syrups, n.e.c.	6.0	1.3	1.2	(Z)	.5	.8	2.2	32
209	Miscellaneous food and kindred products	128.3	14.6	15.8	9.3	28.1	16.4	44.1	13
2091	Canned and cured fish and seafoods	3.3	.3	.4	.2	.6	.2	1.5	53
2092	Fresh or frozen prepared fish	24.1	1.7	2.7	1.3	7.7	2.0	8.8	23
2095	Roasted coffee	17.2	3.4	1.7	3.1	4.7	1.3	3.0	28
2096	Potato chips and similar snacks	22.4	2.1	3.0	(D)	3.4	(D)	10.5	12
2098	Macaroni and spaghetti	1.1	.1	.1	(D)	.6	(D)	.2	13
2099	Food preparations, n.e.c.	60.2	7.1	7.8	3.1	11.1	11.1	20.0	24
<b>21</b>	<b>Tobacco products</b>	<b>33.5</b>	<b>7.1</b>	<b>8.5</b>	<b>5.4</b>	<b>6.0</b>	<b>1.5</b>	<b>5.0</b>	<b>6</b>
211	Cigarettes	20.1	4.3	4.5	(D)	4.5	(D)	3.8	8
2111	Cigarettes	20.1	4.3	4.5	(D)	4.5	(D)	3.8	8
213	Chewing and smoking tobacco	1.1	(D)	(D)	(D)	(D)	(D)	.4	32
2131	Chewing and smoking tobacco	1.1	(D)	(D)	(D)	(D)	(D)	.4	32
214	Tobacco stemming and redrying	11.5	(D)	(D)	3.0	(D)	.4	.4	7
2141	Tobacco stemming and redrying	11.5	(D)	(D)	3.0	(D)	.4	.4	7
<b>22</b>	<b>Textile mill products</b>	<b>256.2</b>	<b>15.7</b>	<b>31.2</b>	<b>33.0</b>	<b>39.6</b>	<b>30.0</b>	<b>106.7</b>	<b>4</b>
221	Broadwoven fabrics mills, cotton	34.6	2.2	5.3	7.0	2.0	5.1	13.0	7
2211	Broadwoven fabrics mills, cotton	34.6	2.2	5.3	7.0	2.0	5.1	13.0	7
222	Broadwoven fabrics mills, manmade fiber and silk	18.8	.6	3.4	3.4	2.8	2.4	6.1	10
2221	Broadwoven fabrics mills, manmade fiber and silk	18.8	.6	3.4	3.4	2.8	2.4	6.1	10
223	Broadwoven fabrics mills, wool	9.6	1.2	1.3	1.5	1.6	1.0	3.0	9
2231	Broadwoven fabrics mills, wool	9.6	1.2	1.3	1.5	1.6	1.0	3.0	9
224	Narrow fabrics mills	2.9	.1	.3	.3	.6	.4	1.1	22
2241	Narrow fabrics mills	2.9	.1	.3	.3	.6	.4	1.1	22
225	Knitting mills	67.6	3.0	4.7	6.6	6.3	5.6	41.3	10
2251	Women's hosiery, except socks	4.0	.2	.4	.3	.7	.2	2.2	32
2252	Hosiery, n.e.c.	6.5	(D)	.4	.4	.7	(D)	4.3	21
2253	Knit outerwear mills	11.2	.3	.4	.5	.8	.6	8.5	20
2254	Knit underwear mills	1.7	(D)	.1	.4	.1	(D)	.8	27
2257	Weft knit fabrics mills	29.0	1.1	2.4	3.6	1.7	3.2	16.9	16
2258	Lace and warp knit fabrics mills	14.4	1.1	.8	1.3	2.2	1.0	8.1	25
226	Textile finishing, except wool	45.7	2.9	4.6	5.4	7.8	5.7	19.3	12
2261	Finishing plants, cotton	19.1	1.3	2.0	1.9	3.6	2.0	8.3	18
2262	Finishing plants, manmade	17.1	1.3	2.1	3.0	3.1	3.2	4.4	14
2269	Finishing plants, n.e.c.	9.5	.3	.5	.5	1.1	.5	6.6	31
227	Carpets and rugs	16.9	.5	1.3	.9	3.4	1.1	9.8	10
2273	Carpets and rugs	16.9	.5	1.3	.9	3.4	1.1	9.8	10
228	Yarn and thread mills	21.5	2.2	2.9	3.1	3.4	2.8	7.0	10
2281	Yarn spinning mills	14.8	2.0	2.2	3.0	2.0	2.1	3.6	13
2282	Throwing and winding mills	3.7	.2	.5	.1	1.0	.3	1.6	16
2284	Thread mills	2.9	.1	.2	(Z)	.4	.4	1.8	17
229	Miscellaneous textile goods	38.7	2.9	7.2	4.8	11.7	5.9	6.1	10
2295	Coated fabrics, not rubberized	11.0	.7	1.9	1.7	4.0	1.1	1.6	21
2296	Tire cord and fabrics	1.7	(D)	.1	.2	.7	(D)	.3	5
2297	Nonwoven fabrics	18.0	1.8	3.8	1.6	5.3	3.6	2.1	7
2298	Cordage and twine	3.4	(Z)	.9	1.0	.2	(Z)	1.2	77
2299	Textile goods, n.e.c.	4.7	(D)	.6	.4	1.5	(D)	.9	25
<b>24</b>	<b>Lumber and wood products</b>	<b>243.0</b>	<b>34.6</b>	<b>41.8</b>	<b>38.4</b>	<b>66.6</b>	<b>42.2</b>	<b>19.5</b>	<b>5</b>
241	Logging	8.1	.4	1.4	1.2	2.4	2.7	.1	11
2411	Logging	8.1	.4	1.4	1.2	2.4	2.7	.1	11
242	Sawmills and planing mills	53.7	8.2	11.4	6.2	12.8	11.8	3.3	9
2421	Sawmills and planing mills, general	41.1	6.4	8.8	2.6	11.4	9.9	2.1	8
2426	Hardwood dimension and flooring mills	12.2	1.7	2.6	3.6	1.4	1.9	1.0	25
243	Millwork, plywood, and structural members	77.8	8.8	15.3	14.9	22.7	8.7	7.3	13
2431	Millwork	21.4	2.2	3.5	4.6	6.3	2.3	2.4	12
2434	Wood kitchen cabinets	14.5	1.5	3.3	2.4	4.4	1.9	1.0	27
2435	Hardwood veneer and plywood	13.9	2.9	1.8	3.5	2.3	1.5	1.8	53
2436	Softwood veneer and plywood	21.4	1.6	5.1	3.3	7.6	2.4	1.5	18
2439	Structural wood members, n.e.c.	6.5	.6	1.5	1.1	2.1	.6	.6	36

Table 11a. Operating Costs by Industries for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Kind of cost for all media						Standard error of estimate (PAOC) (percent)
		Total PAOC	Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous	
<b>24</b>	<b>Lumber and wood products—Con.</b>							
244	Wood containers .....	7.3	.8	.9	.8	2.0	1.0	1.9
2441	Nailed wood boxes and shooks .....	1.0	(D)	.2	.3	(Z)	(D)	(Z)
2446	Wood pallets and skids .....	4.3	.6	.6	.4	.9	.3	1.5
2449	Wood containers, n.e.c. ....	2.0	(D)	.1	.1	1.1	(D)	.4
245	Wood buildings and mobile homes .....	14.7	.3	1.3	.1	6.3	2.0	2.7
2451	Mobile homes .....	11.1	.2	.7	.1	6.8	1.3	2.2
2452	Prefabricated wood buildings .....	3.5	.2	.6	.1	1.5	.7	.5
249	Miscellaneous wood products .....	81.5	16.1	11.6	15.2	18.4	16.0	4.2
2491	Wood preserving .....	19.2	2.5	3.4	.8	8.4	3.6	.6
2493	Reconstituted wood products .....	49.7	11.3	6.3	12.7	6.5	9.9	3.0
2499	Wood products, n.e.c. ....	12.6	2.2	1.9	1.8	3.6	2.5	.6
<b>25</b>	<b>Furniture and fixtures .....</b>	<b>118.5</b>	<b>12.3</b>	<b>21.1</b>	<b>22.7</b>	<b>25.1</b>	<b>22.8</b>	<b>14.4</b>
251	Household furniture .....	63.8	7.0	9.6	15.4	10.9	13.9	7.1
2511	Wood household furniture .....	46.3	6.1	6.5	13.2	6.2	10.3	3.9
2512	Upholstered household furniture .....	6.9	.2	1.4	.9	2.3	.8	1.3
2514	Metal household furniture .....	4.8	.4	.8	.4	1.4	1.2	.9
2515	Mattresses and bedsprings .....	2.7	(D)	.3	.4	.1	(D)	.5
2517	Wood television and radio cabinets .....	1.3	(Z)	.2	.4	.7	.4	.2
2519	Household furniture, n.e.c. ....	1.8	(D)	.4	.2	.1	(D)	.2
252	Office furniture .....	27.9	4.0	6.0	5.5	5.4	3.4	3.6
2521	Wood office furniture .....	10.6	2.0	1.5	3.6	1.8	1.0	.7
2522	Office furniture, except wood .....	17.3	2.0	4.5	2.0	3.6	2.4	2.8
253	Public building and related furniture .....	5.0	.2	1.2	.4	1.6	.6	1.0
2531	Public building and related furniture .....	5.0	.2	1.2	.4	1.6	.6	1.0
254	Partitions and fixtures .....	16.5	.7	3.4	.8	5.4	4.2	2.1
2541	Wood partitions and fixtures .....	5.7	.2	1.2	.2	2.5	1.0	.4
2542	Partitions and fixtures, except wood .....	10.8	.5	2.2	.5	2.8	3.1	1.7
259	Miscellaneous furniture and fixtures .....	5.2	.5	.9	.6	1.8	.8	.6
2591	Drapery hardware and blinds and shades .....	2.2	.3	.4	.3	.8	.3	.2
2599	Furniture and fixtures, n.e.c. ....	3.0	.2	.6	.4	1.0	.5	.4
<b>26</b>	<b>Paper and allied products .....</b>	<b>1 860.7</b>	<b>365.7</b>	<b>243.4</b>	<b>242.5</b>	<b>306.3</b>	<b>502.4</b>	<b>200.3</b>
261	Pulp mills .....	291.2	54.8	34.5	41.0	68.1	68.1	24.7
2611	Pulp mills .....	291.2	54.8	34.5	41.0	68.1	68.1	24.7
262	Paper mills .....	924.3	190.4	115.8	101.3	117.4	286.9	112.5
2621	Paper mills .....	924.3	190.4	115.8	101.3	117.4	286.9	112.5
263	Paperboard mills .....	377.7	88.9	47.2	65.1	40.2	101.9	34.4
2631	Paperboard mills .....	377.7	88.9	47.2	65.1	40.2	101.9	34.4
265	Paperboard containers and boxes .....	93.0	6.3	20.6	9.4	33.1	12.9	10.7
2652	Setup paperboard boxes .....	1.7	(Z)	.5	.1	.3	.3	.4
2653	Corrugated and solid fiber boxes .....	41.2	2.4	11.5	1.2	12.3	8.0	5.9
2655	Fiber cans, drums, and similar products .....	5.0	.2	.3	.2	3.8	.5	.1
2656	Sanitary food containers .....	4.1	.1	.9	.2	1.7	.4	.7
2657	Folding paperboard boxes .....	41.0	3.6	7.4	7.8	15.0	3.6	3.5
267	Miscellaneous converted paper products .....	174.5	25.4	25.2	25.7	47.5	32.7	18.0
2671	Paper coated and laminated, packaging .....	28.3	6.2	3.0	7.9	4.5	4.9	1.8
2672	Paper coated and laminated, n.e.c. ....	45.0	7.7	4.3	6.6	11.9	10.8	3.7
2673	Bags: plastics, laminated, and coated .....	19.0	1.2	2.8	3.1	5.6	4.4	1.9
2674	Bags: uncoated paper and multiwall .....	4.9	.2	1.1	.3	1.4	.6	1.3
2675	Die-cut paper and board .....	7.4	.8	1.0	.8	2.6	1.5	.7
2676	Sanitary paper products .....	43.8	6.1	8.7	5.2	13.0	6.9	3.9
2677	Envelopes .....	7.6	1.1	1.6	.5	1.8	1.5	1.0
2678	Stationery products .....	4.1	.3	1.2	.3	1.1	.6	.6
2679	Converted paper products, n.e.c. ....	14.4	2.0	1.3	.9	5.6	1.6	3.0
<b>27</b>	<b>Printing and publishing .....</b>	<b>239.0</b>	<b>31.2</b>	<b>38.6</b>	<b>45.6</b>	<b>59.6</b>	<b>35.2</b>	<b>28.8</b>
271	Newspapers .....	31.9	.5	4.2	1.5	15.0	3.0	7.6
2711	Newspapers .....	31.9	.5	4.2	1.5	15.0	3.0	7.6
272	Periodicals .....	3.3	1.6	.3	.4	.9	.1	.1
2721	Periodicals .....	3.3	1.6	.3	.4	.9	.1	.1
273	Books .....	17.2	2.2	3.4	2.3	4.2	1.7	3.4
2731	Book publishing .....	2.7	.1	.2	.2	.8	.1	1.3
2732	Book printing .....	14.5	2.0	3.2	2.1	3.5	1.6	2.1
274	Miscellaneous publishing .....	1.5	.1	.3	.1	.6	.3	.2
2741	Miscellaneous publishing .....	1.5	.1	.3	.1	.6	.3	.2
275	Commercial printing .....	148.7	24.7	19.9	39.0	28.3	24.9	12.0
2752	Commercial printing, lithographic .....	92.3	14.2	11.7	23.2	21.6	13.3	8.4
2754	Commercial printing, gravure .....	35.8	7.5	5.6	12.6	1.3	7.5	1.3
2759	Commercial printing, n.e.c. ....	20.6	2.9	2.6	3.2	5.4	4.1	2.3
276	Manifold business forms .....	16.2	1.0	5.8	1.1	4.4	1.7	2.1
2761	Manifold business forms .....	16.2	1.0	5.8	1.1	4.4	1.7	2.1
277	Greeting cards .....	4.6	.1	2.0	.1	1.2	.4	.6
2771	Greeting cards .....	4.6	.1	2.0	.1	1.2	.4	.6
278	Blankbooks and bookbinding .....	4.9	.2	.8	.3	1.7	1.4	.6
2782	Blankbooks and looseleaf binders .....	3.1	(Z)	.6	(Z)	1.0	1.0	.4
2789	Bookbinding and related work .....	1.9	.2	.2	.3	.6	.4	.2
279	Printing trade services .....	10.8	.8	1.9	.8	3.4	1.7	2.1
2796	Platemaking services .....	10.0	.8	1.9	.8	3.3	1.4	1.8











Table 11a. Operating Costs by Industries for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No industries are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Industry	Total PAOC	Kind of cost for all media					Standard error of estimate (PAOC) (percent)	
			Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous		Payments to government
38	Instruments and related products—Con.								
385	Ophthalmic goods	7.1	.5	1.5	.3	1.7	2.1	1.0	10
3851	Ophthalmic goods	7.1	.5	1.5	.3	1.7	2.1	1.0	10
386	Photographic equipment and supplies	154.2	24.7	32.1	19.5	25.3	49.0	3.8	5
3861	Photographic equipment and supplies	154.2	24.7	32.1	19.5	25.3	49.0	3.8	5
387	Watches, clocks, watchcases, and parts	1.9	.1	.3	.1	.4	.7	.3	28
3873	Watches, clocks, watchcases, and parts	1.9	.1	.3	.1	.4	.7	.3	28
39	Miscellaneous manufacturing industries	89.7	8.5	13.6	12.7	26.4	16.5	12.0	5
391	Jewelry, silverware, and plated ware	8.8	.6	1.3	1.6	1.9	2.0	1.6	9
3911	Jewelry, precious metal	3.3	.4	.4	.4	.6	.6	.5	12
3914	Silverware and plated ware	3.9	(D)	.6	1.1	.6	(D)	.1	11
3915	Jewelers' materials and lapidary work	1.7	(D)	.2	.1	.3	(D)	.9	34
393	Musical instruments	5.6	.2	.4	.7	3.9	.2	.3	20
3931	Musical instruments	5.6	.2	.4	.7	3.9	.2	.3	20
394	Toys and sporting goods	17.8	1.7	3.2	1.8	4.8	3.8	2.5	14
3944	Games, toys, and children's vehicles	2.9	.2	.5	.3	1.2	3.5	1.8	14
3949	Sporting and athletic goods, n.e.c.	14.5	1.5	2.7	1.5	3.5	3.5	1.8	17
395	Pens, pencils, office, and art supplies	7.1	.6	1.2	.2	3.2	1.2	.7	10
3951	Pens and mechanical pencils	3.6	.4	.7	(Z)	1.0	.8	.4	13
3952	Lead pencils and art goods	1.8	(D)	.3	(Z)	1.1	(D)	.1	10
3955	Carbon paper and inked ribbons	1.6	(D)	.1	(Z)	1.0	(D)	.2	30
396	Costume jewelry and notions	13.4	2.4	2.4	2.5	2.3	2.0	1.9	14
3961	Costume jewelry	3.8	.4	.7	.3	.9	.7	.6	24
3965	Fasteners, buttons, needles, and pins	9.6	1.9	1.6	2.1	1.4	1.3	1.2	17
399	Miscellaneous manufactures	36.9	3.1	5.2	6.0	10.4	7.3	5.0	5
3991	Brooms and brushes	1.2	(Z)	(D)	(Z)	.9	(Z)	(D)	26
3993	Signs and advertising specialties	6.5	.4	.7	.3	3.1	1.1	.9	15
3995	Burial caskets	2.6	.3	.3	.5	.4	.5	.6	30
3996	Hard surface floor coverings, n.e.c.	19.9	1.7	(D)	4.7	4.2	4.1	(D)	3
3999	Manufacturing industries, n.e.c.	6.8	.6	1.6	.5	1.7	1.6	.8	16

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 11b. Operating Costs by States and Major Groups for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major groups are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	Total PAOC	Kind of cost for all media					Standard error of estimate (PAOC) (percent)	
			Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous		Payments to government
	<b>United States<sup>1</sup></b>	<b>17 466.4</b>	<b>2 550.8</b>	<b>2 987.5</b>	<b>2 390.0</b>	<b>3 408.3</b>	<b>4 500.4</b>	<b>1 629.3</b>	<b>2</b>
20	Food and kindred products	1 312.0	132.6	152.7	142.0	208.9	199.3	476.5	3
21	Tobacco products	33.5	7.1	8.5	5.4	6.0	1.5	5.0	6
22	Textile mill products	256.2	15.7	31.2	33.0	39.6	30.0	106.7	4
24	Lumber and wood products	243.0	34.6	41.8	38.4	66.6	42.2	19.5	5
25	Furniture and fixtures	118.5	12.3	21.1	22.7	25.1	22.8	14.4	6
26	Paper and allied products	1 860.7	365.7	243.4	242.5	306.3	502.4	200.3	4
27	Printing and publishing	239.0	31.2	38.6	45.6	59.6	35.2	28.8	4
28	Chemicals and allied products	4 425.1	703.1	831.1	483.1	825.3	1 363.2	219.3	3
29	Petroleum and coal products	2 585.4	374.5	383.2	567.8	416.5	806.1	37.2	4
30	Rubber and miscellaneous plastics products	379.6	31.6	51.2	41.4	109.6	74.4	71.4	5
31	Leather and leather products	53.5	4.7	7.6	5.2	8.3	15.6	12.2	13
32	Stone, clay, and glass products	491.2	76.9	83.9	87.4	80.2	128.0	34.9	4
33	Primary metal industries	1 993.4	325.9	303.7	359.3	380.8	565.1	58.5	3
34	Fabricated metal products	761.2	67.2	161.7	76.4	197.2	173.9	64.9	4
35	Industrial machinery and equipment	463.7	38.0	98.9	32.2	156.9	83.5	54.3	4
36	Electronic and other electric equipment	657.1	79.8	160.3	58.0	135.7	147.7	75.5	5
37	Transportation equipment	1 171.7	204.2	279.1	109.8	281.0	210.0	87.6	4
38	Instruments and related products	331.9	37.1	76.0	27.2	78.1	83.0	30.5	4
39	Miscellaneous manufacturing industries	89.7	6.5	13.6	12.7	26.4	16.5	12.0	5
	<b>Alabama</b>	<b>380.0</b>	<b>82.8</b>	<b>51.0</b>	<b>49.7</b>	<b>62.7</b>	<b>111.7</b>	<b>22.2</b>	<b>6</b>
20	Food and kindred products	21.5	2.6	2.9	3.4	1.2	5.2	6.2	19
22	Textile mill products	10.8	.5	1.7	1.2	1.0	2.3	4.2	14
24	Lumber and wood products	5.6	.9	1.1	.5	1.8	1.0	.3	14
25	Furniture and fixtures	1.9	.2	.2	.2	.3	.7	.3	36
26	Paper and allied products	84.2	21.7	9.9	13.9	15.1	22.8	.8	3
28	Chemicals and allied products	88.0	21.1	11.0	10.5	15.0	29.7	.6	10
29	Petroleum and coal products	10.4	.1	2.1	.2	2.4	5.3	.3	90
30	Rubber and miscellaneous plastics products	7.7	.7	1.0	1.3	1.9	1.7	1.0	19
32	Stone, clay, and glass products	15.1	5.0	1.6	2.4	.8	4.9	.5	21
33	Primary metal industries	80.2	24.5	7.2	10.1	8.6	25.9	3.8	19
34	Fabricated metal products	23.7	1.6	6.4	(D)	7.3	(D)	1.4	30
35	Industrial machinery and equipment	5.0	.7	1.1	.1	1.7	.7	.6	23
36	Electronic and other electric equipment	17.1	2.8	3.2	2.4	3.9	3.6	1.2	9
37	Transportation equipment	5.6	.4	1.2	(D)	.7	(D)	.6	28
38	Instruments and related products	1.2	—	—	(Z)	.3	.7	.1	67
39	Miscellaneous manufacturing industries	1.1	.1	.1	.1	.4	.2	.2	33

Table 11b. Operating Costs by States and Major Groups for Kinds of Cost: 1992—Con.

Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major groups are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

Table with 10 columns: SIC code, State and major group, Total PAOC, Depreciation, Salaries and wages, Fuel and electricity, Contract work/services, Materials, leasing, and miscellaneous, Payments to government, Standard error of estimate (PAOC) (percent). Rows list various states (Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware) and their major product groups with associated costs.



Table 11b. Operating Costs by States and Major Groups for Kinds of Cost: 1992—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major groups are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.)

Table with 12 columns: SIC code, State and major group, Total PAOC, Depreciation, Salaries and wages, Fuel and electricity, Contract work/services, Materials, leasing, and miscellaneous, Payments to government, Standard error of estimate (PAOC) (percent). Rows are organized by state (Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland) and then by major product group within each state.







Table 11b. Operating Costs by States and Major Groups for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major groups are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	Total PAOC	Kind of cost for all media					Standard error of estimate (PAOC) (percent)	SIC coc	
			Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous			Payments to government
<b>North Carolina—Con.</b>										
	Paper and allied products	121.1	15.2	16.2	(D)	(D)	(D)	1.0	2	34
26	Printing and publishing	6.8	.7	1.1	1.4	1.2	.6	1.8	20	36
27	Chemicals and allied products	110.8	11.6	18.0	10.9	21.9	43.0	5.5	6	39
30	Rubber and miscellaneous plastics products	17.8	1.8	3.4	3.0	3.9	3.1	2.5	9	
32	Stone, clay, and glass products	17.0	2.5	4.1	(D)	(D)	(D)	.9	7	
	<b>North Dakota</b>	<b>19.3</b>	<b>5.2</b>	<b>3.0</b>	<b>2.0</b>	<b>5.4</b>	<b>3.0</b>	<b>.7</b>	<b>52</b>	<b>30</b>
	Food and kindred products	5.1	1.6	.9	.9	1.0	.3	.4	34	
29	Petroleum and coal products	12.6	3.5	1.8	1.0	4.0	2.3	-	78	33
<b>Ohio</b>		<b>1 030.8</b>	<b>125.5</b>	<b>168.4</b>	<b>131.9</b>	<b>232.5</b>	<b>262.9</b>	<b>109.6</b>	<b>4</b>	<b>35</b>
	Food and kindred products	55.9	8.5	4.9	7.8	6.4	7.5	20.9	23	37
22	Textile mill products	3.8	.5	.6	.8	1.4	.2	.2	37	39
24	Lumber and wood products	6.2	.8	.8	1.3	2.7	.3	.4	19	
25	Furniture and fixtures	(D)	(D)	(D)	(D)	.8	(D)	.3	(X)	
26	Paper and allied products	55.0	5.4	7.7	5.1	9.8	18.6	8.4	16	20
	<b>Oklahoma</b>	<b>117.0</b>	<b>12.2</b>	<b>20.3</b>	<b>17.4</b>	<b>32.0</b>	<b>25.6</b>	<b>9.5</b>	<b>9</b>	<b>21</b>
	Food and kindred products	6.0	1.3	.8	.8	.6	.7	1.7	29	31
26	Paper and allied products	12.4	3.1	1.5	1.7	2.5	3.4	.2	29	31
27	Printing and publishing	2.4	.2	.2	.2	1.3	.1	.3	18	31
28	Chemicals and allied products	7.2	1.3	.9	1.5	1.3	1.3	.9	25	31
29	Petroleum and coal products	30.3	(D)	(D)	7.3	9.5	5.9	.2	21	31
	<b>Oregon</b>	<b>170.3</b>	<b>26.4</b>	<b>30.1</b>	<b>23.3</b>	<b>31.6</b>	<b>40.0</b>	<b>18.8</b>	<b>8</b>	<b>24</b>
	Food and kindred products	25.0	2.6	2.4	1.5	9.3	2.5	6.8	24	31
24	Lumber and wood products	20.2	2.7	4.1	3.5	5.0	2.6	2.3	9	31
26	Paper and allied products	48.8	9.7	7.9	10.3	4.1	15.0	1.8	11	25
27	Printing and publishing	1.7	.3	.4	.4	.2	.2	.2	25	31
28	Chemicals and allied products	4.5	.9	.8	.5	.9	.9	.5	24	
	<b>Pennsylvania</b>	<b>890.9</b>	<b>106.1</b>	<b>145.3</b>	<b>109.1</b>	<b>233.5</b>	<b>216.1</b>	<b>80.7</b>	<b>5</b>	<b>12</b>
	Food and kindred products	59.0	4.8	7.0	4.8	13.3	9.3	19.8	12	36
22	Textile mill products	11.0	.2	.6	.2	1.0	1.3	7.7	19	31
24	Lumber and wood products	8.0	1.5	.9	1.0	2.5	1.4	.5	19	31
25	Furniture and fixtures	7.5	.6	1.3	2.3	1.4	.9	.9	24	31
26	Paper and allied products	91.0	9.4	15.6	6.6	22.1	23.0	14.3	14	39
	<b>Rhode Island</b>	<b>31.0</b>	<b>2.4</b>	<b>6.2</b>	<b>3.2</b>	<b>9.7</b>	<b>5.4</b>	<b>4.0</b>	<b>13</b>	<b>28</b>
	Food and kindred products	14.5	2.0	2.3	3.3	3.1	2.1	1.7	12	31
26	Chemicals and allied products	160.7	18.3	32.2	15.8	34.5	51.8	8.1	12	31
29	Petroleum and coal products	77.9	9.0	15.7	(D)	(D)	23.6	2.6	2	19
30	Rubber and miscellaneous plastics products	14.0	1.3	1.1	.8	4.4	1.9	4.6	19	31
31	Leather and leather products	11.4	1.9	1.5	1.9	2.7	3.1	.4	45	
	<b>Texas</b>	<b>1 062.9</b>	<b>128.0</b>	<b>207.8</b>	<b>165.6</b>	<b>367.7</b>	<b>382.8</b>	<b>152.8</b>	<b>6</b>	<b>34</b>
	Food and kindred products	103.4	14.7	13.5	17.2	19.5	17.5	18.8	11	31
22	Textile mill products	17.0	2.6	2.6	3.3	3.1	2.1	1.7	33	31
24	Lumber and wood products	65.3	10.5	7.3	13.6	10.0	19.4	7.8	11	31
26	Paper and allied products	203.4	24.9	32.8	23.2	47.0	52.6	31.0	14	39
27	Printing and publishing	14.5	2.0	2.3	3.3	3.1	2.1	1.7	12	31
28	Chemicals and allied products	160.7	18.3	32.2	15.8	34.5	51.8	8.1	12	31
29	Petroleum and coal products	77.9	9.0	15.7	(D)	(D)	23.6	2.6	2	19
30	Rubber and miscellaneous plastics products	14.0	1.3	1.1	.8	4.4	1.9	4.6	19	31
31	Leather and leather products	11.4	1.9	1.5	1.9	2.7	3.1	.4	45	
	<b>Vermont</b>	<b>15.5</b>	<b>1.8</b>	<b>2.9</b>	<b>1.2</b>	<b>1.6</b>	<b>1.6</b>	<b>1.5</b>	<b>10</b>	<b>31</b>
	Food and kindred products	15.5	1.8	2.9	1.2	1.6	1.6	1.5	10	31
22	Textile mill products	2.4	.1	.4	.4	.2	.3	1.1	28	
26	Paper and allied products	4.2	.4	.3	.5	2.9	.1	(Z)	68	
28	Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)	
32	Stone, clay, and glass products	(D)	(D)	(D)	(D)	(Z)	(D)	(D)	(X)	
33	Primary metal industries	2.2	.2	.6	.2	.5	.7	.1	31	



Table 11b. Operating Costs by States and Major Groups for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States by major groups are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	State and major group	Total PAOC	Kind of cost for all media						Standard error of estimate (PAOC) (percent)
			Depreciation	Salaries and wages	Fuel and electricity	Contract work/ services	Materials, leasing, and miscellaneous	Payments to government	
<b>Virginia—Con.</b>									
32	Stone, clay, and glass products	6.1	.9	1.2	1.0	.7	1.8	.4	20
33	Primary metal industries	10.7	1.6	1.3	.9	2.4	3.7	.8	24
34	Fabricated metal products	6.0	.7	1.0	.2	2.2	1.1	.9	31
35	Industrial machinery and equipment	7.0	1.1	1.4	.2	2.6	.8	.9	22
36	Electronic and other electric equipment	12.3	.8	4.8	2.2	.8	2.7	1.0	5
37	Transportation equipment	22.9	4.7	6.1	.9	4.0	4.6	2.6	13
38	Instruments and related products	4.4	.9	.7	.3	.6	1.1	.7	30
<b>Washington</b>									
		366.2	75.0	64.2	38.1	64.5	88.6	37.8	6
20	Food and kindred products	27.1	2.6	2.6	1.2	6.3	2.2	12.2	15
22	Textile mill products	1.3	.4	.2	.1	.4	.1	.2	41
24	Lumber and wood products	15.8	2.3	3.5	1.2	2.8	3.3	2.6	19
25	Furniture and fixtures	1.4	—	—	—	—	.4	1.0	77
26	Paper and allied products	107.2	25.8	12.3	13.6	8.6	44.1	2.9	11
27	Printing and publishing	1.2	(Z)	.2	.1	.5	.2	.3	41
28	Chemicals and allied products	11.7	3.9	2.1	1.2	1.5	1.3	1.7	35
29	Petroleum and coal products	42.6	19.1	4.1	3.7	11.3	4.0	4.4	27
30	Rubber and miscellaneous plastics products	2.0	(Z)	.2	(Z)	.5	.4	.9	47
32	Stone, clay, and glass products	8.1	2.9	1.2	.5	1.0	.9	1.6	31
33	Primary metal industries	78.0	12.1	15.4	14.2	9.5	24.3	2.6	10
34	Fabricated metal products	4.6	.5	.5	.1	.8	2.0	.7	18
35	Industrial machinery and equipment	3.6	.2	.8	.2	1.1	.4	1.0	37
36	Electronic and other electric equipment	6.9	1.5	1.4	.8	.2	1.7	1.3	30
37	Transportation equipment	(D)	(D)	18.9	.9	(D)	(D)	8.0	(X)
38	Instruments and related products	2.1	.1	.7	.1	.3	.6	.3	22
39	Miscellaneous manufacturing industries	(D)	(D)	.2	.3	(D)	(D)	.3	(X)
<b>West Virginia</b>									
		283.6	54.8	52.9	28.4	35.8	104.3	7.3	17
20	Food and kindred products	2.3	.6	.4	.3	.1	.7	.2	47
22	Textile mill products	1.2	—	—	—	.7	—	.4	91
24	Lumber and wood products	(D)	.4	(D)	.1	(D)	(D)	(D)	(X)
28	Chemicals and allied products	152.7	32.6	29.2	(D)	19.3	61.4	(D)	22
29	Petroleum and coal products	(D)	—	(D)	(D)	(D)	(D)	—	(X)
32	Stone, clay, and glass products	4.6	.8	.8	.7	.9	1.3	.1	18
33	Primary metal industries	108.7	19.3	18.6	19.3	11.9	38.6	1.0	29
34	Fabricated metal products	4.6	.6	.8	.7	1.3	.9	.2	35
35	Industrial machinery and equipment	2.7	.1	1.4	(Z)	.3	.2	.6	68
<b>Wisconsin</b>									
		394.1	61.6	53.4	45.0	59.0	106.1	69.0	10
20	Food and kindred products	47.7	3.7	3.7	2.9	8.8	3.8	24.8	14
24	Lumber and wood products	7.5	1.3	1.0	1.1	1.4	2.1	.6	16
25	Furniture and fixtures	4.0	.4	.4	1.3	1.1	.7	.2	38
26	Paper and allied products	185.7	38.0	26.5	19.5	12.5	68.5	20.6	20
27	Printing and publishing	11.8	2.8	.8	4.1	1.9	1.1	1.1	7
28	Chemicals and allied products	14.0	1.4	2.1	.4	4.8	3.6	1.7	18
30	Rubber and miscellaneous plastics products	6.9	.4	.8	.6	1.7	1.7	1.9	24
31	Leather and leather products	5.7	.4	(D)	.9	.2	(D)	1.3	26
32	Stone, clay, and glass products	7.0	1.0	.4	.6	.4	3.7	.9	42
33	Primary metal industries	29.4	4.4	3.3	6.5	5.8	6.8	2.6	7
34	Fabricated metal products	23.6	3.8	3.4	4.1	3.9	6.3	2.1	13
35	Industrial machinery and equipment	24.9	1.3	3.8	1.0	9.5	2.4	6.8	34
36	Electronic and other electric equipment	10.5	1.2	2.3	.7	2.7	1.7	1.9	15
37	Transportation equipment	8.5	1.0	2.3	.8	2.3	1.3	.8	23
38	Instruments and related products	4.3	.3	1.0	.3	1.0	.6	1.2	26
39	Miscellaneous manufacturing industries	1.7	.1	(D)	.1	.8	(D)	.3	23
<b>Wyoming</b>									
		28.7	6.0	3.6	2.6	12.2	4.0	.3	17
20	Food and kindred products	4.1	—	.9	.5	1.1	1.6	(Z)	75
28	Chemicals and allied products	(D)	(D)	1.2	(D)	(D)	(D)	—	(X)
29	Petroleum and coal products	4.6	.4	1.1	1.0	2.2	—	—	79
32	Stone, clay, and glass products	(D)	(D)	.1	(D)	(D)	(D)	.1	(X)

<sup>1</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 12a. Other Capital Expenditures by Major Groups for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Total PACENM <sup>1</sup>	Total PACE	Nonmedia and other						Standard error of estimate (PACE) (percent)	
				Total	Kind of cost						Not elsewhere classified (n.e.c.)
					Underground storage tanks	Site cleanup	Noise	Radiation	Multimedia		
	<b>All industries<sup>2</sup></b>	<b>8 393.0</b>	<b>7 866.9</b>	<b>526.1</b>	<b>192.5</b>	<b>262.9</b>	<b>11.5</b>	<b>.9</b>	<b>10.4</b>	<b>47.9</b>	<b>3</b>
20	Food and kindred products	352.1	316.8	35.2	15.9	14.4	.7	—	.1	4.2	7
21	Tobacco products	15.1	14.5	.6	(D)	(D)	(Z)	—	—	—	15
22	Textile mill products	43.0	34.3	8.7	4.0	3.9	.2	(Z)	.5	.2	10
24	Lumber and wood products	102.6	94.5	8.1	1.9	5.1	.2	—	(Z)	.8	12
25	Furniture and fixtures	25.6	17.9	7.7	1.5	6.0	.2	—	(Z)	—	15
26	Paper and allied products	1 022.6	1 004.6	18.0	6.3	7.9	1.4	(Z)	(D)	(D)	6
27	Printing and publishing	47.9	41.8	6.1	4.5	1.1	.1	—	(Z)	.4	13
28	Chemicals and allied products	2 315.8	2 120.9	194.9	58.7	95.5	2.6	(D)	(D)	31.8	3
29	Petroleum and coal products	2 702.8	2 685.0	17.8	2.5	14.9	.1	—	—	.3	6
30	Rubber and miscellaneous plastics products	108.2	96.7	11.5	5.6	3.8	1.4	—	—	.7	27

Table 12a. Other Capital Expenditures by Major Groups for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Total PACENM <sup>1</sup>	Total PACE	Nonmedia and other						Standard error of estimate (PACE) (percent)	
				Total	Kind of cost						
					Underground storage tanks	Site cleanup	Noise	Radiation	Multimedia		Not elsewhere classified (n.e.c.)
31	Leather and leather products	9.6	8.5	1.1	.6	.5	-	-	-	-	-
32	Stone, clay, and glass products	154.6	138.8	15.7	7.4	5.6	-	-	(Z)	-	43
33	Primary metal industries	560.6	525.7	34.9	4.7	25.8	.7	-	.1	2.6	15
34	Fabricated metal products	145.4	103.3	42.1	12.4	28.0	(Z)	.3	.4	3.0	5
35	Industrial machinery and equipment	174.2	150.3	23.9	9.5	13.1	(D)	(Z)	.7	1.0	7
36	Electronic and other electric equipment	149.8	126.6	23.2	6.5	16.2	(D)	-	.4	(D)	7
37	Transportation equipment	321.0	281.0	40.0	19.9	15.5	(D)	(D)	.3	.2	6
38	Instruments and related products	123.2	89.1	34.1	(D)	(D)	(D)	(D)	1.2	.2	10
39	Miscellaneous manufacturing industries	19.1	16.6	2.5	.6	1.3	(Z)	-	(Z)	.3	11
							(Z)	-	.2	.3	7

<sup>1</sup>PACENM denotes pollution abatement capital expenditures including the nonmedia and other.

<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 12b. Other Capital Expenditures by States for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PACE is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PACENM <sup>1</sup>	Total PACE	Nonmedia and other						Standard error of estimate (PACE) (percent)	
			Total	Kind of cost						
				Underground storage tanks	Site cleanup	Noise	Radiation	Multimedia		Not elsewhere classified (n.e.c.)
United States <sup>2</sup>	8 393.0	7 866.9	526.1	192.5	262.9	11.5	.9	10.4	47.9	3
Alabama	126.8	119.4	7.4	1.1	5.4	(Z)	-	-	1.0	7
Alaska	15.3	15.3	-	-	-	-	-	-	-	67
Arizona	32.0	30.8	1.2	(D)	(D)	-	-	-	-	14
Arkansas	81.9	75.6	6.4	(D)	5.8	.1	-	-	-	16
California	589.8	547.9	41.9	8.0	29.5	2.8	(D)	.3	(D)	8
Colorado	15.1	13.7	1.4	1.4	(Z)	-	-	-	-	53
Connecticut	34.9	29.3	5.5	1.2	4.1	-	-	-	(Z)	23
Delaware	61.1	59.8	1.3	.5	.9	.1	-	(Z)	.1	9
Florida	110.8	105.9	4.9	(D)	3.6	(Z)	(Z)	(Z)	(D)	16
Georgia	186.0	173.3	12.7	9.3	1.6	(D)	-	(Z)	(D)	5
Hawaii	2.8	2.8	(Z)	(Z)	-	-	-	-	(D)	16
Idaho	25.8	25.0	.8	.7	(D)	(Z)	-	-	(D)	53
Illinois	366.8	350.5	16.2	7.6	7.4	.3	(Z)	(Z)	.9	23
Indiana	363.4	330.9	32.5	24.0	7.7	.1	-	(Z)	.6	3
Iowa	52.2	46.9	5.3	1.7	2.9	(D)	-	(Z)	.1	6
Kansas	193.9	186.1	7.8	2.9	3.7	1.2	-	-	(D)	9
Kentucky	197.5	180.9	16.6	2.4	12.7	(Z)	-	-	(Z)	35
Louisiana	1 091.0	1 057.2	33.8	1.7	10.4	.1	-	(D)	1.2	6
Maine	67.2	62.2	5.0	1.3	(D)	(D)	(Z)	(D)	(D)	2
Maryland	45.2	38.1	7.1	1.8	.1	-	-	(D)	(D)	8
Massachusetts	65.0	59.5	5.5	3.0	2.3	.2	-	-	.1	11
Michigan	183.9	159.3	24.6	11.7	11.0	(Z)	-	-	.1	7
Minnesota	137.2	133.1	4.1	1.8	2.2	(Z)	(Z)	(Z)	1.6	7
Mississippi	115.8	112.8	3.0	.1	1.5	(D)	-	(D)	.1	7
Missouri	69.8	65.2	4.5	1.1	3.2	(Z)	-	(D)	(D)	6
Montana	7.6	7.1	.5	.5	(Z)	-	-	-	-	8
Nebraska	12.4	8.0	4.4	.1	.6	-	-	-	-	9
Nevada	5.4	5.3	.1	(Z)	(Z)	-	-	-	3.7	11
New Hampshire	17.6	(D)	(D)	.3	(D)	(Z)	-	-	(Z)	45
New Jersey	192.7	154.0	38.8	12.6	24.2	.2	(Z)	(D)	(Z)	(X)
New Mexico	44.3	44.3	-	-	-	-	-	-	-	12
New York	184.5	128.8	55.7	35.6	19.1	.3	(D)	-	(D)	70
North Carolina	281.0	259.8	21.2	5.3	9.5	.7	-	(D)	(D)	8
North Dakota	3.7	3.7	-	-	-	-	-	-	.1	4
Ohio	335.6	309.1	26.4	11.1	14.7	.1	-	.3	.3	32
Oklahoma	42.6	41.1	1.5	.8	.4	-	-	-	.2	5
Oregon	109.5	105.6	3.7	.7	2.1	.6	(D)	(D)	.1	15
Pennsylvania	305.7	272.4	33.4	16.1	16.2	.7	(Z)	.1	.3	14
Rhode Island	5.4	2.2	3.2	.3	2.9	(D)	-	-	.3	8
South Carolina	126.0	119.9	6.1	1.6	2.3	(D)	(D)	.5	.2	23
South Dakota	4.3	(D)	(D)	-	-	-	-	-	-	14
Tennessee	222.2	218.3	3.9	2.0	(D)	(Z)	-	-	-	(X)
Texas	1 491.8	1 448.0	45.8	9.3	32.2	(D)	(Z)	(Z)	(Z)	12
Utah	86.9	86.4	.5	(D)	(D)	(D)	(Z)	.3	(D)	8
Vermont	(D)	13.7	(D)	.1	(D)	-	-	-	-	49
Virginia	222.8	217.6	5.2	3.2	(D)	(D)	-	-	-	38
Washington	195.3	186.7	8.5	2.9	4.9	(Z)	-	(Z)	(D)	26
West Virginia	90.4	85.1	5.3	(D)	(D)	(D)	-	(Z)	(D)	14
Wisconsin	147.3	136.9	10.4	3.6	4.1	(D)	-	(Z)	(Z)	12
Wyoming	(D)	11.8	(D)	-	-	-	-	.7	.1	22
									(D)	29

<sup>1</sup>PACENM denotes pollution abatement capital expenditures including the nonmedia and other.

<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 13a. Other Operating Costs by Major Groups for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No major groups (two-digit industries) are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code	Major group	Total PAOCNM <sup>1</sup>	Total PAOC	Nonmedia and other						Standard error of estimate (PAOC) (percent)
				Kind of cost						
				Total	Site cleanup	Noise	Radiation	Multimedia	Not elsewhere classified (n.e.c.)	
	<b>All industries<sup>2</sup></b>	<b>19 228.0</b>	<b>17 466.4</b>	<b>1 761.6</b>	<b>1 573.5</b>	<b>7.8</b>	<b>13.0</b>	<b>89.8</b>	<b>77.4</b>	<b>2</b>
20	Food and kindred products	1 340.1	1 312.0	28.1	23.9	.6	(D)	.7	(D)	3
21	Tobacco products	(D)	33.5	(D)	(D)	-	(Z)	(D)	(D)	6
22	Textile mill products	264.2	256.2	7.9	6.3	.1	.1	.4	1.1	4
24	Lumber and wood products	268.0	243.0	25.0	23.1	.1	-	.8	1.0	5
25	Furniture and fixtures	126.0	118.5	7.5	7.2	(Z)	-	.1	.3	6
26	Paper and allied products	1 896.2	1 860.7	35.5	21.6	1.4	(Z)	3.7	8.8	4
27	Printing and publishing	260.0	239.0	21.0	10.8	(Z)	(Z)	9.5	.6	4
28	Chemicals and allied products	4 862.2	4 425.1	437.1	358.5	2.9	(D)	45.7	(D)	3
29	Petroleum and coal products	3 190.6	2 595.4	605.4	593.1	.6	-	8.8	2.9	4
30	Rubber and miscellaneous plastics products	403.9	379.6	24.3	20.9	.1	-	1.8	1.5	5
31	Leather and leather products	53.9	53.5	.4	.3	(Z)	-	-	(Z)	13
32	Stone, clay, and glass products	521.6	491.2	30.3	25.0	.2	.1	1.4	3.6	4
33	Primary metal industries	2 101.1	1 993.4	107.7	94.8	.6	.4	4.0	7.9	3
34	Fabricated metal products	869.3	761.2	108.0	102.3	.2	(D)	2.7	(D)	4
35	Industrial machinery and equipment	524.6	463.7	60.9	56.0	.1	-	1.6	3.2	4
36	Electronic and other electric equipment	722.1	657.1	65.0	58.4	.1	(D)	1.7	(D)	5
37	Transportation equipment	1 298.5	1 171.7	126.8	109.8	.6	(D)	5.1	(D)	4
38	Instruments and related products	393.3	331.9	61.5	57.2	.1	.2	1.4	2.6	4
39	Miscellaneous manufacturing industries	(D)	89.7	(D)	(D)	.1	-	.6	1.7	5

<sup>1</sup>PAOCNM denotes pollution abatement operating costs including the nonmedia and other.  
<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 13b. Other Operating Costs by States for Kinds of Cost: 1992

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PAOCNM <sup>1</sup>	Total PAOC	Nonmedia and other						Standard error of estimate (PAOC) (percent)
			Kind of cost						
			Total	Site cleanup	Noise	Radiation	Multimedia	Not elsewhere classified (n.e.c.)	
<b>United States<sup>2</sup></b>	<b>19 228.0</b>	<b>17 466.4</b>	<b>1 761.6</b>	<b>1 573.5</b>	<b>7.8</b>	<b>13.0</b>	<b>89.8</b>	<b>77.4</b>	<b>2</b>
Alabama	401.6	380.0	21.6	20.3	.1	-	.1	1.1	6
Alaska	31.5	31.4	.1	.1	-	-	-	-	21
Arizona	143.4	129.4	14.0	13.3	-	(D)	.4	(D)	10
Arkansas	224.6	208.1	16.5	15.7	(D)	(Z)	(D)	.5	11
California	1 637.6	1 492.6	145.0	131.3	(D)	(D)	4.6	2.5	4
Colorado	95.5	83.5	12.0	11.5	(Z)	(D)	-	(D)	12
Connecticut	197.6	168.5	29.1	26.9	(D)	-	1.2	(D)	5
Delaware	153.3	145.5	7.9	7.8	(Z)	-	-	-	15
District of Columbia	13.3	1.4	11.9	(D)	-	-	(D)	-	40
Florida	336.7	304.3	32.4	25.4	.4	-	2.5	4.2	5
Georgia	396.8	375.7	21.1	13.5	.1	-	.3	7.2	6
Hawaii	16.2	12.8	3.4	3.1	.1	-	.2	(Z)	33
Idaho	68.0	60.4	7.7	(D)	-	-	(D)	(Z)	13
Illinois	932.0	896.1	35.9	27.7	.1	-	5.3	2.8	6
Indiana	752.4	706.6	45.7	31.9	(D)	(Z)	6.1	(D)	3
Iowa	178.9	166.9	12.0	11.1	-	-	(D)	(D)	7
Kansas	113.1	107.3	5.7	4.7	(Z)	-	.7	(D)	11
Kentucky	339.1	324.8	14.3	11.8	(Z)	(D)	.5	(D)	5
Louisiana	969.2	920.0	49.3	41.1	-	(Z)	5.3	(D)	5
Maine	129.7	123.5	6.2	3.2	1.3	(D)	1.4	(D)	10
Maryland	210.0	205.6	4.4	3.2	(Z)	(D)	.2	.9	6
Massachusetts	261.0	246.2	14.8	12.6	.5	(Z)	1.3	.3	7
Michigan	796.1	763.0	33.1	31.3	.1	(Z)	1.1	.3	3
Minnesota	261.4	254.5	7.0	6.5	(Z)	(Z)	.2	.3	6
Mississippi	271.9	269.1	2.8	2.5	(Z)	-	.2	.1	7
Missouri	299.1	287.6	11.6	10.4	(Z)	-	.4	.8	4
Montana	(D)	25.5	(D)	(D)	-	-	-	(Z)	12
Nebraska	62.7	60.0	2.7	2.5	(Z)	(Z)	(Z)	.2	12
Nevada	12.7	11.0	1.8	(D)	-	-	(D)	-	20
New Hampshire	47.4	44.1	3.4	2.8	-	-	(Z)	.5	15
New Jersey	784.8	673.8	111.0	96.0	.9	(D)	9.7	(D)	13
New Mexico	65.2	63.4	1.8	(D)	(Z)	(D)	(D)	(D)	42
New York	718.5	650.6	67.9	62.5	(Z)	(D)	2.2	(D)	5
North Carolina	580.8	554.4	26.5	22.2	(Z)	-	1.7	2.5	3
North Dakota	(D)	19.3	(D)	.3	-	-	(D)	-	52
Ohio	1 170.0	1 030.8	139.2	129.4	.1	.7	.7	8.2	4
Oklahoma	122.6	117.0	5.7	4.3	(Z)	(Z)	.2	1.1	9
Oregon	182.9	170.3	12.6	9.3	(Z)	(D)	1.4	(D)	8
Pennsylvania	952.1	890.9	61.3	55.5	.3	(D)	3.6	(D)	5
Rhode Island	33.7	31.0	2.8	.3	(Z)	-	(Z)	2.4	13
South Carolina	379.2	360.1	19.1	12.8	(Z)	(D)	1.5	(D)	7
South Dakota	16.6	16.5	(Z)	(Z)	-	-	-	-	33
Tennessee	474.7	441.0	33.7	30.5	.1	(Z)	1.0	2.0	6
Texas	2 700.2	2 092.2	608.0	588.9	(D)	.1	12.0	(D)	2
Utah	129.7	123.4	6.3	3.6	-	-	(D)	(D)	22

Table 13b. Other Operating Costs by States for Kinds of Cost: 1992—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. Statistics in this table cover manufacturing establishments with 20 or more employees. No States are shown where PAOC is less than \$1.0 million. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

State	Total PAOCNM <sup>1</sup>	Total PAOC	Nonmedia and other							Standard error of estimate (PAOC) (percent)
			Kind of cost							
			Total	Site cleanup	Noise	Radiation	Multimedia	Not elsewhere classified (n.e.c.)		
Vermont	19.8	17.5	2.2	2.0	-	-	-	-	.2	24
Virginia	361.9	334.4	27.4	21.3	(D)	-	-	-	(D)	8
Washington	394.3	368.2	26.1	20.1	(Z)	(Z)	4.4	-	(D)	6
West Virginia	306.6	283.6	23.1	17.3	(Z)	-	-	-	5.8	17
Wisconsin	404.3	394.1	10.2	8.7	(Z)	-	-	5.5	.2	10
Wyoming	28.8	28.7	.1	.1	-	-	-	.9	.5	17

<sup>1</sup>PAOCNM denotes pollution abatement operating costs including the nonmedia and other.  
<sup>2</sup>Excludes Major Group 23, Apparel and Other Textile Products.

Table 14. Summary New Capital Expenditures by Companies in Mining, Petroleum, and Electric Utilities for All Media: 1988 to 1992

[Million dollars. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code <sup>1</sup>	Industry	New plant and equipment	Pollution abatement capital expenditures (PACE)						Nonmedia and other
			Total PACENM <sup>2</sup>	Media					
				Total	Air	Water	Solid/contained waste		
10,12,13,14	Mining	1992..	8 883.7	405.1	317.6	105.9	144.7	67.0	
		1991..	10 022.5	(NA)	273.6	117.5	119.6	36.5	87.5
		1990..	9 880.3	(NA)	251.7	78.9	138.2	34.6	(NA)
		1989..	9 207.9	(NA)	199.9	39.9	112.9	47.2	(NA)
		1988..	8 282.5	(NA)	144.4	42.2	84.4	17.8	(NA)
19	Petroleum and coal products	1992..	29 585.8	4 367.3	3 873.5	1 932.9	1 380.5	560.1	
		1991..	35 590.6	(NA)	3 559.6	1 744.2	1 503.3	312.2	493.8
		1990..	34 787.3	(NA)	3 221.3	1 265.6	1 643.6	312.2	(NA)
		1989..	30 081.0	(NA)	2 275.9	771.5	1 174.5	329.9	(NA)
		1988..	26 031.6	(NA)	1 904.8	705.1	998.9	200.6	(NA)
91,493	Electric utilities <sup>3</sup>	1992..	42 657.6	3 037.9	2 886.7	1 948.3	567.0	371.4	
		1991..	38 616.7	(NA)	1 943.2	1 054.5	573.0	315.7	151.2
		1990..	39 267.5	(NA)	2 111.1	1 111.3	673.0	325.9	(NA)
		1989..	40 319.1	(NA)	1 819.1	1 074.6	481.9	262.5	(NA)
		1988..	36 685.0	(NA)	2 091.3	1 215.4	525.6	350.3	(NA)

<sup>1</sup>For further description of SIC codes covered in this survey, see introductory text.  
<sup>2</sup>PACENM denotes pollution abatement capital expenditures including the nonmedia and other.  
<sup>3</sup>Does not include Rural Electric Administration utilities.

Table 15a. New Capital Expenditures by Companies in Mining, Petroleum, and Electric Utilities for the Media Air: 1992

[Million dollars. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols.]

SIC code <sup>1</sup>	Industry	Total PACE	Total	Air					
				Type of pollutant abated				Abatement technique	
				Hazardous	Nonhazardous			End of line	Production process enhancements
					Total	Particulates, etc. <sup>2</sup>	Other		
10,12,13,14	Mining	317.6	105.9	3.1	102.8	100.0	2.8	71.9	34.0
19	Petroleum and coal products	3 873.5	1 932.9	574.1	1 358.8	1 156.7	202.1	999.7	933.2
91,493	Electric utilities <sup>3</sup>	2 886.7	1 948.3	59.4	1 888.9	1 861.1	27.8	1 398.8	549.5

<sup>1</sup>For further description of SIC codes covered in this survey, see introductory text.  
<sup>2</sup>Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons/volatile organic compounds, and lead.  
<sup>3</sup>Does not include Rural Electric Administration utilities.



Table 15b. **New Capital Expenditures by Companies in Mining, Petroleum, and Electric Utilities for the Media Water: 1992**

[Million dollars. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code <sup>1</sup>	Industry	Total PACE	Water				
			Total	Type of pollutant abated		Abatement technique	
				Hazardous	Nonhazardous	End of line	Production process enhancements
10,12,13,14	Mining .....	317.6	144.7	76.1	68.6	127.9	16.8
29	Petroleum and coal products .....	2 873.5	1 380.5	624.0	756.5	1 018.3	362.2
491,493	Electric utilities <sup>2</sup> .....	2 886.7	567.0	68.9	498.1	519.3	47.7

<sup>1</sup>For further description of SIC codes covered in this survey, see introductory text.<sup>2</sup>Does not include Rural Electric Administration utilities.Table 15c. **New Capital Expenditures by Companies in Mining, Petroleum, and Electric Utilities for the Media Solid/Contained Waste: 1992**

[Million dollars. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code <sup>1</sup>	Industry	Total PACE	Solid/contained waste				
			Total	Type of pollutant abated		Abatement technique	
				Hazardous	Nonhazardous	End of line	Production process enhancements
10,12,13,14	Mining .....	317.6	67.0	18.5	48.5	43.8	23.2
29	Petroleum and coal products .....	2 873.5	560.1	60.3	499.8	276.2	283.9
491,493	Electric utilities <sup>2</sup> .....	2 886.7	371.4	67.0	304.4	332.0	39.4

<sup>1</sup>For further description of SIC codes covered in this survey, see introductory text.<sup>2</sup>Does not include Rural Electric Administration utilities.Table 15d. **New Capital Expenditures by Companies in Mining, Petroleum, and Electric Utilities for Kinds of Cost: 1992**

[Million dollars. See introductory text for a description of survey coverage and for the meaning of abbreviations and symbols]

SIC code <sup>1</sup>	Industry	Total PACENM <sup>2</sup>	Total PACE	Nonmedia and other							
				Total	Kind of cost						Not elsewhere classified (n.e.c.)
					Underground storage tanks	Site cleanup	Noise	Radiation	Multimedia		
10,12,13,14	Mining .....	405.1	317.6	87.5	11.8	74.9	.4	-	.4	-	
29	Petroleum and coal products .....	4 367.3	2 873.5	493.8	150.2	293.3	6.4	-	8.6	35.3	
491,493	Electric utilities <sup>3</sup> .....	3 037.9	2 886.7	151.2	46.8	58.8	20.3	4.2	6.6	14.5	

<sup>1</sup>For further description of SIC codes covered in this survey, see introductory text.<sup>2</sup>PACENM denotes pollution abatement capital expenditures including the nonmedia and other.<sup>3</sup>Does not include Rural Electric Administration utilities.

Table 16. Selected Industrial Air Pollution Control Equipment: 1988 to 1992

[Million dollars]

Type of equipment	Value			Shipments by end use												
	New orders	Total shipments	Back-log of orders	Pulp and paper mill operations	Chemical and fertilizer production	Petroleum refining	Cement manufacturing	Foundries	Iron and steel mills	Primary metals smelting plants	Grain milling and handling	Coal mining and cleaning	Steam electric utility power plants	Steam industrial power plants	Municipal waste combustors	Other end use industries <sup>1</sup>
<b>Total air pollution control equipment<sup>2</sup></b>																
1992..	781.2	713.4	754.1	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
1991..	846.6	817.8	884.3	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
1990..	952.2	825.3	821.1	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
1989..	826.6	710.9	558.5	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
1988..	632.8	550.0	475.3	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
<b>Particulates emission collectors</b>																
1992..	422.1	463.3	255.1	35.7	58.6	32.3	14.1	4.2	5.5	6.9	5.3	4.9	96.2	18.0	2.5	179.1
1991..	494.0	496.0	294.4	47.4	64.4	41.2	15.0	4.1	6.6	7.3	5.6	3.4	72.4	21.0	5.2	202.6
1990..	531.0	446.5	264.7	53.8	42.5	18.2	12.3	3.7	6.3	8.7	5.9	4.3	65.7	47.9	(D)	169.5
1989..	426.0	394.0	221.7	61.2	42.1	10.2	10.5	3.3	6.9	3.4	4.2	4.9	47.9	38.7	-	160.8
1988..	361.6	362.6	200.9	49.2	23.7	8.2	4.2	6.1	3.1	6.6	6.6	5.1	112.3	22.8	(4)	112.7
<b>Gaseous emission control devices</b>																
1992..	292.4	196.9	422.8	(D)	9.3	(D)	-	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	48.8
1991..	225.2	226.9	327.3	(D)	6.3	(D)	-	(D)	(D)	(D)	-	(D)	(D)	(D)	(D)	55.2
1990..	280.8	224.8	299.3	(D)	3.3	(D)	-	(D)	(D)	(D)	-	(D)	(D)	65.9	(D)	76.6
1989..	295.1	227.7	304.0	(D)	16.2	5.6	-	(D)	(D)	(D)	-	(D)	97.2	39.7	-	61.6
1988..	218.1	145.0	250.7	(D)	9.8	4.5	-	(D)	(D)	(D)	-	(D)	37.0	24.9	(4)	64.6

Source: Current Industrial Reports, Selected Industrial Air Pollution Control Equipment (MA-35J), 1988 to 1992.

<sup>1</sup>Includes municipal waste combustors shipments prior to 1989.<sup>2</sup>Includes other types of industrial air pollution control equipment not shown separately.<sup>3</sup>No longer collected.<sup>4</sup>Not collected separately prior to 1989.

# Appendix

## Report Forms and Respondent Instructions

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The following pages present samples of the questionnaires used for the 1992 Pollution Abatement Costs and Expenditures Survey.

Form MA-200, Survey of Pollution Abatement Costs and Expenditures.....	A-2
Form PA-2, Plant and Equipment Survey Supplement for Pollution Abatement.....	A-22

MA-200  
(12-92)

OMB No. 0607-0176:  
Approval Expires 09/30/95



UNITED STATES DEPARTMENT OF COMMERCE  
Bureau of the Census  
Washington, DC 20233-0001

OFFICE OF THE DIRECTOR

FROM THE DIRECTOR  
BUREAU OF THE CENSUS

Industrial firms are devoting a significant share of their resources for pollution abatement. Consequently, it is important that accurate and timely statistics be available on a broad national basis so that business, Government, and the general public can better evaluate the economic implications of such costs. The annual "Survey of Pollution Abatement Costs and Expenditures" provides this information.

We require this report only for plant(s) for which you received an addressed form. Please read the general instructions carefully, particularly if more than one establishment of your company used the same pollution abatement facilities. If actual records are not available, carefully prepared estimates are acceptable.

The law (Title 13, United States Code, Sections 182, 224, and 225) requires response to this inquiry. By Section 9 of the same law, your report to the Census Bureau is confidential. Only sworn Census Bureau employees will see the information reported and will use it only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Your cooperation in returning the completed form by May 1 will help to make possible the timely release of the survey results. If you need additional time to complete the report or need additional forms, call (812) 288-3331. If you have any questions, call the Special Surveys Branch of our Industry Division on (301) 763-1755. Your Census Bureau appreciates your help.

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## 1992 SURVEY OF POLLUTION ABATEMENT COSTS AND EXPENDITURES

PLEASE COMPLETE THIS WORKBOOK. COPY THE ANSWERS TO THE ATTACHED ANSWER SHEET IN THE BACK OF THE BOOKLET. RETURN ONLY THE ANSWER SHEET.

### SUBJECT and PURPOSE

This survey collects new capital expenditures and annual operating expenses for pollution abatement in manufacturing. It also covers cost offsets for reclaiming valuable materials or energy as a result of pollution abatement efforts.

***Pollution abatement is for the purpose of reducing or eliminating unwanted emissions or wastes that are created by the production process and harmful to the environment or the removal of pollution created by prior years production. For this survey, only expenditures with the primary purpose of protecting the environment are included.*** This survey does not collect expenditures intended to meet worker safety and health requirements. It also does not include expenditures that abate pollution when the primary purpose is to increase profits or cut costs, and the environmental protection is a side benefit.

The ***results of the survey*** are mainly used by the Bureau of Economic Analysis to incorporate pollution abatement expenditures into the national income and product accounts and by the Environmental Protection Agency to monitor the economic impact of environmental programs. Other data users include: other Federal agencies, state and local governments, trade associations, manufacturers, marketing and research companies, universities, financial institutions, and environmental reporters.

### AUTHORITY and CONFIDENTIALITY

Response to this inquiry is ***required by law*** (Title 13, U.S. Code). By Section 9, of Title 13, U.S. Code, your report to the Census Bureau is ***confidential***. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. The data can not be used for regulation or enforcement. Copies of your report retained in your files are ***immune from legal process***.

### HOW TO REPORT

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

All respondents should complete Item 1, ***Operational Status***. Review Section B on page 6, ***Screening for Pollution Abatement Costs and Expenditures***. Complete Item 2, ***Total Pollution Abatement Costs and Expenditures***, and follow Item 2 instructions.

This booklet contains general definitions and specific instructions for each item. Each item's instructions include a guide listing examples of expenditures. In most cases these lists will provide sufficient information for completing this survey form.

For further details or definitions, see the following acts:

Clean Air Act and Amendments  
Clean Water Act and Amendments  
Resource Conservation and Recovery Act and Amendments  
Pollution Prevention Act of 1990  
Comprehensive Environmental Responses, Compensation, and Liability Act  
Superfund Amendments and Reauthorization Act  
Noise Pollution Control Act

For copies of these laws write:

U.S. House of Representatives  
Document Room  
Ford Building, Room B18  
Washington, DC 20515-6622

This survey is directed to manufacturing operations. The information requested supplements the data collected in the annual survey of manufactures. If you think that you are **not a manufacturing operation**, call our analysts at (301) 763-1755 for instructions.

If you have **questions** or **suggestions** regarding this report, please call the Special Surveys Branch on (301) 763-1755. Please refer to the Census Bureau file number (the 11-digit number above the plant name in the address box) when calling or in written correspondence.

#### **DUE DATE**

Detach the answer sheet and return it by **May 1** in the enclosed prepaid envelope to:

Bureau of the Census  
1201 East 10th Street  
Jeffersonville, IN 47132-0001

#### **DO NOT RETURN THIS WORKBOOK.**

If you need **additional time** to complete the report, or if you need a **duplicate workbook** or answer sheet, please call our Jeffersonville office at **(812) 288-3331**.

#### **RESPONSE TIME**

Public reporting burden for this collection of information is estimated to vary from 45 minutes to 35 hours per form (with an average of 2-1/2 hours), including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send **comments** regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Associate Director for Management Services, Paperwork Reduction Project (0607-0176), Room 2027, FB 3, Bureau of the Census, Washington, DC 20233-0001; and to the Office of Management and Budget, Paperwork Reduction Project (0607-0176), Washington, DC 20503.

#### **ELECTRONIC REPORTING**

For **information** concerning the possible use of reporting formats other than the form provided, such as computer tape or printouts, contact our Special Surveys Branch on (301) 763-1755.

#### **PUBLICATION OF RESULTS OF THIS SURVEY**

Industry estimates are published in the Current Industrial Report, Pollution Abatement Costs and Expenditures, MA-200. Companies reporting in this survey may obtain a copy of this publication without charge by marking the check box on the answer sheet for a copy of the **MA-200 publication**. You also may request a copy without charge by writing to the Bureau of the Census, Industry Division, Federal Office Building 4, Room 2105, Washington, DC 20233-0001.

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**SECTION A - OPERATIONAL STATUS**

**ITEM 1 - OPERATIONAL STATUS**

Check *one box* which best describes this establishment on December 31 *of the survey year*.

**IN OPERATION** If you owned the plant for the entire year, **CONTINUE WITH SECTION B.**  
If you owned the plant (possessed the book records) for less than the entire survey year, indicate the month purchased:

Month 

--	--

 and **CONTINUE WITH SECTION B.**

**TEMPORARILY IDLE** If the plant was idle for part or all of the survey year, **CONTINUE WITH SECTION B.**

**PERMANENTLY CEASED OPERATIONS, NOT YET SOLD OR DISMANTLED** **CONTINUE WITH SECTION B.**

**DISMANTLED** Check this box on the answer sheet. **COMPLETE ITEM 13** of the answer sheet and return it.

**SOLD** Complete the following information on the answer sheet. If the book records were relinquished in the sale, **COMPLETE ITEM 13** and return it. If you retain the book records, **CONTINUE WITH SECTION B.**

**Date sold:** Month 

--	--

 Year 

--	--	--	--

**Sold to:**

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ ZIP \_\_\_\_\_

Employer Identification 

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*Failure to return the answer sheet will require the issuance of letters and duplicate forms. Save tax dollars by sending your response in on time.*



**SECTION B - SCREENING FOR POLLUTION ABATEMENT COSTS AND EXPENDITURES**

This survey collects the following types of expenditures for pollution abatement and environmental protection:

1. Capital expenditures for pollution abatement structures or equipment added to the production process, **and** for structures and equipment with built-in pollution abatement features to reduce generation of air pollutants, water pollutants, or solid/contained wastes.
2. Operating expenses for operating pollution abatement equipment; for removal or disposal of pollutants including **trash removal or sewage service**; for testing and monitoring of emissions or wastes; for pollution abatement audits, reports, studies, or operating procedures development.
3. Costs and expenditures for cleaning up contaminants from the site.
4. Costs and expenditures for other environmental protection such as expenditures to reduce noise pollution, radiation, or multimedia expenses.

**Note:** Some common pollution abatement expenses are for the removal of garbage, paints, discarded cans, used oils, and inks resulting from the production process.

**ITEM 2 - TOTAL POLLUTION ABATEMENT COSTS AND EXPENDITURES**

Check **all** appropriate boxes to indicate the types of pollution abatement expenditures at this location and proceed as instructed.

- No** operating expenses or capital expenditures for pollution abatement
- Costs either included in rent or not charged. All pollution abatement expenses were included in rent, taxes, lease agreement, **or** waste removal at no charge (such as a scavenger service)
- Pollution abatement operating expenses and capital expenditures **each** were less than \$500 but greater than zero

Check this box on the answer sheet. Complete **ITEM 13** of the answer sheet and return it.

- Annual pollution abatement operating expenses exceeding \$500 Complete **Section D**
- Capital expenditures exceeding \$500 for pollution abatement structures or equipment, or for structures or equipment with built-in pollution abatement features Complete **Section E**
- Costs and expenditures exceeding \$500 for site cleanup Complete **Section F**
- OTHER** environmental protection costs and expenditures exceeding \$500 Complete **Section G**

Read **Section C**, General Definitions, first.

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## SECTION C - GENERAL DEFINITIONS

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### GENERAL INSTRUCTIONS

**Answer all questions.** If you cannot answer a question from your plant records, please estimate the answer carefully. In some cases, identification of pollution abatement expenditures may require the joint efforts of your establishment's financial and engineering staff. Report all value figures in thousands of dollars. Report data for the calendar year. If calendar year book figures are not available except at considerable cost, reasonable estimates are acceptable. If your fiscal year ends between October 31 and February 28, fiscal year figures are acceptable.

### MEDIA

**Air pollutants** are harmful or objectionable airborne substances. They include particulates, (dust, fly ash, smoke), sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons, volatile organic compounds, lead, hazardous air pollutants, and other air pollutants.

**Water pollutants** are harmful or objectionable waterborne substances. They include conventional pollutants, nonconventional pollutants, toxic metals/toxic inorganic compounds, and toxic organic compounds.

**Solid/contained waste** is harmful or objectionable solids or contained liquids. It includes garbage, sewage sludge, dredged spoils, incinerator residue, wrecked or discarded equipment, and hazardous waste. Include solid/contained waste produced as a result of air and water pollution abatement.

### TECHNIQUES FOR POLLUTION ABATEMENT

**Treatment** refers to the wide variety of techniques used on wastes to cool, detoxify, decompose, and separate-to-store or ameliorate.

**Collection/Disposal** refers to the collection, storage, transport, processing, and disposal of solid waste by incineration, sanitary or other landfill methods, and disposing in authorized areas.

**Waste minimization** is any practice which prevents, reduces, eliminates, or recovers and reuses emissions or wastes so as to avoid treatment or collection/disposal. Waste minimization includes source reduction and recycling.

**Source reduction** is any practice which prevents or reduces the amount of emissions or waste generated for recycling, treatment, or collection/disposal. This can be accomplished by equipment/technology changes, process procedure modifications, product reformulation/redesign, raw material substitutions (including improved catalysts and reuse of waste or water), and improvements in housekeeping, maintenance, training, or inventory control.

**Recycling** is a method of waste management in which waste is recovered and reused for its material or energy values. The waste can be reused in the production process or sold to an outside party as material. We are including the burning of flammable wastes for energy recovery as recycling. Closed loop recovery systems are recycling.

### HAZARDOUS POLLUTANTS

**Hazardous air pollutants** are those regulated under Section 112 of the Clean Air Act. Examples include arsenic, benzene, beryllium, mercury, and vinyl chloride.

**Hazardous water pollutants** are toxic metals/toxic inorganic compounds, and toxic organic compounds as listed by the Clean Water Act. Examples of toxic metals and inorganic compounds include antimony, arsenic, asbestos, beryllium, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, thallium, and zinc. Examples of toxic organic compounds are benzene, chloroethane, toluene, and zylene.

**Hazardous solid/contained wastes** are listed under Subtitle D of the Resource Conservation and Recovery Act.

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**SECTION D – ANNUAL OPERATING EXPENSES AND COST OFFSETS FOR POLLUTION ABATEMENT**

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**GUIDE FOR ITEMS 3-5**

The following list describes the types of expenses to report in this section. The list is intended to be a guide and is not complete.

***Include operating expenses for:***

- private contractor collection/disposal of waste created by the production process
- sewage or solid/contained waste collection/disposal paid to Federal, State, or local governments (Report only in Item 5.)
- handling, treatment, or disposal of wastes created by the production process
- testing and monitoring of emissions or wastes
- operating and maintaining pollution abatement equipment
- fuel and power costs for operating pollution abatement equipment
- incremental costs for consumption of environmentally preferable materials and fuels
- conducting environmental studies for development or expansion
- parts for pollution abatement equipment replacement and repair
- leasing of pollution abatement equipment
- compliance and environmental auditing
- salaries and wages for time spent completing environmental reporting requirements
- developing pollution abatement operating procedures

***Exclude operating expenses for:***

- collection/disposal of office and cafeteria trash (If you cannot separate from industrial, report the entire amount.)
- health, safety, environmental aesthetics, or employee comfort (OSHA)
- research and development services
- manufacture of pollution abatement equipment
- taxes, fines, permits, legal fees, superfund taxes and contributions
- interest for financing pollution abatement capital expenditures

**SECTION E - NEW CAPITAL EXPENDITURES FOR ABATEMENT OF POLLUTANTS**

**GUIDE FOR ITEMS 7-9**

**New capital expenditures for pollution abatement** are all outlays during the year for pollution abatement structures and equipment that are chargeable to fixed asset accounts, and for which depreciation or amortization reserves (accounts) are maintained. Report only those capital outlays actually made during the year, not the final value of equipment put in place or the building completed during the year. If leasing arrangements meet Financial Accounting Standards Board criteria, please report the original cost or market value of the structure or equipment as a new capital expenditure. **Do not report total capital expenditures.** Total capital expenditures are reported on your annual survey of manufacturers (ASM). Report only the portions of capital expenditures that are for pollution abatement as defined by this survey.

Pollution abatement structures and equipment are of two types: **end-of-line** and **production process**.

**End-of-line** structures or equipment reduce pollutants after their generation. These are separately identifiable (retrofit) treatment facilities that are installed exclusively for the purpose of abating pollutant emissions or wastes. Report the entire end-of-line expenditure.

**Production process** enhancements (or replacements, additions, or alterations) reduce or eliminate the generation of pollutants by converting processes and equipment to enable waste minimization (source reduction or recycling), or to enable additional uses of water prior to discharge. Report the pollution abatement portion of the installed cost of enhancement projects intended for environmental protection. Estimate the pollution abatement portion as the extra cost of pollution abatement features in structures and equipment (i.e., your actual spending less what you would have spent without the pollution abatement features built-in.)

**Special instructions:** Estimating the pollution abatement portion (distinct from production efficiency, energy conservation, employee safety, etc.) of a process enhancement may not be feasible in all cases. For these cases, report in this manner: Do **not** include any of the project cost **unless** the primary purpose is environmental protection. If the primary purpose of the project is environmental protection, report the whole production process enhancement project expenditure. Indicate in the remarks section that this is the case. **Caution:** A project with the primary purpose of improving production efficiency may include pollution abatement features added to meet legal requirements. Since the primary purpose of such a project is still not environmental protection, do not report **any** of the production process enhancement.

Examples of Pollution Abatement Capital

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line Structures and Equipment	dust collectors, scrubbers, precipitators	trickling filters, settling ponds, clarifiers, spill containment dikes	cardboard balers, compactors, bins, improved containments for waste
Production Process Enhancements	conversion to substitute fuels that generate fewer pollutants	conversion to a closed or partially closed loop system for pollution abatement	conversion to enable recycling scrap materials, converting piping for greater pollution prevention

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The following list further describes the capital expenditures to report in this section. The list is intended to be a guide and is not complete.

**Include new capital expenditures for:**

- end-of-line structures or equipment: new, replacement, and/or expansion, intended for environmental protection
- the pollution abatement **portion of** production process enhancements intended for environmental protection
- construction in progress intended for environmental protection
- waste storage facilities (Report tanks in Item 9.)

**Exclude new capital expenditures for:**

- pollution abatement end-of-line structures or equipment, or production process enhancements intended to maximize efficiency or profit
- research and development
- health, safety, environmental aesthetics or employee comfort (OSHA)
- recycling equipment if your primary product is recycling, that is, you are a recycling plant
- motor vehicles with pollution abatement devices
- production of pollution abatement equipment that is your primary product, that is, you are a pollution abatement equipment manufacturer
- projects undertaken exclusively for the purpose of insuring adequate water supply for production

**ITEM 7 - NEW CAPITAL EXPENDITURES FOR POLLUTION ABATEMENT BY MEDIA**

For each media, report your pollution abatement end-of-line structures and equipment expenditures; the pollution abatement **portion** of your spending for production process enhancements; and the total of your end-of-line and your production process responses. Report the percentage of each total by media, except air, which is directed to hazardous pollutants. (Item 8 asks for the percentage for air.)

**Exclude tanks from ITEM 7. Report capital expenditures for installation of safeguards or replacement of inferior underground storage tank systems in ITEM 9. Capital expenditures for other tank systems are not collected on this survey.**

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line	\$ , ,000	\$ , ,000	\$ , ,000
Production Process (pollution abatement portion)	\$ , ,000	\$ , ,000	\$ , ,000
<b>Total by Media</b>	\$ , ,000	\$ , ,000	\$ , ,000
<b>Percent Hazardous</b>	See Item 8.	.0%	.0%

**ITEM 8 - TYPE OF AIR POLLUTANTS**

Report the percentage of new capital expenditures for air pollution abatement from Item 7 by the type of pollutant the structure or equipment will abate. For example, if expenditures are intended to abate hazardous air pollutants and sulfur oxides equally, report 50% on the hazardous air pollutant line and 50% on the particulates, sulfur oxides etc. line.

a. Hazardous air pollutants	.0%	
b. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons - volatile organic compounds, and lead	.0%	
c. Other nonhazardous air pollutants	.0%	
<b>d. Total</b>	<b>100</b>	<b>.0%</b>

**ITEM 9 - NEW CAPITAL EXPENDITURES FOR UNDERGROUND STORAGE TANKS**

Report new capital expenditures for *underground storage tanks*.

**Include expenditures for:**

- installation of safeguards for existing underground tanks
- replacement of inferior or leaking underground storage tanks
- removal of inferior or leaking underground storage tanks

New capital expenditures for underground storage tanks	\$ , ,000
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**SECTION F – COSTS AND EXPENDITURES FOR SITE CLEANUP**


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**GUIDE FOR ITEM 10**

**Site cleanup** is the abatement of pollutant contamination from leaks, spills, past production processes, or at a former disposal site (Superfund). The pollution must be on the site of the establishment named on this survey form or from your plant's production process. Site cleanup is not reported by media. The following list describes the types of expenditures to report in this section. The list is intended to be a guide and is not complete.

**Include costs and expenditures for:**

- privately-paid site cleanup
- testing and monitoring
- compliance and environmental auditing
- environmental studies
- groundwater contamination cleanup
- reclamation for pollution abatement

**Exclude costs and expenditures for:**

- government-paid site cleanup
- taxes, fines, permits, legal fees such as for settling liability and other issues, superfund taxes and contributions
- interest for financing pollution abatement capital expenditures
- reclamation to enhance property values or for aesthetics

**▶ ITEM 10 – COSTS AND EXPENDITURES FOR SITE CLEANUP**

Annual operating expenses for site cleanup	\$ , ,000
New capital expenditures for site cleanup	\$ , ,000

**SECTION G - COSTS AND EXPENDITURES FOR ABATEMENT OF OTHER POLLUTANTS**

**GUIDE FOR ITEMS 11-12**

**OTHER** pollution abatement costs and expenditures cover pollution emissions or wastes that can not be reasonably allocated by media. Media are defined in Section C on page 7.

**Include costs and expenditures for:**

- noise pollution control that would otherwise disturb the surrounding community
- protection against radiation that would otherwise reach the surrounding environment
- multimedia expenses, that is, expenses that can not be allocated to one particular media (such as administrative costs for an on-site environmental office or lab)

▶ **ITEM 11 - COST AND EXPENDITURES FOR OTHER POLLUTANTS**

Annual operating expenses for OTHER pollution abatement	\$ , ,000
New capital expenditures for OTHER pollution abatement	\$ , ,000

▶ **ITEM 12 - TYPE OF OTHER POLLUTANTS**

Check the type(s) of pollutants abated by the expenditures reported in ITEM 11.

- Noise pollution that would otherwise disturb the surrounding community
- Radiation that would otherwise reach the surrounding environment
- Multimedia expenses
- Other pollutants within the scope of this survey but not reported elsewhere on this form.  
*Please specify in remarks.*

**SECTION H - CERTIFICATION**

▶ **ITEM 13 - CERTIFICATION** - Certify the answer sheet. For this workbook, record the name of the person who can clarify the data reported in this year's survey.

Name of person to contact regarding this report ( <i>Print or type</i> )	Telephone		
	Area code	Number	Extension



**ITEM 2 - TOTAL POLLUTION ABATEMENT EXPENDITURES**

- 211  **No** operating expenses or capital expenditures for pollution abatement Complete **ITEM 13** and return the answer sheet.
- 212  Costs either included in rent or not charged. All pollution abatement expenses were included in rent, taxes, lease agreement, **or** waste removal at no charge (such as a scavenger service)
- 213  Pollution abatement operating expenses and capital expenditures **each** were less than \$500 but greater than zero
- 214  Annual pollution abatement operating expenses exceeding \$500 Complete **Section D**
- 215  Capital expenditures exceeding \$500 for pollution abatement structures or equipment, or for structures or equipment with built-in pollution abatement features Complete **Section E**
- 216  Costs and expenditures exceeding \$500 for site cleanup Complete **Section F**
- 217  OTHER environmental protection costs and expenditures exceeding \$500 Complete **Section G**

**ITEM 3 - OPERATING EXPENSES FOR POLLUTION ABATEMENT EXCEPT PAYMENTS TO GOVERNMENT**

Expense Category	Media		
	Air	Water	Solid/Contained Waste
a. Depreciation	301 \$ , , ,000 \$	311 \$ , , ,000 \$	321 \$ , , ,000 \$
b. Salaries & Wages	302 \$ , , ,000 \$	312 \$ , , ,000 \$	322 \$ , , ,000 \$
c. Fuel & Electricity	303 \$ , , ,000 \$	313 \$ , , ,000 \$	323 \$ , , ,000 \$
d. Contract Work	304 \$ , , ,000 \$	314 \$ , , ,000 \$	324 \$ , , ,000 \$
e. Materials, Leasing, Miscellaneous	305 \$ , , ,000 \$	315 \$ , , ,000 \$	325 \$ , , ,000 \$
f. Total	306 \$ , , ,000 \$	316 \$ , , ,000 \$	326 \$ , , ,000 \$

**ITEM 4 - OPERATING EXPENSES FOR HAZARDOUS POLLUTANTS**

Percent Hazardous	Media		
	Air	Water	Solid/Contained Waste
401 .0%	411 .0%	421 .0%	421 .0%

**ITEM 5 -- PAYMENTS TO GOVERNMENTS FOR POLLUTION REMOVAL**

Payments to government for:		
a. Sewage Services		501
	\$	, , ,000
b. Solid/Contained Waste Collection/Disposal		502
	\$	, , ,000
c. Total		503
	\$	, , ,000

**ITEM 6 -- POLLUTION ABATEMENT COST OFFSETS**

Air (a)	Water (b)	Solid/Contained Waste (c)	Total
601	611	621	631
\$ , , ,000	\$ , , ,000	\$ , , ,000	\$ , , ,000

**ITEM 7 -- NEW CAPITAL EXPENDITURES FOR POLLUTION ABATEMENT BY MEDIA**

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line	701	711	721
	\$ , , ,000	\$ , , ,000	\$ , , ,000
Production Process (pollution abatement portion)	702	712	722
	\$ , , ,000	\$ , , ,000	\$ , , ,000
<b>Total by Media</b>	703	713	723
<b>Percent Hazardous</b>	See Item 8.	714	724
		.0%	.0%

**ITEM 8 -- TYPE OF AIR POLLUTANTS**

a. Hazardous air pollutants	801	.0%
b. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons -- volatile organic compounds, and lead	802	.0%
c. Other nonhazardous air pollutants	803	.0%
<b>d. Total</b>	<b>100</b>	<b>.0%</b>

**ITEM 9 - NEW CAPITAL EXPENDITURES FOR UNDERGROUND STORAGE TANKS**

New capital expenditures for underground storage tanks	901 \$	,000
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**ITEM 10 - COSTS AND EXPENDITURES FOR SITE CLEANUP**

Annual operating expenses for site cleanup	101 \$	,000
New capital expenditures for site cleanup	102 \$	,000

**ITEM 11 - COSTS AND EXPENDITURES FOR ABATEMENT OF OTHER POLLUTANTS**

Annual operating costs for OTHER pollution abatement	111 \$	,000
New capital expenditures for OTHER pollution abatement	112 \$	,000

**ITEM 12 - TYPE OF OTHER POLLUTANTS**

- 121  Noise pollution that would otherwise disturb the surrounding community
- 122  Radiation that would otherwise reach the surrounding environment
- 123  Multimedia expenses
- 124  Other pollutants within the scope of this survey but not reported elsewhere on this form.  
*Please specify in remarks.*

**ITEM 13 - CERTIFICATION -**

This report is substantially accurate and has been prepared in accordance with instructions.

Remarks

Name of person to contact regarding this report ( <i>Print or type</i> )	132 Telephone		
	Area code	Number	Extension
Signature of authorized person	Month	Day	Year

133 Check here, if you would like a copy of the MA-200 publication without charge.

**RETURN THIS ANSWER SHEET TO OUR JEFFERSONVILLE OFFICE.**

**THE WORKBOOK IS FOR YOUR RECORDS.**

**THANK-YOU FOR YOUR COOPERATION.**

# 1992 SURVEY OF POLLUTION ABATEMENT COSTS AND EXPENDITURES

PLEASE COMPLETE THE WORKBOOK.  
**TEAR ALONG PERFORATION AND COPY THE ANSWERS  
TO THIS ANSWER SHEET.**  
RETURN ONLY THE ANSWER SHEET.

## ITEM 1 - OPERATIONAL STATUS

Check **one** box which best describes this establishment on December 31 of the survey year.

Month

011  IN OPERATION

012  TEMPORARILY  
IDLE

013  PERMANENTLY CEASED  
OPERATIONS, NOT YET SOLD  
OR DISMANTLED

014  DISMANTLED

015  SOLD

Year

Month

Date sold:

Sold to:

021 Name \_\_\_\_\_

022 Street \_\_\_\_\_

023 City \_\_\_\_\_

024 State \_\_\_\_\_ 026 ZIP \_\_\_\_\_

Employer  
025 Identification

(1)  
TEAR ALONG PERFORATION

**THIS IS A WORKBOOK WITH A DETACHABLE ANSWER SHEET FOR THE SURVEY OF POLLUTION ABATEMENT COSTS AND EXPENDITURES.**

**PLEASE TRANSFER ALL ANSWERS TO THE ANSWER SHEET.**

**COMPLETE ITEM 13, CERTIFICATION,  
AND RETURN ONLY THE ANSWER SHEET  
IN THE ENCLOSED ENVELOPE  
TO OUR JEFFERSONVILLE OFFICE.**

**THIS WORKBOOK IS FOR YOUR RECORDS.**

**THANK-YOU FOR YOUR COOPERATION.**

**PLEASE TURN THIS BOOKLET OVER AND BEGIN THE SURVEY WITH THE LETTER.**



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Bureau of the Census**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

**PA-2**  
**(1-93)**

OMB No. 0607-0176:  
Approval Expires 09/30/95

**FROM THE DIRECTOR**  
**BUREAU OF THE CENSUS**

Industrial firms are devoting a significant share of their resources for pollution abatement. Consequently, it is important that accurate and timely statistics be available on a broad national basis so that business, Government, and the general public can better evaluate the economic implications of such costs. The annual "Plant and Equipment Survey Supplement for Pollution Abatement" provides this information.

This report covers the operations of the company identified in the address box. Please read the general instructions carefully. If actual records are not available, carefully prepared estimates are acceptable.

The law (Title 13, United States Code, Sections 182, 224, and 225) requires response to this inquiry. By Section 9 of the same law, your report to the Census Bureau is confidential. Only sworn Census Bureau employees will see the information reported and will use it only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Your cooperation in returning the completed form by May 1 will help to make possible the timely release of the survey results. If you need additional time to complete the report, require additional forms, or if you have any questions, call the Special Surveys Branch of our Industry Division on (301) 763-1755. Your Census Bureau appreciates your help.

**1992  
PLANT AND EQUIPMENT SURVEY  
SUPPLEMENT FOR POLLUTION ABATEMENT**

PLEASE COMPLETE THIS WORKBOOK. COPY THE  
ANSWERS TO THE ATTACHED ANSWER SHEET IN THE BACK  
OF THE BOOKLET. RETURN ONLY THE ANSWER SHEET.

**SUBJECT and PURPOSE**

This survey collects total new capital expenditures and pollution abatement new capital expenditures.

*Pollution abatement is for the purpose of reducing or eliminating unwanted emissions or wastes that are harmful to the environment or the removal of pollution created by prior years activities. For this survey, only expenditures which have the primary purpose of protecting the environment are included.* This survey does not collect expenditures intended to meet worker safety and health requirements. It also does not include expenditures that abate pollution when the primary purpose is to increase profits or cut costs, and the environmental protection is a side benefit.

The **results of the survey** are mainly used by the Bureau of Economic Analysis in the environmental accounts that assess the effect of pollution control programs on investment and overall economic performance. Other data users include: other Federal agencies, state and local governments, trade associations, manufacturers, marketing and research companies, universities, financial institutions, and environmental reporters.

**AUTHORITY and CONFIDENTIALITY**

Response to this inquiry is **required by law** (Title 13, U.S. Code). By Section 9 of Title 13, U.S. Code, your report to the Census Bureau is **confidential**. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. The data can not be used for regulation or enforcement. Copies of your report retained in your files are **immune from legal process**.

**HOW TO REPORT**

Report for all operations, including active and inactive sites, of the company named in the address box on the answer sheet. All respondents should complete Item 1, **Operational Status**. Review Section B on page 7, **Screening for Pollution Abatement New Capital Expenditures**. Complete Item 2, **Total New Capital Expenditures and Pollution Abatement New Capital Expenditures**, and follow Item 2 instructions.

This booklet contains general definitions and specific instructions for each item. Each item's instructions include a guide listing examples of expenditures. In most cases these lists will provide sufficient information for completing this survey form.

For further details or definitions, see the following acts:

- Clean Air Act and Amendments
- Clean Water Act and Amendments
- Resource Conservation and Recovery Act and Amendments
- Pollution Prevention Act of 1990
- Comprehensive Environmental Responses, Compensation, and Liability Act
- Superfund Amendments and Reauthorization Act
- Noise Pollution Control Act

For copies of these laws write:

U.S. House of Representatives  
Document Room  
Ford Building, Room B18  
Washington, DC 20515-6622

If you have **questions** or **suggestions** regarding this report, please call the Special Surveys Branch on (301) 763-1755.

Please refer to the identification number (the 10-digit number above the company name in the address box) in calls or correspondence.

#### **DUE DATE**

Detach the answer sheet and return it by **May 1** in the enclosed prepaid envelope to:

Bureau of the Census  
Industry Division  
FOB 4 Room 2105  
Washington, DC 20233-0001

#### **DO NOT RETURN THIS WORKBOOK.**

If you need **additional time** to complete the report, or if you need a **duplicate workbook** or answer sheet, please call our Special Surveys Branch on (301) 763-1755.

#### **RESPONSE TIME**

Public reporting burden for this collection of information is estimated to vary from 45 minutes to 60 hours per form (with an average of 2-1/2 hours), including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Associate Director for Management Services, Paperwork Reduction Project (0607-0176), Room 2027, FB 3, Bureau of the Census, Washington, DC 20233-0001; and to the Office of Management and Budget, Paperwork Reduction Project (0607-0176), Washington, DC 20503.

#### **ELECTRONIC REPORTING**

For **information** concerning the possible use of reporting formats other than the form provided, such as computer tape or printouts, contact our Special Surveys Branch on (301) 763-1755.

#### **PUBLICATION OF RESULTS OF THIS SURVEY**

Industry estimates will be published in the Current Industrial Report, Pollution Abatement Costs and Expenditures, MA-200. Companies reporting in this survey may obtain a copy of this publication without charge by marking the check box on the answer sheet for a copy of the **MA-200 publication** without charge. You also may request a copy by writing to the Bureau of the Census, Industry Division, Federal Office Building 4, Room 2105, Washington, DC 20233-0001.



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**SECTION A - OPERATIONAL STATUS**

**ITEM 1 - OPERATIONAL STATUS**

Check the **one box** that best describes the company as a whole on December 31 of the survey year.

**In operation** on December 31 of the survey year.

**No longer in operation** on December 31 of the survey year.  
Give date operations ceased:

Month

Year

**Change of ownership.** Give date of change and ownership information:

Month

Year

New Owner \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_

**CONTINUE WITH SECTION B.**

*Failure to return the answer sheet will require the issuance of letters and duplicate forms.  
Save tax dollars by sending your response in on time.*

**SECTION A - OPERATIONAL STATUS**

**ITEM 1 - OPERATIONAL STATUS**

Check the **one box** that best describes the company as a whole on December 31 of the survey year.

**In operation** on December 31 of the survey year.

**No longer in operation** on December 31 of the survey year.  
Give date operations ceased:

Month  |

Year  |  |  |

**Change of ownership.** Give date of change and ownership information:

Month  |

Year  |  |  |

New Owner \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_

**CONTINUE WITH SECTION B.**

Failure to return the answer sheet will require the issuance of letters and duplicate forms. Save tax dollars by sending your response in on time.

**SECTION B - SCREENING FOR POLLUTION ABATEMENT NEW CAPITAL EXPENDITURES**

This survey collects total new capital expenditures and the following types of new capital expenditures for pollution abatement and environmental protection:

- 1. New capital expenditures for pollution abatement structures or equipment added to the production process, **and** structures and equipment with built-in pollution abatement features to reduce generation of air pollutants, water pollutants, or solid/contained waste.
- 2. New capital expenditures for cleaning up contaminants from the site.
- 3. New capital expenditures for other environmental protection such as expenditures to reduce noise pollution, radiation, or multimedia expenditures.

**ITEM 2 - TOTAL NEW CAPITAL EXPENDITURES AND POLLUTION ABATEMENT NEW CAPITAL EXPENDITURES**

Check **all** appropriate boxes to indicate new capital expenditures and the types of pollution abatement new capital expenditures for this company and proceed as instructed.

Total new capital expenditures for all purposes . . . . . Complete **Section D**

**No** pollution abatement new capital expenditures . . . . .

Pollution abatement new capital expenditures less than \$500 but greater than zero . . . . .

Check this box on the answer sheet. Complete **ITEM 10** of the answer sheet and return it.

Capital expenditures exceeding \$500 for pollution abatement structures or equipment, or for structures or equipment with built-in pollution abatement features . . . Complete **Section E**

New capital expenditures exceeding \$500 for site cleanup . . . . .

OTHER environmental protection new capital expenditures exceeding \$500 . . . . . Complete **Section G**

Read **Section C**, General Definitions, first.

---

**SECTION C - GENERAL DEFINITIONS**

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**GENERAL INSTRUCTIONS**

**Answer all questions.** If you can not answer a question from your company records, please estimate the answer carefully. In some cases, identification of pollution abatement new capital expenditures may require the joint efforts of your company's financial and engineering staff. Report all value figures in thousands of dollars. If the answer is zero, please report zero. Report data for the calendar year. If calendar year book figures are not available except at considerable cost, reasonable estimates are acceptable. If your fiscal year ends between October 31 and February 28, fiscal year figures are acceptable.

**MEDIA**

**Air pollutants** are harmful or objectionable airborne substances. They include particulates, (dust, fly ash, smoke), sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons, volatile organic compounds, lead, hazardous air pollutants, and other air pollutants.

**Water pollutants** are harmful or objectionable waterborne substances. They include conventional pollutants, nonconventional pollutants, toxic metals/toxic inorganic compounds, and toxic organic compounds.

**Solid/contained waste** is harmful or objectionable solids or contained liquids. It includes garbage, sewage sludge, dredged spoils, incinerator residue, wrecked or discarded equipment, and hazardous waste. Include solid/contained waste produced as a result of air and water pollution abatement.

**TECHNIQUES FOR POLLUTION ABATEMENT**

**Treatment** refers to the wide variety of techniques used on wastes to cool, detoxify, decompose, and separate-to-store or ameliorate.

**Collection/Disposal** refers to the collection, storage, transport, processing, and disposal of solid waste by incineration, sanitary or other landfill methods, and disposing in authorized areas.

**Waste minimization** is any practice which prevents, reduces, eliminates, or recovers and reuses emissions or wastes so as to avoid treatment or collection/disposal. Waste minimization includes source reduction and recycling.

**Source reduction** is any practice which prevents or reduces the amount of emissions or waste generated for recycling, treatment, or collection/disposal. This can be accomplished by equipment/technology changes, process procedure modifications, product reformulation/redesign, raw material substitutions (including improved catalysts and reuse of waste or water), and improvements in housekeeping, maintenance, training, or inventory control.

**Recycling** is a method of waste management in which waste is recovered and reused for its material or energy values. The waste can be reused in the production process or sold to an outside party as material. We are including the burning of flammable wastes for energy recovery as recycling. Closed loop recovery systems are recycling.

**HAZARDOUS POLLUTANTS**

**Hazardous air pollutants** are those regulated under Section 112 of the Clean Air Act. Examples include arsenic, benzene, beryllium, mercury, and vinyl chloride.

**Hazardous water pollutants** are toxic metals/toxic inorganic compounds, and toxic organic compounds as listed by the Clean Water Act. Examples of toxic metals and inorganic compounds include antimony, arsenic, asbestos, beryllium, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, thallium, and zinc. Examples of toxic organic compounds are benzene, chlorethane, toluene, and zylene.

**Hazardous solid/contained wastes** are listed under Subtitle D of the Resource Conservation and Recovery Act.

**SECTION C - GENERAL DEFINITIONS****GENERAL INSTRUCTIONS**

**Answer all questions.** If you can not answer a question from your company records, please estimate the answer carefully. In some cases, identification of pollution abatement new capital expenditures may require the joint efforts of your company's financial and engineering staff. Report all value figures in thousands of dollars. If the answer is zero, please report zero. Report data for the calendar year. If calendar year book figures are not available except at considerable cost, reasonable estimates are acceptable. If your fiscal year ends between October 31 and February 28, fiscal year figures are acceptable.

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**Hazardous solid/contained wastes** are listed under Subtitle D of the Resource Conservation and Recovery Act.

**SECTION D - TOTAL NEW CAPITAL EXPENDITURES****GUIDE FOR ITEM 3**

**New capital expenditures** are all outlays during the year for new structures and equipment that are chargeable to fixed asset accounts, and for which depreciation or amortization reserves (accounts) are maintained. Purchases of used structures and equipment are not new capital expenditures. Report only those capital outlays actually made during the year, not the final value of equipment put in place or the building completed during the year.

**ITEM 3 - TOTAL NEW CAPITAL EXPENDITURES**

This number is available on your **PE-4** or **PE-5** Plant and Equipment Survey.

Total new capital expenditures	\$	,	,	,000
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**SECTION E - NEW CAPITAL EXPENDITURES FOR ABATEMENT OF POLLUTANTS**

**GUIDE FOR ITEMS 4-6**

Pollution abatement new capital expenditures for structures and equipment are of two types: **end-of-line** and **production process**.

**End-of-line** structures or equipment reduce pollutants after their generation. These are separately identifiable (retrofit) treatment facilities that are installed exclusively for the purpose of abating pollutant emissions or wastes. Report the entire end-of-line expenditure.

**Production process** enhancements (or replacements, additions, or alterations) reduce or eliminate the generation of pollutants by converting processes and equipment to enable waste minimization (source reduction or recycling), or to enable additional uses of water prior to discharge. Report the pollution abatement portion of the installed cost of enhancement projects intended for environmental protection. Estimate the pollution abatement portion as the extra cost of pollution abatement features in structures and equipment (i.e., your actual spending less what you would have spent without the pollution abatement features built-in.)

**Special instructions:** Estimating the pollution abatement portion (distinct from production efficiency, energy conservation, employee safety, etc.) of a process enhancement may not be feasible in all cases. For these cases, report in this manner: Do **not** include any of the project cost **unless** the primary purpose is environmental protection. If the primary purpose of the project is environmental protection, report the whole production process enhancement project expenditure. Indicate in the remarks section that this is the case. **Caution:** A project with the primary purpose of improving production efficiency may include pollution abatement features added to meet legal requirements. Since the primary purpose of such a project is still not environmental protection, do not report **any** of the production process enhancement.

Examples of Pollution Abatement Capital

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line Structures and Equipment	dust collectors, scrubbers, precipitators	trickling filters, settling ponds, clarifiers, spill containment dikes	cardboard balers, compactors, bins, improved containments for waste
Production Process Enhancements	conversion to substitute fuels that generate fewer pollutants	conversion to a closed or partially closed loop system for pollution abatement	conversion to enable recycling scrap materials, converting piping for greater pollution prevention

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**GUIDE FOR ITEMS 4-6**

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**Production process** enhancements (or replacements, additions, or alterations) reduce or eliminate the generation of pollutants by converting processes and equipment to enable waste minimization (source reduction or recycling), or to enable additional uses of water prior to discharge. Report the pollution abatement portion of the installed cost of enhancement projects intended for environmental protection. Estimate the pollution abatement portion as the extra cost of pollution abatement features in structures and equipment (i.e., your actual spending less what you would have spent without the pollution abatement features built-in.)

**Special instructions:** Estimating the pollution abatement portion (distinct from production efficiency, energy conservation, employee safety, etc.) of a process enhancement may not be feasible in all cases. For these cases, report in this manner: Do **not** include any of the project cost **unless** the primary purpose is environmental protection. If the primary purpose of the project is environmental protection, report the whole production process enhancement project expenditure. Indicate in the remarks section that this is the case. **Caution:** A project with the primary purpose of improving production efficiency may include pollution abatement features added to meet legal requirements. Since the primary purpose of such a project is still not environmental protection, do not report **any** of the production process enhancement.

Examples of Pollution Abatement Capital

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line Structures and Equipment	dust collectors, scrubbers, precipitators	trickling filters, settling ponds, clarifiers, spill containment dikes	cardboard balers, compactors, bins, improved containments for waste
Production Process Enhancements	conversion to substitute fuels that generate fewer pollutants	conversion to a closed or partially closed loop system for pollution abatement	conversion to enable recycling scrap materials, converting piping for greater pollution prevention

The following list further describes the capital expenditures to report in this section. The list is intended to be a guide and is not complete.

**Include new capital expenditures for:**

- end-of-line structures or equipment: new, replacement, and/or expansion, intended for environmental protection
- the pollution abatement **portion** of production process enhancements intended for environmental protection
- construction in progress intended for environmental protection
- waste storage facilities (Report tanks in Item 6.)

**Exclude new capital expenditures for:**

- pollution abatement end-of-line structures or equipment, or production process enhancements intended to maximize efficiency or profit
- research and development
- health, safety, environmental aesthetics or employee comfort (OSHA)
- recycling equipment if a plant's primary product is recycling, that is, it is a recycling plant
- motor vehicles with pollution abatement devices
- production of pollution abatement equipment that is a plant's primary product, that is, it is a pollution abatement equipment manufacturer
- projects undertaken exclusively for the purpose of insuring adequate water supply for production

**ITEM 4 - NEW CAPITAL EXPENDITURES FOR POLLUTION ABATEMENT BY MEDIA**

For each media, report your pollution abatement end-of-line structures and equipment expenditures; the pollution abatement **portion** of your spending for production process enhancements; and the total of your end-of-line and your production process enhancements. Report the percentage of each total by media, except air, which is directed to hazardous pollutants. (Item 5 asks for this percentage for air.)

**Exclude tanks from ITEM 4. Report capital expenditures for installation of safeguards or replacement of inferior storage tank systems in ITEM 6. Capital expenditures for other tank systems are not collected on this survey.**

Percent hazardous - Report the percent of total expenditures for water and solid/contained waste which is for the abatement of hazardous pollutants. For example, if the expenses for the abatement of pollutants are intended to abate only hazardous pollutants, report 100% in the appropriate category below. Report 0 when no hazardous pollutants are abated. Estimate the percentage of expenditures directed to hazardous pollutants when both hazardous and nonhazardous pollutants are abated. See Section C on page 7 for hazardous pollutants definitions.

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line	\$ , , ,000 \$	, , ,000 \$	, , ,000 \$
Production Process (pollution abatement portion)	\$ , , ,000 \$	, , ,000 \$	, , ,000 \$
<b>Total by Media</b>	\$ , , ,000 \$	, , ,000 \$	, , ,000 \$
<b>Percent Hazardous</b>	See Item 5.	.0%	.0%

▶ **ITEM 5 – TYPE OF AIR POLLUTANTS**

Report the percentage of new capital expenditures for air pollution abatement from Item 4 by the type of pollutant the structure or equipment will abate. For example, if expenditures are intended to abate hazardous air pollutants and sulfur oxides equally, report 50% on the hazardous air pollutant line and 50% on the particulates, sulfur oxides etc. line.

a. Hazardous air pollutants		.0%
b. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons – volatile organic compounds, and lead		.0%
c. Other nonhazardous air pollutants		.0%
d. Total	100	.0%

▶ **ITEM 6 – NEW CAPITAL EXPENDITURES FOR UNDERGROUND STORAGE TANKS**

Report new capital expenditures for *underground storage tanks*.

**Include expenditures for:**

- installation of safeguards for existing underground tanks
- replacement of inferior or leaking underground storage tanks
- removal of inferior or leaking underground storage tanks

New capital expenditures for underground storage tanks	\$	,	,000
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**SECTION F – NEW CAPITAL EXPENDITURES FOR SITE CLEANUP**

**GUIDE FOR ITEM 7**

**Site cleanup** is the abatement of pollutant contamination from leaks, spills, past production processes, or at a former disposal site (Superfund). The pollution must be on the property of the company named on this survey form or from your company's production process. Site cleanup is not reported by media. The following list describes the types of expenditures to report in this section. The list is intended to be a guide and is not complete.

**Include site cleanup new capital expenditures for:**

- privately paid-for site cleanup capital
- testing and monitoring equipment
- reclamation for pollution abatement
- groundwater contamination cleanup capital

**Exclude site cleanup new capital expenditures for:**

- government paid-for site cleanup
- interest for financing pollution abatement capital expenditures
- reclamation to enhance property values or for aesthetics

▶ **ITEM 7 – NEW CAPITAL EXPENDITURES FOR SITE CLEANUP**

New capital expenditures for site cleanup	\$	,	,000
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**SECTION G - NEW CAPITAL EXPENDITURES FOR ABATEMENT OF OTHER POLLUTANTS**

**GUIDE FOR ITEMS 8-9**

**OTHER** pollution abatement new capital expenditures cover pollution emissions or wastes that can not be reasonably allocated by media. Media are defined in Section C on page 7.

**Include new capital expenditures for:**

- noise pollution control that would otherwise disturb the surrounding community
- protection against radiation that would otherwise reach the surrounding environment
- multimedia expenditures, that is, expenses that can not be allocated to one particular media (such as capital expenditures for an environmental protection office or lab)

▶ **ITEM 8 - NEW CAPITAL EXPENDITURES FOR OTHER POLLUTANTS**

New capital expenditures for OTHER pollution abatement	\$	,000
--	----	------

▶ **ITEM 9 - TYPE OF OTHER POLLUTANTS**

Check the type(s) of pollutants abated by the new capital expenditures reported in ITEM 8.

- Noise pollution that would otherwise disturb the surrounding community
- Radiation that would otherwise reach the surrounding environment
- Multimedia expenditures
- Other pollutants within the scope of this survey but not reported elsewhere on this form -  
*Please specify in remarks.*

**SECTION H - CERTIFICATION**

▶ **ITEM 10 - CERTIFICATION** - Certify the answer sheet. For this workbook, record the name of the person who can clarify the data reported in this year's survey.

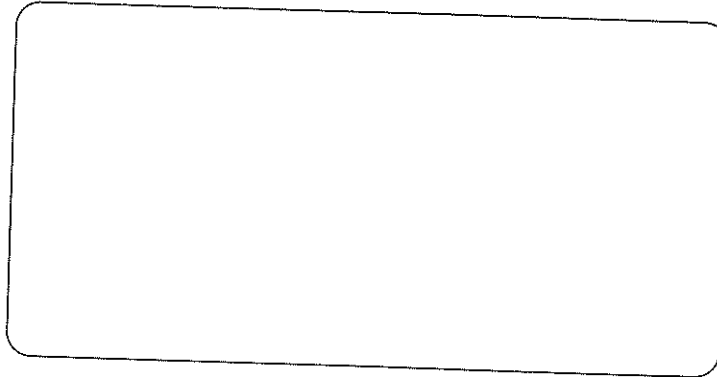
Name of person to contact regarding this report <i>(Print or type)</i>	Telephone		
	Area code	Number	Extension

FORM PA-2  
(1-17-93)

OMB NO. 0607-0176: Approval Expires 09/30/95

U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

**1992  
PLANT AND  
EQUIPMENT SURVEY  
SUPPLEMENT FOR  
POLLUTION  
ABATEMENT**



PLEASE COMPLETE THE WORKBOOK. **TEAR ALONG PERFORATION** AND COPY THE ANSWERS TO THIS ANSWER SHEET. RETURN ONLY THE ANSWER SHEET.

**ITEM 1 - OPERATIONAL STATUS**

- 011  **In operation** on December 31 of the survey year.
- 012  **No longer in operation** on December 31 of the survey year.  
Give date operations ceased:

Month   Year

- 013  **Change of ownership.** Give date of change and ownership information:

Month   Year

021 New Owner \_\_\_\_\_

022 Street \_\_\_\_\_

023 City \_\_\_\_\_

024 State \_\_\_\_\_ 025 ZIP Code \_\_\_\_\_

**ITEM 2 - TOTAL NEW CAPITAL EXPENDITURES AND POLLUTION ABATEMENT NEW CAPITAL EXPENDITURES**

- 211  Total new capital expenditures for all purposes
- 212  **No** pollution abatement new capital expenditures
- 213  Pollution abatement new capital expenditures less than \$500 but greater than zero
- 214  Capital expenditures exceeding \$500 for pollution abatement structures or equipment, or for structures or equipment with built-in pollution abatement features
- 215  New capital expenditures exceeding \$500 for site cleanup
- 216  OTHER environmental protection new capital expenditures exceeding \$500

**ITEM 3 - TOTAL NEW CAPITAL EXPENDITURES**

Total new capital expenditures	301 \$ _____,000
--------------------------------	---------------------

**ITEM 4 - NEW CAPITAL EXPENDITURES FOR POLLUTION ABATEMENT BY MEDIA**

Type	Media		
	Air (a)	Water (b)	Solid/Contained Waste (c)
End-of-Line	401 \$ , ,000	421 \$ , ,000	431 \$ , ,000
Production Process (pollution abatement portion)	402 \$ , ,000	422 \$ , ,000	432 \$ , ,000
<b>Total by Media</b>	403 \$ , ,000	423 \$ , ,000	433 \$ , ,000
<b>Percent Hazardous</b>	See Item 5.	424 .0%	434 .0%

**ITEM 5 - TYPE OF AIR POLLUTANTS**

a. Hazardous air pollutants	501	.0%
b. Particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons - volatile organic compounds, and lead	502	.0%
c. Other nonhazardous air pollutants	503	.0%
<b>d. Total</b>	<b>100</b>	<b>.0%</b>

**ITEM 6 - NEW CAPITAL EXPENDITURES FOR UNDERGROUND STORAGE TANKS**

New capital expenditures for underground storage tanks	601 \$ , ,000
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**ITEM 7 - NEW CAPITAL EXPENDITURES FOR SITE CLEANUP**

New capital expenditures for site cleanup	701 \$ , ,000
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**ITEM 8 - NEW CAPITAL EXPENDITURES FOR OTHER POLLUTANTS**

New capital expenditures for OTHER pollution abatement	801 \$ , ,000
--	------------------

**ITEM 9 - TYPE OF OTHER POLLUTANTS**

- 901  Noise pollution that would otherwise disturb the surrounding community
- 902  Radiation that would otherwise reach the surrounding environment
- 903  Multimedia expenditures
- 904  Other pollutants within the scope of this survey but not reported elsewhere on this form -  
*Please specify in remarks.*

**ITEM 10 -  
CERTIFICATION -**

This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report (Print or type) 101	102 Telephone		
	Area code	Number	Extension
Signature of authorized person	Month	Day	Year

Remarks

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

103  Check here, if you would like a copy of the MA-200 publication without charge.

**RETURN THIS ANSWER SHEET  
TO OUR WASHINGTON OFFICE.**

**THE WORKBOOK IS FOR YOUR RECORDS.**

**THANK-YOU FOR YOUR COOPERATION.**

FORM PA-2  
(1-11-93)

**THIS IS A WORKBOOK WITH A DETACHABLE ANSWER SHEET FOR THE  
PLANT AND EQUIPMENT SUPPLEMENT FOR POLLUTION ABATEMENT.**

**PLEASE TRANSFER ALL ANSWERS TO THE ANSWER SHEET.**

**COMPLETE ITEM 10, CERTIFICATION,  
AND RETURN ONLY THE ANSWER SHEET  
IN THE ENCLOSED ENVELOPE  
TO OUR WASHINGTON OFFICE.**

**THIS WORKBOOK IS FOR YOUR RECORDS.**

**THANK-YOU FOR YOUR COOPERATION.**

**PLEASE TURN THIS BOOKLET OVER AND BEGIN THE SURVEY WITH THE LETTER.**