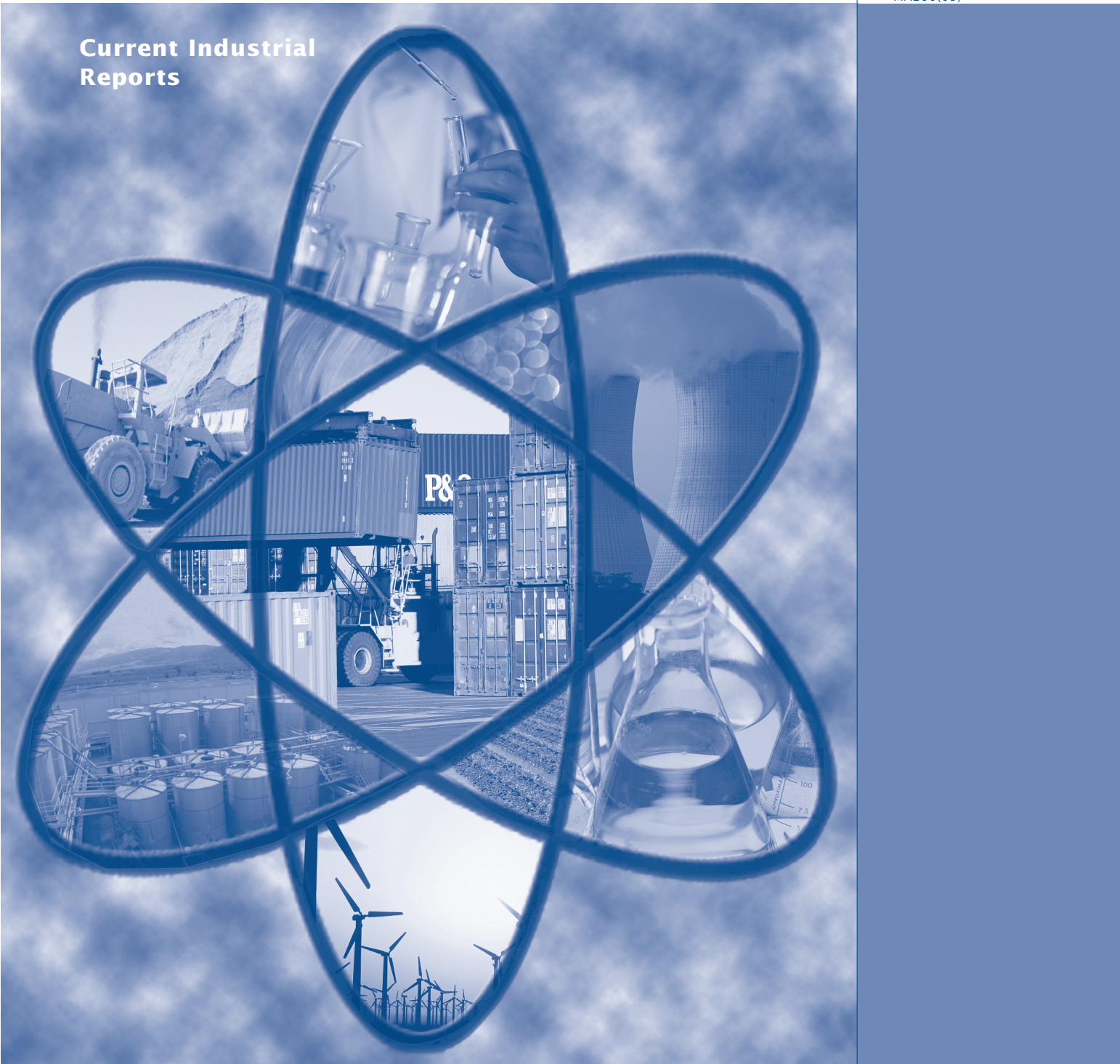


Pollution Abatement Costs and Expenditures: 2005

Issued April 2008

MA200(05)

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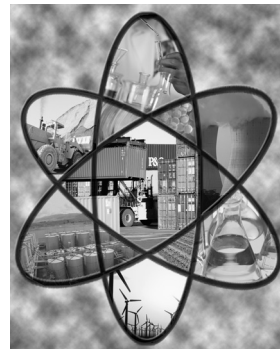
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CONTENTS

Introduction	
Summary of the 2005 Pollution Abatement Costs and Expenditures (PACE) Survey Results	v
Scope	v
Survey Description	v
Survey Changes Affecting Historic Comparisons	v
Limitations of the Data	vi
Questions Concerning This Report	vi
Abbreviations and Symbols	vi
Statistical Tables	
1. Summary Pollution Abatement Operating Costs—Subsector by Activity, Media, and Cost Category: 2005	1
2. Summary Pollution Abatement Capital Expenditures—Subsector by Activity and Media: 2005	2
3. Pollution Abatement Operating Costs—State by Activity, Media, and Cost Category: 2005	4
4. Pollution Abatement Capital Expenditures—State by Activity and Media: 2005	6
5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005	8
6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005	24
7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005	42
8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005	49
9. Other Costs and Expenditures and Cost Offsets by Industry: 2005	55
Appendixes	
A. MA-200 Report Form and Instructions	A-1
B. Qualifications of the Data	B-1
C. Description of Survey Sample, Estimation Methodology, and Imputation Methodology	C-1

Introduction

SUMMARY OF THE 2005 POLLUTION ABATEMENT COSTS AND EXPENDITURES (PACE) SURVEY RESULTS

Pollution abatement capital expenditures amounted to \$5,907.8 million in 2005. Of this total, \$3,112.7 million was attributed to treatment/capture, \$372.6 million to recycling, \$318.3 million to disposal, and \$2,104.2 million to prevention. Pollution abatement operating costs amounted to \$20,677.6 million. Of this total, \$10,762.8 million was attributed to treatment/capture, \$1,748.3 million to recycling, \$4,567.0 million to disposal and \$3,599.4 million to prevention.

Of the \$5,907.8 million capital expenditures, \$3,876.7 million was attributed to air emissions abatement, \$1,354.5 million to water discharge abatement and \$676.7 million to solid waste abatement. Of the \$20,677.6 operating costs, \$8,629.1 million was attributed to air emissions abatement, \$6,725.2 million to water discharge abatement and \$5,323.3 million to solid waste abatement.

Of the \$20,677.6 million operating costs, \$4,095.9 million was attributed to salaries, wages, and benefits; \$5,712.3 million to energy costs; \$2,811.2 million to materials and supplies; \$5,209.7 million to contract work, leasing, and other purchased services; and \$2,848.4 million to depreciation.

The industries with the highest capital expenditures in 2005 were subsector 324, Petroleum and coal products manufacturing, with \$1,743.0 million and subsector 325, Chemical manufacturing, with \$1,271.6 million. The industries with the highest operating costs in 2005 were subsector 325, Chemical manufacturing, with \$5,217.2 million and subsector 324, Petroleum and coal products manufacturing, with \$3,746.1 million.

The states with the highest capital expenditures in 2005 were Texas with \$1,168.5 million and Louisiana with \$488.8 million. The states with the highest operating costs were Texas with \$2,622.8 million and California with \$1,877.1 million.

SCOPE

The survey includes approximately 20,000 plants classified in manufacturing industries, with the exception of subsector 315 Apparel, defined by the 2002 North American Industry Classification System (NAICS). The survey excludes plants with less than 20 employees.

SURVEY DESCRIPTION

The data in this report are from the 2005 Pollution Abatement Costs and Expenditures Survey conducted by the U.S. Census Bureau under a joint partnership agreement with the U.S. Environmental Protection Agency (EPA). Survey content was developed by the EPA. The Census Bureau was the collection agency and produced the estimates in this report. The survey is based on a national probability sample of manufacturing plants. A detailed description of the sample design appears in Appendix C.

Data were obtained by means of a mailout/mailback form. The survey collects data on pollution abatement capital expenditures and operating costs, including treatment/capture, recycling, disposal, and prevention. It also includes data on the cost of abating air emissions, water discharges, and solid wastes, as well as data on permits and fees, site cleanup, product redesign, and cost offsets.

During the data review, all survey responses were subject to an editing process. This process is conducted to identify incomplete, inconsistent, or incorrect data provided by respondents. These edits, developed by the EPA, include logic, magnitude, and data verification.

Final estimates are based on response from approximately 75 percent of the survey panel.

SURVEY CHANGES AFFECTING HISTORIC COMPARISONS

The Pollution Abatement Costs and Expenditures (PACE) survey is the most comprehensive source of information on capital expenditures and operating costs associated with pollution abatement for facilities in the U.S. manufacturing industry. The Census Bureau conducted the PACE survey from 1973 to 1994. With guidance and financial support from the EPA, a substantially new version of the PACE survey was administered for reference year 1999. Because the 1999 PACE survey was different from the preceding surveys, longitudinal analysis was difficult. Conceptual differences include matters as fundamental as the scope and meaning of *pollution abatement* as well as the definition of *operating costs*. For more information on the differences between the 1999 PACE survey and previous PACE surveys, please visit: <<http://yosemite.epa.gov/ee/epa/eed.nsf/Webpages/PACE2005.html>>.

The 2005 PACE survey and content is similar to the 1994 PACE survey, particularly in its intended definition of pollution abatement costs. However, the recognition of four

distinct pollution abatement activities (treatment/capture, prevention, recycling, and disposal) from the 1999 survey was also included in the 2005 survey. Because this is merely an additional partitioning of pollution abatement costs rather than a change in the scope of these costs, this should not impact historical comparability. The one significant change affecting longitudinal comparability was the decision to ask facilities to include benefits when reporting their pollution abatement labor costs, which has not been done historically. For more details regarding the redesign of the 2005 PACE survey, please visit: <http://yosemite.epa.gov/ee/epa/eed.nsf/Webpages/PACE2005.html>.

LIMITATIONS OF THE DATA

The survey estimates presented in this report are subject to both sampling and nonsampling errors. A detailed description of each appear in Appendix B.

QUESTIONS CONCERNING THIS REPORT

Please direct questions about the survey estimates in this report to the U.S. Census Bureau, Manufacturing and Construction Division, HQ-7K145, 4600 Silver Hill Road, Washington, DC 20233, or call the Special Studies Branch at 301-763-1907.

ABBREVIATIONS AND SYMBOLS

–	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies.
(NA)	Not available.
(X)	Not applicable.
(Z)	Less than half the unit shown.
NAICS	North American Industry Classification System.
PACE	Pollution abatement capital expenditures.
PAOC	Pollution abatement operating costs.
SCU	Site cleanup.
^a	Data cells with a level of imputation exceeding 50 percent.

Table 1. Summary Pollution Abatement Operating Costs—Subsector by Activity, Media, and Cost Category: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols]

NAICS code	Subsector	Annual Survey of Manufactures (ASM) value of shipments	Total	Activity				Relative standard error PAOC		
				Treatment	Prevention	Recycling	Disposal			
31-33	All industries	4 735 383.7	20 677.6	10 762.8	3 599.4	1 748.3	4 567.0			
311	Food mfg	534 878.2	1 572.8	859.1	172.7	108.0	433.0			
312	Beverage & tobacco product mfg	123 635.7	277.6	157.0	35.0	26.5	59.1			
313	Textile mills	41 149.1	221.1	139.4	14.5	20.1	47.0			
314	Textile product mills	36 705.6	34.9	12.3	3.5	4.0	15.0			
316	Leather & allied product mfg	6 012.9	51.2	29.1	5.1	3.5	13.5			
321	Wood product mfg	112 017.5	566.6	310.3	128.3	31.3	96.7			
322	Paper mfg	162 848.2	1 796.2	1 072.0	189.4	118.6	416.2			
323	Printing & related support activities	97 094.5	238.8	111.6	35.9	35.5	55.8			
324	Petroleum & coal products mfg	476 074.7	3 746.1	1 896.2	1 294.1	273.6	282.2			
325	Chemical mfg	604 501.2	5 217.2	2 757.9	809.6	417.2	1 232.5			
326	Plastics & rubber products mfg	200 488.7	503.2	214.0	79.4	50.2	159.6			
327	Nonmetallic mineral product mfg	114 320.7	696.0	398.0	125.6	50.5	121.9			
331	Primary metal mfg	201 835.5	2 291.1	1 238.3	273.2	219.3	560.4			
332	Fabricated metal product mfg	288 067.9	763.3	353.1	84.1	92.4	233.8			
333	Machinery mfg	302 203.6	315.8	108.4	49.8	34.3	123.2			
334	Computer & electronic product mfg	373 931.9	623.8	338.4	54.5	63.9	167.0			
335	Electrical equipment, appliance, & component mfg	112 078.0	190.8	80.8	28.6	20.7	60.7			
336	Transportation equipment mfg	687 287.7	1 319.1	592.8	173.0	157.3	396.1			
337	Furniture & related product mfg	84 290.6	133.0	50.8	26.4	9.4	46.5			
339	Miscellaneous mfg	144 381.8	115.5	41.9	15.3	12.1	46.2			
NAICS code	Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
31-33	All industries	8 629.1	6 725.2	5 323.3	4 095.9	5 712.3	2 811.2	5 209.7	2 848.4	2
311	Food mfg	314.1	933.1	325.6	256.8	280.5	245.8	591.0	198.7	3
312	Beverage & tobacco product mfg	70.5	152.9	54.1	44.1	69.1	27.6	102.3	34.4	4
313	Textile mills	99.5	77.2	44.4	28.6	99.3	21.4	57.7	14.1	16
314	Textile product mills	6.6	13.6	14.7	7.4	3.7	4.5	17.1	2.2	9
316	Leather & allied product mfg	3.8	33.9	13.5	10.3	7.1	13.2	14.8	5.9	12
321	Wood product mfg	388.2	47.2	131.2	79.7	268.2	47.0	77.3	94.3	6
322	Paper mfg	571.7	757.9	466.6	289.6	357.6	328.4	475.5	345.0	3
323	Printing & related support activities	159.2	20.1	59.5	36.0	117.7	14.0	38.6	32.4	5
324	Petroleum & coal products mfg	2 522.2	754.9	469.0	616.0	1 423.2	511.7	716.1	479.1	4
325	Chemical mfg	1 697.5	1 986.2	1 533.4	1 111.5	1 307.3	764.8	1 225.6	807.9	2
326	Plastics & rubber products mfg	238.6	84.6	180.0	118.7	133.8	54.0	141.1	55.7	5
327	Nonmetallic mineral product mfg	483.0	76.4	136.6	134.8	226.0	93.4	128.3	113.5	4
331	Primary metal mfg	989.5	638.4	663.1	406.7	598.9	313.8	666.1	305.6	4
332	Fabricated metal product mfg	196.9	284.2	282.2	206.9	158.7	111.8	207.4	78.5	8
333	Machinery mfg	71.7	97.1	147.0	94.6	38.2	30.1	116.9	36.0	5
334	Computer & electronic product mfg	164.6	270.9	188.3	185.3	142.4	86.2	144.5	65.4	10
335	Electrical equipment, appliance, & component mfg	62.2	59.5	69.1	58.6	42.9	18.7	51.9	18.7	6
336	Transportation equipment mfg	484.8	394.6	439.7	338.7	377.1	102.5	360.7	140.2	3
337	Furniture & related product mfg	69.1	13.0	50.9	35.5	37.8	11.4	34.2	14.1	6
339	Miscellaneous mfg	33.8	28.1	53.6	35.1	21.8	10.2	41.9	6.6	5

Table 2. Summary Pollution Abatement Capital Expenditures—Subsector by Activity and Media: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols]

NAICS code	Subsector	Annual Survey of Manufactures (ASM) new capital expenditures	Total	Activity				Media			Relative standard error PACE
				Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
31-33	All industries	128 325.2	5 907.8	3 112.7	2 104.2	372.6	318.3	3 876.7	1 354.5	676.7	3
311	Food mfg	12 068.3	448.0	256.3	112.7	26.6	52.3	151.6	247.2	49.2	8
312	Beverage & tobacco product mfg	3 342.9	77.6	39.6	20.5	15.0	2.5	33.4	41.2	3.1	15
313	Textile mills	852.8	30.9	20.9	3.3	1.0	5.6	18.8	9.9	2.1	27
314	Textile product mills	469.8	5.3	1.7	1.6	.6	1.4	1.7	2.1	1.5	12
316	Leather & allied product mfg	102.1	1.7	.5	.3	.5	.4	.3	.8	.7	9
321	Wood product mfg	3 018.1	142.2	83.0	25.0	23.8	10.3	104.2	5.3	32.7	18
322	Paper mfg	5 597.9	573.3	294.6	238.3	20.6	19.9	379.9	146.0	47.5	4
323	Printing & related support activities	4 343.3	67.7	43.5	9.4	11.2	3.6	47.1	4.6	15.9	19
324	Petroleum & coal products mfg	11 046.7	1 743.0	928.0	780.0	30.9	4.1	1 531.0	181.8	30.1	4
325	Chemical mfg	16 886.8	1 271.6	579.9	549.6	53.4	88.7	727.0	351.4	193.3	5
326	Plastics & rubber products mfg	6 967.7	94.3	40.9	25.8	12.3	15.3	51.0	21.3	21.9	8
327	Nonmetallic mineral product mfg	5 155.7	217.4	98.2	84.0	22.6	12.5	159.6	23.1	34.7	5
331	Primary metal mfg	4 474.6	511.9	350.2	64.6	73.3	23.8	310.5	99.8	101.7	11
332	Fabricated metal product mfg	7 641.1	168.2	63.3	55.5	23.8	25.6	88.1	39.4	40.7	12
333	Machinery mfg	6 789.8	47.4	22.3	13.0	4.1	8.0	20.2	15.5	11.6	9
334	Computer & electronic product mfg	15 794.6	155.9	89.6	19.2	35.2	11.9	58.1	72.0	25.8	17
335	Electrical equipment, appliance, & component mfg	1 924.4	33.0	8.2	17.1	3.4	4.3	10.5	9.8	12.8	13
336	Transportation equipment mfg	15 279.1	260.1	167.1	63.0	11.3	18.7	148.2	75.1	36.8	6
337	Furniture & related product mfg	1 410.4	30.8	8.9	15.6	1.2	5.1	19.6	1.5	9.7	30
339	Miscellaneous mfg	4 665.8	27.7	16.0	5.7	1.7	4.3	16.1	6.7	4.9	8

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Table 3. Pollution Abatement Operating Costs—State by Activity, Media, and Cost Category: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No states are shown where total abatement operating costs are less than \$1.0 million]

State	Annual Survey of Manufactures (ASM) value of shipments	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
United States	4 735 383.7	20 677.6	10 762.8	3 599.4	1 748.3	4 567.0
Alabama	87 840.5	536.8	325.9	58.5	26.9	125.5
Alaska	6 570.8	16.6	6.9	4.1	3	5.3
Arizona	43 238.6	137.7	79.5	13.4	11.9	32.9
Arkansas	48 188.2	311.7	155.1	47.9	35.1	73.6
California	434 238.4	1 877.1	706.9	747.8	141.4	280.9
Colorado	37 420.0	80.3	42.3	12.5	6.0	19.4
Connecticut	46 549.3	109.2	47.8	21.3	5.2	34.8
Delaware	23 361.7	51.2	21.4	9.8	3.1	16.8
Florida	91 573.5	397.6	201.2	73.6	20.3	102.4
Georgia	143 980.1	562.0	287.0	71.4	70.0	133.6
Hawaii	6 406.9	8.9	3.8	2.0	(D)	(D)
Idaho	18 232.4	102.4	59.5	14.1	8.8	19.9
Illinois	231 332.3	872.3	488.5	133.4	63.4	187.1
Indiana	199 871.8	793.9	417.2	83.8	100.1	192.8
Iowa	86 427.0	234.1	126.3	28.0	14.9	65.0
Kansas	62 064.4	147.9	76.7	19.4	10.9	40.9
Kentucky	106 365.1	486.7	250.1	72.4	58.0	106.2
Louisiana	163 162.8	1 809.2	1 067.9	414.1	106.8	220.3
Maine	14 918.5	88.4	56.4	6.2	4.1	21.7
Maryland	39 770.6	162.6	85.7	19.8	19.0	38.1
Massachusetts	80 701.5	201.1	94.0	14.7	15.9	76.5
Michigan	222 074.8	752.2	374.7	89.3	89.7	198.5
Minnesota	97 998.6	357.3	237.6	29.6	23.7	66.4
Mississippi	49 661.1	180.7	78.3	34.5	12.7	55.2
Missouri	107 660.8	381.1	217.9	40.2	50.6	72.5
Montana	7 948.8	45.3	29.8	4.8	1.8	9.0
Nebraska	38 258.0	117.8	46.1	16.2	5.0	50.5
Nevada	12 281.1	69.2	18.0	12.5	5.6	33.2
New Hampshire	16 871.5	26.7	9.4	4.5	2.9	10.0
New Jersey	103 235.8	408.1	201.9	54.9	45.2	106.1
New Mexico	26 747.5	23.6	8.7	3.4	4.4	7.1
New York	154 682.0	520.6	282.8	42.0	54.3	141.5
North Carolina	186 665.1	762.6	418.5	107.7	55.3	181.2
North Dakota	8 977.8	39.2	22.1	8.7	(D)	(D)
Ohio	278 576.8	1 167.9	597.1	152.0	83.1	335.7
Oklahoma	55 095.6	185.2	66.0	55.4	7.1	56.6
Oregon	61 770.5	225.2	133.6	24.3	21.7	45.6
Pennsylvania	214 876.2	880.1	396.5	168.8	93.5	221.3
Rhode Island	11 547.6	27.9	14.5	3.6	2.7	7.1
South Carolina	87 499.1	584.2	287.0	104.6	49.5	143.2
South Dakota	10 360.6	23.8	10.6	6.0	1.6	5.5
Tennessee	137 388.2	460.0	231.0	76.6	45.1	107.2
Texas	463 953.0	2 622.8	1 393.1	464.7	248.2	516.8
Utah	33 572.1	188.3	145.2	6.3	6.7	30.1
Vermont	10 686.1	33.5	18.5	6.7	2.9	5.4
Virginia	88 955.8	389.6	189.4	77.9	40.7	81.7
Washington	93 099.2	346.1	213.4	38.3	21.0	73.5
West Virginia	21 572.6	269.1	153.9	36.1	9.5	69.7
Wisconsin	144 243.9	522.1	301.7	56.7	36.2	127.4
Wyoming	6 659.7	79.6	65.5	4.8	3.0	6.3

Table 3. Pollution Abatement Operating Costs—State by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No states are shown where total abatement operating costs are less than \$1.0 million]

State	Media			Cost category					Relative standard error PAOC
	Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
United States	8 629.1	6 725.2	5 323.3	4 095.9	5 712.3	2 811.2	5 209.7	2 848.4	2
Alabama	230.3	172.1	134.3	93.0	140.7	61.1	141.5	100.5	7
Alaska	8.9	4.6	5.1	7.7	3.4	.5	4.2	.9	59
Arizona	45.6	51.5	40.6	38.1	35.1	18.1	27.0	19.5	25
Arkansas	114.3	117.3	80.1	54.4	71.5	49.7	65.0	71.0	8
California	1 038.9	477.5	360.7	396.3	595.8	227.2	442.4	215.3	4
Colorado	27.6	29.6	23.1	26.7	12.0	11.8	18.6	11.2	13
Connecticut	28.0	49.1	32.1	24.8	33.7	13.8	29.3	7.6	11
Delaware	10.7	23.0	17.5	12.0	4.9	10.0	16.7	7.6	11
Florida	154.2	138.8	104.6	85.9	86.3	59.6	89.4	76.3	6
Georgia	194.2	213.2	154.7	98.6	120.3	100.8	148.9	93.4	6
Hawaii	3.6	3.0	2.4	3.1	1.4	1.5	1.5	1.4	28
Idaho	41.6	38.9	21.9	24.3	19.2	17.1	23.7	18.1	6
Illinois	318.6	336.6	217.1	201.4	235.2	108.4	210.1	117.3	10
Indiana	315.3	276.7	201.9	162.6	166.8	109.4	239.7	115.3	3
Iowa	77.3	92.3	64.6	48.7	35.8	41.7	80.2	27.8	8
Kansas	61.1	44.6	42.2	41.3	31.0	19.7	36.0	20.0	14
Kentucky	195.0	150.6	141.1	80.4	110.6	65.9	166.1	63.8	12
Louisiana	928.7	530.4	350.0	283.4	709.0	283.2	294.2	239.3	4
Maine	26.6	39.6	22.2	18.9	21.4	15.5	19.9	12.7	12
Maryland	54.6	66.3	41.6	40.9	49.6	18.5	42.8	10.8	12
Massachusetts	43.5	102.4	55.2	52.0	37.0	27.6	66.9	17.7	11
Michigan	301.6	220.3	230.3	153.5	216.6	65.3	214.3	102.6	4
Minnesota	152.0	117.4	88.0	68.7	92.1	50.5	90.9	55.1	5
Mississippi	56.4	62.5	61.8	34.1	27.1	40.6	45.4	33.4	9
Missouri	150.2	130.2	100.7	89.0	93.0	50.1	87.7	61.3	6
Montana	30.1	5.8	9.5	12.6	13.4	4.3	11.7	3.2	47
Nebraska	34.3	55.4	28.1	18.4	45.0	17.2	25.6	11.6	8
Nevada	18.2	21.4	29.6	9.6	9.6	6.5	24.5	19.0	49
New Hampshire	8.7	6.4	11.6	8.3	6.5	2.8	7.5	1.6	14
New Jersey	138.4	149.9	119.8	87.8	94.5	46.7	145.1	33.9	8
New Mexico	7.5	6.8	9.2	7.7	4.0	3.8	4.9	3.2	12
New York	134.8	225.8	160.1	130.1	85.4	66.0	131.2	108.0	7
North Carolina	291.3	274.1	197.3	148.0	191.1	106.6	210.8	106.1	9
North Dakota	19.3	12.1	7.8	4.2	4.4	6.0	15.6	9.0	37
Ohio	431.6	377.2	359.1	241.2	291.8	157.2	356.5	121.2	5
Oklahoma	50.9	85.6	48.7	44.7	32.8	27.0	62.5	18.2	16
Oregon	81.3	89.9	53.9	52.5	43.7	33.2	58.6	37.1	8
Pennsylvania	357.8	250.4	271.9	197.0	258.0	107.3	218.3	99.4	4
Rhode Island	11.1	8.5	8.3	6.8	8.4	3.2	8.0	^a 1.6	17
South Carolina	251.0	163.5	169.7	88.5	170.5	89.2	150.0	86.0	7
South Dakota	15.7	5.0	3.1	3.7	5.3	2.4	6.2	6.2	16
Tennessee	162.7	170.6	126.7	89.4	124.3	65.3	123.4	57.6	4
Texas	1 235.4	728.4	659.0	445.5	928.4	325.5	560.2	363.2	3
Utah	125.2	30.5	32.6	^a 35.8	^a 71.7	^a 21.6	^a 34.6	^a 24.6	55
Vermont	6.3	20.7	6.5	9.0	5.6	2.7	13.8	2.4	44
Virginia	159.1	130.2	100.3	84.4	104.7	58.2	96.1	46.1	7
Washington	141.8	124.6	79.7	68.7	64.5	58.7	98.8	55.3	10
West Virginia	105.1	80.0	84.1	47.8	70.0	52.5	52.4	46.5	12
Wisconsin	178.5	199.1	144.4	101.7	114.3	67.4	173.5	65.2	7
Wyoming	56.1	15.0	8.5	12.8	14.6	12.4	17.6	22.2	55

Table 4. Pollution Abatement Capital Expenditures—State by Activity and Media: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No states are shown where total abatement capital expenditures are less than \$1.0 million]

State	Annual Survey of Manufactures (ASM) new capital expenditures	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
United States	128 325.2	5 907.8	3 112.7	2 104.2	372.6	318.3	3 876.7	1 354.5	676.7	3
Alabama	2 689.1	138.2	86.1	31.5	9.6	11.1	76.4	35.3	26.5	8
Alaska	57 997.0	3.9	(D)	(D)	—	—	(D)	(D)	—	75
Arizona	2 308.3	30.2	21.0	5.0	(D)	(D)	22.3	4.2	3.6	41
Arkansas	1 376.2	60.1	27.4	9.7	1.7	21.3	38.0	17.3	4.8	14
California	13 554.1	465.1	203.7	203.6	34.9	22.9	299.2	121.1	44.9	9
Colorado	1 790.8	62.5	46.7	7.9	^a 5.8	2.1	36.0	24.3	2.2	13
Connecticut	1 210.2	42.3	(D)	(D)	(D)	3.0	27.2	10.0	5.1	59
Delaware	421.1	13.4	6.8	5.3	(Z)	1.3	1.0	9.0	3.4	5
Florida	2 761.3	208.9	86.5	114.9	2.0	5.5	73.0	110.9	25.0	7
Georgia	3 540.5	151.2	67.8	61.5	13.7	8.1	92.7	45.1	13.4	6
Hawaii	146.4	3.7	.1	.4	3.2	—	3.3	(D)	(D)	60
Idaho	848.2	48.4	37.5	8.3	1.1	1.6	29.3	13.6	5.6	12
Illinois	5 870.4	260.2	146.5	90.3	11.7	11.8	140.3	93.7	26.2	17
Indiana	5 832.5	170.6	73.7	28.6	62.2	6.2	85.4	17.4	67.9	33
Iowa	1 796.0	68.0	32.9	28.1	2.2	4.7	45.3	14.7	7.9	8
Kansas	1 595.1	34.4	13.8	14.2	4.9	1.5	25.3	4.2	4.9	9
Kentucky	2 503.7	98.8	44.5	33.6	13.4	7.2	63.2	22.2	13.5	17
Louisiana	4 726.6	488.8	304.7	166.6	4.1	13.4	373.4	89.2	26.1	7
Maine	415.1	15.0	7.7	5.3	.2	1.9	6.2	5.6	3.2	6
Maryland	1 729.1	38.7	24.7	10.2	1.6	2.1	20.3	14.0	4.3	6
Massachusetts	2 706.1	20.5	13.0	4.7	.6	2.2	8.7	6.5	5.4	16
Michigan	5 294.4	192.7	128.6	48.3	6.9	8.8	125.7	41.4	25.6	5
Minnesota	2 833.5	91.3	55.2	27.2	3.7	5.3	63.8	18.3	9.2	5
Mississippi	1 212.3	46.4	27.4	7.2	1.6	10.2	19.0	11.7	15.7	4
Missouri	2 404.1	40.1	21.0	13.3	3.5	2.3	22.6	9.4	8.1	10
Montana	334.0	22.1	11.3	10.7	(Z)	.1	21.4	.6	.1	35
Nebraska	627.8	31.2	8.7	13.7	.7	8.1	14.9	12.2	4.1	24
Nevada	522.3	57.2	55.1	.9	.2	1.0	3.7	50.1	3.5	2
New Hampshire	507.5	1.5	(D)	(D)	.1	.6	.6	.7	.2	20
New Jersey	3 295.1	153.9	79.0	57.2	6.9	10.8	121.5	17.8	14.6	11
New Mexico	404.7	11.6	6.4	2.0	.2	3.0	5.0	6.5	.2	24
New York	4 260.4	133.8	77.0	35.2	8.0	13.6	64.4	53.3	16.0	17
North Carolina	4 086.6	169.6	76.3	57.1	28.5	7.7	105.1	48.2	16.3	14
North Dakota	184.7	5.0	(D)	(D)	(D)	(D)	2.0	.7	2.4	34
Ohio	6 301.4	260.4	182.8	50.3	6.8	20.6	158.7	71.8	29.9	4
Oklahoma	1 327.4	54.1	23.6	24.6	5.1	.8	39.6	8.3	6.3	25
Oregon	1 456.7	67.4	46.8	11.6	2.7	6.3	44.8	18.7	4.0	8
Pennsylvania	5 886.4	191.3	119.1	46.9	13.3	12.0	130.3	38.7	22.3	7
Rhode Island	297.6	7.7	1.6	5.2	.3	.7	1.2	4.6	2.0	7
South Carolina	2 500.1	121.9	76.7	22.9	12.0	10.3	75.8	25.8	20.3	8
South Dakota	311.3	12.5	11.0	1.4	—	.1	(D)	(D)	(D)	2
Tennessee	4 126.5	69.2	31.3	24.5	6.1	7.3	36.6	21.1	11.5	7
Texas	11 588.3	1 168.5	421.6	669.7	44.8	32.4	937.2	138.4	92.9	5
Utah	762.7	59.1	^a 19.4	^a 18.2	19.1	2.3	36.1	3.9	19.1	50
Vermont	276.3	4.6	1.1	2.8	(Z)	.6	2.3	1.3	1.0	34
Virginia	2 731.7	99.9	72.7	20.8	2.1	4.4	78.1	16.2	5.5	5
Washington	1 945.9	201.7	163.6	28.3	5.3	4.5	165.2	29.7	6.8	18
West Virginia	685.6	43.5	26.0	12.8	.7	4.0	27.0	11.6	4.9	13
Wisconsin	3 902.8	121.1	68.4	27.1	16.0	9.6	59.1	29.4	32.5	17
Wyoming	361.5	45.8	36.1	9.0	(D)	(D)	35.7	2.2	7.9	59

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Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
31-33	All industries	20 677.6	10 762.8	3 599.4	1 748.3	4 567.0
311	Food mfg	1 572.8	859.1	172.7	108.0	433.0
3111	Animal food mfg	53.6	19.5	4.6	8.1	21.3
31111	Animal food mfg	53.6	19.5	4.6	8.1	21.3
311111	Dog & cat food mfg	38.5	11.2	1.7	7.9	17.6
311119	Other animal food mfg	15.1	8.3	3.0	.2	3.7
3112	Grain & oilseed milling	296.7	175.0	38.2	17.9	65.6
31121	Flour milling & malt mfg	22.6	9.0	9.5	1.2	2.9
311211	Flour milling	15.2	7.7	5.6	.8	1.1
311212	Rice milling	3.5	.7	2.4	.2	.2
311213	Malt mfg	3.9	.6	1.5	.3	1.5
31122	Starch & vegetable fats & oils mfg	250.1	157.6	25.7	14.9	51.9
311221	Wet corn milling	179.8	121.3	12.3	12.4	33.7
311222	Soybean processing	42.2	25.3	5.7	1.3	10.0
311223	Other oilseed processing	6.7	3.3	1.8	.5	1.0
311225	Fats & oils refining & blending	21.4	7.6	6.0	.7	7.2
31123	Breakfast cereal mfg	24.0	8.4	3.0	1.8	10.8
311230	Breakfast cereal mfg	24.0	8.4	3.0	1.8	10.8
3113	Sugar & confectionery product mfg	93.5	47.7	14.8	4.7	26.2
31131	Sugar mfg	61.8	33.7	11.5	2.5	14.1
311311	Sugarcane mills	9.1	6.1	1.2	.5	1.2
311312	Cane sugar refining	9.9	.3	.5	.2	9.0
311313	Beet sugar mfg	42.7	27.4	9.8	1.7	3.9
31132	Chocolate & confectionery mfg from cacao beans	5.9	2.7	.8	.1	2.2
311320	Chocolate & confectionery mfg from cacao beans	5.9	2.7	.8	.1	2.2
31133	Confectionery mfg from purchased chocolate	15.7	8.7	.8	1.2	4.9
311330	Confectionery mfg from purchased chocolate	15.7	8.7	.8	1.2	4.9
31134	Nonchocolate confectionery mfg	10.1	2.5	1.6	1.0	5.0
311340	Nonchocolate confectionery mfg	10.1	2.5	1.6	1.0	5.0
3114	Fruit & vegetable preserving & specialty food mfg	252.9	134.7	23.8	18.6	75.8
31141	Frozen food mfg	106.9	60.9	8.7	4.7	32.7
311411	Frozen fruit, juice, & vegetable mfg	68.6	42.2	5.5	3.2	17.6
311412	Frozen specialty food mfg	38.4	18.7	3.2	1.4	15.1
31142	Fruit & vegetable canning, pickling, & drying	146.0	73.7	15.2	13.9	43.1
311421	Fruit & vegetable canning	120.8	61.9	10.5	12.4	36.1
311422	Specialty canning	12.3	3.7	2.9	.9	4.8
311423	Dried & dehydrated food mfg	12.8	8.2	1.8	.6	2.2
3115	Dairy product mfg	153.2	77.6	16.4	9.3	49.9
31151	Dairy product (except frozen) mfg	138.5	72.3	14.1	8.4	43.6
311511	Fluid milk mfg	48.8	18.0	5.2	1.9	23.6
311512	Creamery butter mfg	3.3	2.2	.5	.2	.5
311513	Cheese mfg	68.2	40.9	4.9	5.9	16.5
311514	Dry, condensed, & evaporated dairy product mfg	18.1	11.2	3.6	.3	3.0
31152	Ice cream & frozen dessert mfg	14.7	5.2	2.2	.9	6.3
311520	Ice cream & frozen dessert mfg	14.7	5.2	2.2	.9	6.3
3116	Meat product mfg	479.7	294.0	43.4	35.8	106.5
31161	Animal slaughtering & processing	479.7	294.0	43.4	35.8	106.5
311611	Animal (except poultry) slaughtering	105.1	72.8	5.0	3.3	24.0
311612	Meat processed from carcasses	62.5	31.4	2.9	5.9	22.3
311613	Rendering & meat byproduct processing	83.2	56.5	18.0	.4	8.3
311615	Poultry processing	228.8	133.2	17.4	26.3	51.9
3117	Seafood product preparation & packaging	15.1	6.9	1.1	.2	6.8
31171	Seafood product preparation & packaging	15.1	6.9	1.1	.2	6.8
311711	Seafood canning	3.4	1.6	.1	—	1.7
311712	Fresh & frozen seafood processing	11.7	5.3	1.0	.2	5.1
3118	Bakeries & tortilla mfg	67.6	28.4	9.7	5.2	24.3
31181	Bread & bakery product mfg	49.4	21.2	7.4	3.3	17.5
311812	Commercial bakeries	40.4	16.3	6.8	2.4	14.9
311813	Frozen cakes, pies, & other pastries mfg	8.7	4.7	.6	.8	2.5
31182	Cookie, cracker, & pasta mfg	13.5	5.1	2.0	1.7	4.7
31183	Tortilla mfg	4.7	2.1	.3	.2	2.2
311830	Tortilla mfg	4.7	2.1	.3	.2	2.2
3119	Other food mfg	160.7	75.4	20.6	8.2	56.5
31191	Snack food mfg	41.6	22.9	4.4	3.1	11.2
311911	Roasted nuts & peanut butter mfg	7.4	2.9	1.7	.6	2.2
311919	Other snack food mfg	34.2	20.0	2.7	2.5	9.0
31192	Coffee & tea mfg	20.8	12.5	4.1	1.0	3.2
311920	Coffee & tea mfg	20.8	12.5	4.1	1.0	3.2
31193	Flavoring syrup & concentrate mfg	9.0	3.1	3.2	.3	2.4
311930	Flavoring syrup & concentrate mfg	9.0	3.1	3.2	.3	2.4
31194	Seasoning & dressing mfg	42.6	14.4	1.6	1.4	25.1
311941	Mayonnaise, dressing, & other prepared sauce mfg	18.3	9.6	.9	1.0	6.8
311942	Spice & extract mfg	24.3	4.8	.7	.4	18.3
31199	All other food mfg	46.7	22.4	7.4	2.4	14.5
311991	Perishable prepared food mfg	19.4	9.9	2.0	1.3	6.2
311999	All other miscellaneous food mfg	27.3	12.5	5.4	1.0	8.3

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
31-33	All industries	8 629.1	6 725.2	5 323.3	4 095.9	5 712.3	2 811.2	5 209.7	2 848.4	2
311	Food mfg	314.1	933.1	325.6	256.8	280.5	245.8	591.0	198.7	3
3111	Animal food mfg	14.3	18.9	20.3	7.3	6.4	2.7	32.2	5.0	14
31111	Animal food mfg	14.3	18.9	20.3	7.3	6.4	2.7	32.2	5.0	14
311111	Dog & cat food mfg	4.6	16.5	17.3	4.6	.9	1.9	28.2	2.9	16
311119	Other animal food mfg	9.7	2.4	3.0	2.7	5.5	.8	3.9	2.1	23
3112	Grain & oilseed milling	117.3	138.7	40.7	36.3	76.3	54.2	91.4	38.5	5
31121	Flour milling & malt mfg	18.9	2.4	1.4	2.6	13.2	1.6	3.1	2.1	19
311211	Flour milling	13.8	.3	1.0	1.8	9.7	1.0	1.5	1.2	28
311212	Rice milling	2.9	.3	.3	.2	2.5	.4	.1	.2	9
311213	Malt mfg	2.1	1.7	(Z)	.6	.9	.2	1.6	.6	1
31122	Starch & vegetable fats & oils mfg	91.1	126.3	32.7	31.0	55.6	50.4	78.7	34.5	6
311221	Wet corn milling	63.2	94.1	22.5	18.4	40.9	42.6	53.1	24.8	6
311222	Soybean processing	16.6	19.8	5.9	8.5	9.1	5.6	15.3	3.6	17
311223	Other oilseed processing	4.2	1.8	.6	.9	2.3	.3	1.8	1.3	1
311225	Fats & oils refining & blending	7.0	10.7	3.7	3.1	3.2	1.8	8.6	4.7	14
31123	Breakfast cereal mfg	7.3	10.0	6.6	2.7	7.6	2.2	9.5	2.0	17
311230	Breakfast cereal mfg	7.3	10.0	6.6	2.7	7.6	2.2	9.5	2.0	17
3113	Sugar & confectionery product mfg	20.4	42.8	30.3	13.1	11.2	15.0	38.4	15.8	5
31131	Sugar mfg	15.6	29.4	16.8	8.3	7.7	10.8	25.5	9.6	5
311311	Sugarcane mills	4.9	2.7	1.5	2.0	1.8	.8	2.6	1.9	3
311312	Cane sugar refining	.2	3.1	6.7	.4	.1	.2	9.1	.1	1
311313	Beet sugar mfg	10.6	23.5	8.6	5.9	5.8	9.8	13.7	7.6	7
31132	Chocolate & confectionery mfg from cacao beans	1.2	2.4	2.4	1.2	.3	.9	3.1	.3	10
311320	Chocolate & confectionery mfg from cacao beans	1.2	2.4	2.4	1.2	.3	.9	3.1	.3	10
31133	Confectionery mfg from purchased chocolate	1.3	8.2	6.2	1.9	1.1	2.5	5.9	4.2	9
311330	Confectionery mfg from purchased chocolate	1.3	8.2	6.2	1.9	1.1	2.5	5.9	4.2	9
31134	Nonchocolate confectionery mfg	2.3	2.9	5.0	1.7	2.0	.8	3.9	1.8	28
311340	Nonchocolate confectionery mfg	2.3	2.9	5.0	1.7	2.0	.8	3.9	1.8	28
3114	Fruit & vegetable preserving & specialty food mfg	21.8	173.9	57.2	45.4	30.3	33.3	92.7	51.2	8
31141	Frozen food mfg	10.3	73.0	23.6	22.1	13.4	13.0	42.1	16.4	8
311411	Frozen fruit, juice, & vegetable mfg	7.1	51.0	10.5	13.9	9.6	8.2	24.0	12.8	8
311412	Frozen specialty food mfg	3.3	22.0	13.1	8.2	3.8	4.8	18.1	3.5	18
31142	Fruit & vegetable canning, pickling, & drying	11.4	100.9	33.6	23.3	16.9	20.3	50.6	34.8	12
311421	Fruit & vegetable canning	6.9	86.4	27.5	17.8	12.6	18.0	42.2	30.2	14
311422	Specialty canning	2.6	5.9	3.8	3.0	^a 1.9	^a 1.2	4.4	1.8	4
311423	Dried & dehydrated food mfg	1.8	8.6	2.3	2.6	2.4	1.1	4.0	2.8	36
3115	Dairy product mfg	17.4	101.0	34.8	23.0	23.7	20.2	68.4	17.9	9
31151	Dairy product (except frozen) mfg	16.6	90.2	31.7	19.9	22.4	18.6	60.7	16.9	10
311511	Fluid milk mfg	3.9	31.7	13.3	6.7	6.8	4.6	27.8	2.9	10
311512	Creamery butter mfg	.1	3.0	.3	.5	.2	.6	1.4	.5	1
311513	Cheese mfg	8.6	45.9	13.6	8.0	12.8	11.5	27.1	8.8	17
311514	Dry, condensed, & evaporated dairy product mfg	4.0	9.6	4.5	4.6	2.5	1.8	4.5	4.7	25
31152	Ice cream & frozen dessert mfg	.8	10.8	3.1	3.2	1.3	1.6	7.6	1.0	15
311520	Ice cream & frozen dessert mfg	.8	10.8	3.1	3.2	1.3	1.6	7.6	1.0	15
3116	Meat product mfg	77.6	316.3	85.7	87.0	82.8	93.9	170.9	45.1	6
31161	Animal slaughtering & processing	77.6	316.3	85.7	87.0	82.8	93.9	170.9	45.1	6
311611	Animal (except poultry) slaughtering	15.1	64.4	25.6	16.0	12.9	14.4	53.2	8.7	12
311612	Meat processed from carcasses	7.7	36.6	18.1	17.2	10.6	8.8	20.5	5.4	13
311613	Rendering & meat byproduct processing	31.4	47.0	4.8	15.2	19.3	25.0	15.5	8.2	7
311615	Poultry processing	23.4	168.3	37.2	38.6	40.1	45.6	81.7	22.8	10
3117	Seafood product preparation & packaging	1.3	9.6	4.2	2.0	2.3	1.6	8.6	.6	19
31171	Seafood product preparation & packaging	1.3	9.6	4.2	2.0	2.3	1.6	8.6	.6	19
311711	Seafood canning	.2	2.8	.4	.2	1.3	.7	1.0	.2	37
311712	Fresh & frozen seafood processing	1.1	6.8	3.8	1.7	1.0	.9	7.7	.4	22
3118	Bakeries & tortilla mfg	14.0	33.5	20.1	15.9	15.0	5.7	25.4	5.6	11
31181	Bread & bakery product mfg	9.8	26.4	13.2	9.7	13.0	4.6	18.7	3.4	13
311812	Commercial bakeries	9.2	20.8	10.4	8.9	10.1	3.8	14.5	3.1	15
311813	Frozen cakes, pies, & other pastries mfg	.5	5.4	2.8	.7	3.0	.7	4.0	.3	10
31182	Cookie, cracker, & pasta mfg	3.4	4.6	5.5	5.5	1.3	.8	4.0	1.9	26
31183	Tortilla mfg	.8	2.5	1.4	.8	.7	.3	2.7	.3	20
311830	Tortilla mfg	.8	2.5	1.4	.8	.7	.3	2.7	.3	20
3119	Other food mfg	29.9	98.3	32.4	26.7	32.5	19.3	63.1	19.1	9
31191	Snack food mfg	5.9	24.9	10.8	8.8	8.5	4.7	13.6	6.0	8
311911	Roasted nuts & peanut butter mfg	1.4	3.5	2.6	2.4	.9	.5	3.0	.7	26
311919	Other snack food mfg	4.5	21.4	8.2	6.4	7.7	4.1	10.6	5.4	8
31192	Coffee & tea mfg	13.4	4.0	3.4	2.1	10.0	1.0	4.3	3.5	16
311920	Coffee & tea mfg	13.4	4.0	3.4	2.1	10.0	1.0	4.3	3.5	16
31193	Flavoring syrup & concentrate mfg	2.3	5.6	1.1	1.5	2.1	.7	2.9	1.9	39
311930	Flavoring syrup & concentrate mfg	2.3	5.6	1.1	1.5	2.1	.7	2.9	1.9	39
31194	Seasoning & dressing mfg	3.8	33.2	5.6	6.8	6.5	5.5	20.4	3.4	23
311941	Mayonnaise, dressing, & other prepared sauce mfg	1.2	13.1	4.0	4.9	.9	3.6	7.2	1.7	20
311942	Spice & extract mfg	2.5	20.1	1.7	1.9	5.6	1.9	13.1	1.7	38
31199	All other food mfg	4.6	30.6	11.5	7.6	5.4	7.4	21.9	4.3	14
311991	Perishable prepared food mfg	2.0	10.4	6.9	2.8	2.6	2.5	9.8	1.5	8
311999	All other miscellaneous food mfg	2.5	20.2	4.6	4.8	2.8	4.9	12.1	2.7	24

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
312	Beverage & tobacco product mfg	277.6	157.0	35.0	26.5	59.1
3121	Beverage mfg	246.2	138.2	32.4	25.3	50.4
31211	Soft drink & ice mfg	57.8	24.7	4.1	7.4	21.6
312111	Soft drink mfg	56.1	24.4	3.8	6.6	21.3
312112	Bottled water mfg	1.7	.3	.2	.7	.4
31212	Breweries	165.8	97.7	27.0	16.2	24.9
312120	Breweries	165.8	97.7	27.0	16.2	24.9
31213	Wineries	8.0	3.5	.4	1.2	2.9
312130	Wineries	8.0	3.5	.4	1.2	2.9
31214	Distilleries	14.7	12.3	.9	.5	1.0
312140	Distilleries	14.7	12.3	.9	.5	1.0
3122	Tobacco mfg	31.3	18.8	2.7	1.2	8.7
31221	Tobacco stemming & redrying	2.0	.8	.2	.2	.7
312210	Tobacco stemming & redrying	2.0	.8	.2	.2	.7
31222	Tobacco product mfg	29.3	17.9	2.5	1.0	8.0
312221	Cigarette mfg	19.6	11.7	(D)	.5	(D)
312229	Other tobacco product mfg	9.8	6.3	(D)	.5	(D)
313	Textile mills	221.1	139.4	14.5	20.1	47.0
3131	Fiber, yarn, & thread mills	89.9	64.4	5.8	9.8	10.0
31311	Fiber, yarn, & thread mills	89.9	64.4	5.8	9.8	10.0
313111	Yarn spinning mills	30.2	20.2	2.8	1.4	5.8
313112	Yarn texturing, throwing, & twisting mills	58.9	44.0	2.5	8.3	4.1
3132	Fabric mills	53.7	34.8	3.1	1.9	13.9
31321	Broadwoven fabric mills	8.4	4.8	.1	.2	3.3
313210	Broadwoven fabric mills	8.4	4.8	.1	.2	3.3
31322	Narrow fabric mills & schiffli machine embroidery	2.4	1.4	.3	.2	.4
313221	Narrow fabric mills	2.4	1.4	.3	.2	.4
31323	Nonwoven fabric mills	29.4	20.3	1.1	1.1	6.8
313230	Nonwoven fabric mills	29.4	20.3	1.1	1.1	6.8
31324	Knit fabric mills	13.5	8.2	1.6	.4	3.3
313241	Weft knit fabric mills	10.4	7.2	.6	.2	2.4
313249	Other knit fabric & lace mills	3.1	1.1	1.0	.2	.9
3133	Textile & fabric finishing & fabric coating mills	77.5	40.2	5.6	8.5	23.1
31331	Textile & fabric finishing mills	51.7	23.9	5.1	6.3	16.3
313311	Broadwoven fabric finishing mills	37.9	18.3	3.7	5.6	10.3
313312	Textile & fabric finishing mills	13.7	5.6	1.4	.7	6.1
31332	Fabric coating mills	25.8	16.3	.6	2.1	6.8
313320	Fabric coating mills	25.8	16.3	.6	2.1	6.8
314	Textile product mills	34.9	12.3	3.5	4.0	15.0
3141	Textile furnishings mills	20.9	5.6	2.5	3.5	9.2
3149	Other textile product mills	13.9	6.6	1.0	.5	5.8
31499	All other textile product mills	13.6	6.6	.8	.5	5.7
314992	Tire cord & tire fabric mills	6.6	3.8	.6	.2	2.0
314999	All other miscellaneous textile product mills	6.5	2.8	(Z)	.3	3.4
316	Leather & allied product mfg	51.2	29.1	5.1	3.5	13.5
3161	Leather & hide tanning & finishing	46.1	28.5	4.6	2.8	10.1
31611	Leather & hide tanning & finishing	46.1	28.5	4.6	2.8	10.1
316110	Leather & hide tanning & finishing	46.1	28.5	4.6	2.8	10.1
3162	Footwear mfg	1.4	.2	.2	.4	.7
31621	Footwear mfg	1.4	.2	.2	.4	.7
3169	Other leather & allied product mfg	3.7	.4	.3	.4	2.7
321	Wood product mfg	566.6	310.3	128.3	31.3	96.7
3211	Sawmills & wood preservation	60.5	23.4	18.6	6.5	12.1
32111	Sawmills & wood preservation	60.5	23.4	18.6	6.5	12.1
321113	Sawmills	52.6	21.7	15.3	6.4	9.2
321114	Wood preservation	7.9	1.7	3.3	.1	2.8
3212	Veneer, plywood, & engineered wood product mfg	388.2	234.9	96.7	14.1	42.4
32121	Veneer, plywood, & engineered wood product mfg	388.2	234.9	96.7	14.1	42.4
321211	Hardwood veneer & plywood mfg	13.7	6.0	1.8	2.3	3.5
321212	Softwood veneer & plywood mfg	46.3	31.6	8.4	1.7	4.7
321213	Engineered wood member (except truss) mfg	8.1	4.6	.7	.1	2.7
321219	Reconstituted wood product mfg	319.7	192.6	85.9	9.8	31.4
3219	Other wood product mfg	117.9	52.0	13.0	10.6	42.3
32191	Millwork	77.3	38.8	7.6	5.3	25.6
321911	Wood window & door mfg	51.1	23.9	3.8	4.2	19.2
321912	Cut stock, resawing lumber, & planing	11.9	8.2	1.0	.3	2.3
321918	Other millwork (including flooring)	14.3	6.8	2.7	.7	4.1
32192	Wood container & pallet mfg	7.6	3.9	1.0	1.1	1.6
321920	Wood container & pallet mfg	7.6	3.9	1.0	1.1	1.6
32199	All other wood product mfg	33.0	9.2	4.4	4.3	15.1
321991	Manufactured home (mobile home) mfg	13.4	.2	.1	1.0	12.1
321992	Prefabricated wood building mfg	2.5	.1	(Z)	.9	1.4
321999	All other miscellaneous wood product mfg	17.2	8.9	4.3	2.4	1.6

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
312	Beverage & tobacco product mfg	70.5	152.9	54.1	44.1	69.1	27.6	102.3	34.4	4
3121	Beverage mfg	55.2	144.5	46.5	36.3	61.2	24.5	93.6	30.6	5
31211	Soft drink & ice mfg	1.5	40.1	16.2	11.4	2.7	6.5	32.0	5.2	9
312111	Soft drink mfg	1.4	39.5	15.1	10.8	2.7	6.2	31.3	5.2	9
312112	Bottled water mfg . . . . .	.1	.6	1.1	.7	.1	.3	.7	—	14
31212	Breweries	51.3	88.1	26.4	21.3	55.5	17.0	48.8	23.2	2
312120	Breweries	51.3	88.1	26.4	21.3	55.5	17.0	48.8	23.2	2
31213	Wineries . . . . .	.2	4.9	2.8	1.9	2.1	.6	2.1	1.3	20
312130	Wineries . . . . .	.2	4.9	2.8	1.9	2.1	.6	2.1	1.3	20
31214	Distilleries	2.2	11.4	1.1	1.6	1.0	.4	10.8	.9	56
312140	Distilleries	2.2	11.4	1.1	1.6	1.0	.4	10.8	.9	56
3122	Tobacco mfg	15.3	8.4	7.6	7.8	7.9	3.1	8.7	3.9	1
31221	Tobacco stemming & redrying	1.1	.2	.7	.3	.2	.2	.8	.5	1
312210	Tobacco stemming & redrying	1.1	.2	.7	.3	.2	.2	.8	.5	1
31222	Tobacco product mfg	14.2	8.2	6.9	7.4	7.7	2.9	7.9	3.4	1
312221	Cigarette mfg	11.3	3.9	4.4	3.6	6.0	1.4	5.8	2.8	1
312229	Other tobacco product mfg	3.0	4.3	2.4	3.8	1.7	1.5	2.1	.6	1
313	Textile mills	99.5	77.2	44.4	28.6	99.3	21.4	57.7	14.1	16
3131	Fiber, yarn, & thread mills	60.3	16.6	13.0	7.0	67.0	4.5	8.7	2.7	37
31311	Fiber, yarn, & thread mills	60.3	16.6	13.0	7.0	67.0	4.5	8.7	2.7	37
313111	Yarn spinning mills	19.9	5.0	5.3	2.2	16.8	2.7	5.9	2.6	16
313112	Yarn texturing, throwing, & twisting mills	40.0	11.3	7.6	4.3	49.9	1.8	2.8	.1	56
3132	Fabric mills	13.5	25.5	14.7	9.4	10.8	5.2	24.4	3.8	7
31321	Broadwoven fabric mills	2.0	4.6	1.8	1.0	2.6	1.2	3.2	.3	24
313210	Broadwoven fabric mills	2.0	4.6	1.8	1.0	2.6	1.2	3.2	.3	24
31322	Narrow fabric mills & schiffli machine embroidery . . . . .	.1	1.7	.6	.6	.1	.6	.7	.4	12
313221	Narrow fabric mills . . . . .	.1	1.7	.6	.6	.1	.6	.7	.4	12
31323	Nonwoven fabric mills	9.4	10.1	9.9	6.5	6.4	1.8	12.0	2.6	11
313230	Nonwoven fabric mills	9.4	10.1	9.9	6.5	6.4	1.8	12.0	2.6	11
31324	Knit fabric mills	2.0	9.2	2.3	1.3	1.7	1.6	8.4	.5	4
313241	Weft knit fabric mills . . . . .	.9	7.6	1.9	.6	1.0	1.3	7.0	.4	3
313249	Other knit fabric & lace mills	1.1	1.6	.4	.6	.6	.3	1.5	.1	14
3133	Textile & fabric finishing & fabric coating mills	25.6	35.1	16.8	12.2	21.5	11.7	24.5	7.6	7
31331	Textile & fabric finishing mills	10.4	31.2	10.1	7.5	11.0	9.7	18.7	4.8	10
313311	Broadwoven fabric finishing mills	9.1	21.5	7.3	5.6	9.3	8.2	11.2	3.7	13
313312	Textile & fabric finishing mills	1.2	9.7	2.8	1.9	1.6	1.5	7.6	1.1	8
31332	Fabric coating mills	15.3	3.8	6.7	4.8	10.5	1.9	5.8	2.8	8
313320	Fabric coating mills	15.3	3.8	6.7	4.8	10.5	1.9	5.8	2.8	8
314	Textile product mills	6.6	13.6	14.7	7.4	3.7	4.5	17.1	2.2	9
3141	Textile furnishings mills	3.0	9.4	8.5	3.9	1.3	3.0	11.8	.9	12
3149	Other textile product mills	3.6	4.1	6.2	3.5	2.4	1.5	5.3	1.2	14
31499	All other textile product mills	3.4	4.1	6.0	3.5	2.3	1.4	5.2	1.1	15
314992	Tire cord & tire fabric mills	2.6	1.9	2.1	1.1	1.8	.8	2.1	.7	1
314999	All other miscellaneous textile product mills . . . . .	.8	1.8	3.9	2.3	.5	.5	2.9	.3	30
316	Leather & allied product mfg	3.8	33.9	13.5	10.3	7.1	13.2	14.8	5.9	12
3161	Leather & hide tanning & finishing	3.2	33.7	9.2	9.7	5.9	13.1	13.9	3.4	12
31611	Leather & hide tanning & finishing	3.2	33.7	9.2	9.7	5.9	13.1	13.9	3.4	12
316110	Leather & hide tanning & finishing	3.2	33.7	9.2	9.7	5.9	13.1	13.9	3.4	12
3162	Footwear mfg . . . . .	.3	(Z)	1.1	.5	.1	.1	.7	(Z)	4
31621	Footwear mfg . . . . .	.3	(Z)	1.1	.5	.1	.1	.7	(Z)	4
3169	Other leather & allied product mfg . . . . .	.3	.1	3.3	.1	1.1	—	.1	2.4	66
321	Wood product mfg	388.2	47.2	131.2	79.7	268.2	47.0	77.3	94.3	6
3211	Sawmills & wood preservation	28.0	12.7	19.8	19.1	18.5	4.2	10.0	8.8	9
32111	Sawmills & wood preservation	28.0	12.7	19.8	19.1	18.5	4.2	10.0	8.8	9
321113	Sawmills	27.6	9.9	15.1	16.2	18.2	3.1	7.4	7.8	10
321114	Wood preservation . . . . .	.4	2.8	4.7	2.9	.3	1.0	2.6	1.0	13
3212	Veneer, plywood, & engineered wood product mfg	307.3	27.9	53.1	35.4	213.6	32.3	30.9	76.0	8
32121	Veneer, plywood, & engineered wood product mfg	307.3	27.9	53.1	35.4	213.6	32.3	30.9	76.0	8
321211	Hardwood veneer & plywood mfg	5.7	2.1	5.8	3.0	3.9	1.1	2.8	2.8	13
321212	Softwood veneer & plywood mfg	36.8	4.2	5.3	8.3	17.0	3.2	4.6	13.2	6
321213	Engineered wood member (except truss) mfg	5.2	.2	2.7	1.5	1.7	.7	3.1	1.1	24
321219	Reconstituted wood product mfg	259.6	21.4	38.7	22.5	190.9	27.2	20.2	58.8	9
3219	Other wood product mfg	53.0	6.6	58.3	25.2	36.2	10.6	36.4	9.4	11
32191	Millwork	36.0	4.7	36.5	20.4	25.2	5.0	19.8	7.0	14
321911	Wood window & door mfg	18.0	3.9	29.2	12.8	15.4	2.8	15.9	4.1	18
321912	Cut stock, resawing lumber, & planing	9.2	.4	2.4	3.7	4.6	.7	1.5	1.4	33
321918	Other millwork (including flooring)	8.8	.5	4.9	3.9	5.1	1.4	2.4	1.5	16
32192	Wood container & pallet mfg	4.3	.1	3.2	1.4	2.6	1.0	1.4	1.0	29
321920	Wood container & pallet mfg	4.3	.1	3.2	1.4	2.6	1.0	1.4	1.0	29
32199	All other wood product mfg	12.7	1.8	18.6	3.4	8.3	4.6	15.2	1.5	21
321991	Manufactured home (mobile home) mfg . . . . .	.6	.4	12.5	1.8	.3	.1	11.0	.1	42
321992	Prefabricated wood building mfg . . . . .	.1	(Z)	2.3	.4	.1	.1	1.9	(Z)	33
321999	All other miscellaneous wood product mfg	12.0	1.4	3.8	1.2	7.9	4.4	2.4	1.3	23

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
322	Paper mfg	1 796.2	1 072.0	189.4	118.6	416.2
3221	Pulp, paper, & paperboard mills	1 576.1	969.2	169.3	84.6	354.0
32211	Pulp mills	156.5	108.9	15.3	7.4	24.8
322110	Pulp mills	156.5	108.9	15.3	7.4	24.8
32212	Paper mills	878.7	545.8	79.7	46.2	207.0
322121	Paper (except newsprint) mills	817.4	500.6	73.8	45.8	197.3
322122	Newsprint mills	61.4	45.2	5.9	.5	9.8
32213	Paperboard mills	540.8	313.5	74.3	31.0	122.1
322130	Paperboard mills	540.8	313.5	74.3	31.0	122.1
3222	Converted paper product mfg	220.1	103.8	20.1	34.0	62.2
32221	Paperboard container mfg	71.3	28.6	6.7	13.2	22.8
322211	Corrugated & solid fiber box mfg	53.3	24.3	2.2	9.4	17.3
322212	Folding paperboard box mfg	12.3	2.6	3.4	2.9	3.4
322214	Fiber can, tube, drum, & similar products mfg	1.0	.5	(Z)	.3	.2
322215	Nonfolding sanitary food container mfg	4.7	1.2	1.1	.5	1.9
32222	Paper bag & coated & treated paper mfg	106.0	60.2	7.7	11.3	26.8
322221	Coated & laminated packaging paper & plastics film mfg	13.9	5.7	.3	2.1	5.8
322222	Coated & laminated paper mfg	70.3	38.3	6.4	8.7	16.9
322223	Plastics, foil, & coated paper bag mfg	2.7	1.5	.1	.1	1.0
322224	Uncoated paper & multiwall bag mfg	2.0	.9	.2	.1	.7
322225	Laminated aluminum foil mfg for flexible packaging uses	16.0	13.5	.6	(Z)	1.9
322226	Surface-coated paperboard mfg	1.0	.1	.1	.3	.5
32223	Stationery product mfg	5.6	.9	.3	1.5	2.9
322232	Envelope mfg	4.3	.4	.3	1.3	2.3
32229	Other converted paper product mfg	37.3	14.2	5.5	8.0	9.7
322291	Sanitary paper product mfg	27.2	11.5	4.2	6.8	4.8
322299	All other converted paper product mfg	10.1	2.7	1.3	1.2	4.9
323	Printing & related support activities	238.8	111.6	35.9	35.5	55.8
3231	Printing & related support activities	238.8	111.6	35.9	35.5	55.8
32311	Printing	234.8	110.4	35.2	34.9	54.3
323110	Commercial lithographic printing	130.1	64.5	20.5	18.2	26.9
323111	Commercial gravure printing	72.2	35.7	10.1	12.1	14.4
323112	Commercial flexographic printing	9.8	3.9	1.2	1.0	3.7
323113	Commercial screen printing	8.8	1.1	1.6	.9	5.3
323115	Digital printing	1.2	(Z)	1.0	(Z)	.1
323116	Manifold business form printing	1.7	.3	.1	.5	.8
323117	Book printing	8.8	4.6	.6	1.9	1.7
323119	Other commercial printing	1.2	.2	.1	.1	.8
32312	Support activities for printing	4.0	1.3	.7	.6	1.5
323121	Tradebinding & related work	1.7	(Z)	.6	.6	.5
323122	Prepress services	2.3	1.2	.1	—	1.0
324	Petroleum & coal products mfg	3 746.1	1 896.2	1 294.1	273.6	282.2
3241	Petroleum & coal products mfg	3 746.1	1 896.2	1 294.1	273.6	282.2
32411	Petroleum refineries	3 596.5	1 819.0	1 259.3	266.2	252.0
324110	Petroleum refineries	3 596.5	1 819.0	1 259.3	266.2	252.0
32412	Asphalt paving, roofing, & saturated materials mfg	66.0	22.1	18.2	5.5	20.2
324121	Asphalt paving mixture & block mfg	7.5	3.8	2.3	.9	.5
324122	Asphalt shingle & coating materials mfg	58.5	18.2	15.9	4.6	19.7
32419	Other petroleum & coal products mfg	83.7	55.1	16.6	1.9	10.0
324191	Petroleum lubricating oil & grease mfg	36.8	23.7	4.4	1.6	7.1
324199	All other petroleum & coal products mfg	46.9	31.4	12.2	.3	2.9
325	Chemical mfg	5 217.2	2 757.9	809.6	417.2	1 232.5
3251	Basic chemical mfg	2 542.2	1 355.0	428.3	176.0	582.9
32511	Petrochemical mfg	267.8	114.4	113.0	7.5	32.8
325110	Petrochemical mfg	267.8	114.4	113.0	7.5	32.8
32512	Industrial gas mfg	77.1	36.3	21.9	2.1	16.8
325120	Industrial gas mfg	77.1	36.3	21.9	2.1	16.8
32513	Dye & pigment mfg	169.5	81.3	22.9	7.9	57.5
325131	Inorganic dye & pigment mfg	111.6	56.2	16.3	2.4	36.7
325132	Synthetic organic dye & pigment mfg	58.0	25.1	6.6	5.5	20.7
32518	Other basic inorganic chemical mfg	578.4	326.2	72.2	46.8	133.3
325181	Alkalies & chlorine mfg	76.7	56.2	7.2	1.6	11.8
325182	Carbon black mfg	11.4	6.0	4.0	.1	1.4
325188	All other basic inorganic chemical mfg	490.3	264.1	61.1	45.0	120.1
32519	Other basic organic chemical mfg	1 449.3	796.9	198.2	111.7	342.5
325191	Gum & wood chemical mfg	12.6	3.5	4.3	.5	4.3
325192	Cyclic crude & intermediate mfg	106.9	68.6	16.5	.4	21.3
325193	Ethyl alcohol mfg	60.2	39.4	13.9	2.4	4.5
325199	All other basic organic chemical mfg	1 269.7	685.4	163.5	108.4	312.4
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	1 151.1	609.2	163.2	111.2	267.4
32521	Resin & synthetic rubber mfg	1 038.6	547.8	144.3	104.9	241.6
325211	Plastics material & resin mfg	789.3	449.7	118.9	94.3	126.4
325212	Synthetic rubber mfg	249.3	98.2	25.3	10.6	115.2
32522	Artificial & synthetic fibers & filaments mfg	112.5	61.4	18.9	6.3	25.9
325221	Cellulosic organic fiber mfg	9.3	7.3	(Z)	.1	1.9
325222	Noncellulosic organic fiber mfg	103.1	54.1	18.9	6.2	23.9
3253	Pesticide, fertilizer, & other agricultural chemical mfg	466.2	265.0	95.7	24.4	81.2
32531	Fertilizer mfg	306.5	131.2	90.5	20.3	64.4
325311	Nitrogenous fertilizer mfg	58.0	21.0	10.8	8.1	18.2
325312	Phosphatic fertilizer mfg	229.6	98.3	75.3	11.4	44.6
325314	Fertilizer (mixing only) mfg	18.8	11.9	4.4	.8	1.7
32532	Pesticide & other agricultural chemical mfg	159.8	133.8	5.1	4.1	16.8
325320	Pesticide & other agricultural chemical mfg	159.8	133.8	5.1	4.1	16.8

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
322	Paper mfg	571.7	757.9	466.6	289.6	357.6	328.4	475.5	345.0	3
3221	Pulp, paper, & paperboard mills	488.5	699.9	387.7	242.6	293.6	308.2	418.4	315.3	4
32211	Pulp mills	48.1	77.2	31.2	26.4	37.1	32.7	28.6	33.6	1
322110	Pulp mills	48.1	77.2	31.2	26.4	37.1	32.7	28.6	33.6	1
32212	Paper mills	267.4	410.2	201.2	144.7	147.7	180.2	250.0	156.1	6
322121	Paper (except newsprint) mills	255.1	375.8	186.5	137.8	140.7	170.2	216.7	151.9	6
322122	Newsprint mills	12.3	34.3	14.7	6.9	7.0	10.0	33.3	4.2	1
32213	Paperboard mills	173.0	212.5	155.3	71.5	108.8	95.2	139.7	125.6	4
322130	Paperboard mills	173.0	212.5	155.3	71.5	108.8	95.2	139.7	125.6	4
3222	Converted paper product mfg	83.3	58.0	78.9	47.0	64.0	20.3	59.2	29.7	5
32221	Paperboard container mfg	12.9	29.4	29.0	19.7	18.0	11.2	16.8	5.6	12
322211	Corrugated & solid fiber box mfg	7.5	26.1	19.7	14.9	13.2	9.0	11.5	4.8	14
322212	Folding paperboard box mfg	3.7	1.9	6.7	3.0	3.9	1.6	3.2	.6	23
322214	Fiber can, tube, drum, & similar products mfg . . . . .	.6	(Z)	.3	.2	.4	.1	.2	(Z)	10
322215	Nonfolding sanitary food container mfg	1.0	1.4	2.3	1.5	.5	.6	1.9	.2	31
32222	Paper bag & coated & treated paper mfg	61.8	12.3	31.8	16.8	39.0	6.0	25.3	18.9	6
322221	Coated & laminated packaging paper & plastics film mfg	6.6	1.6	5.8	2.8	5.6	a.8	2.6	2.1	20
322222	Coated & laminated paper mfg	40.2	8.8	21.4	10.9	29.3	4.5	18.4	7.2	8
322223	Plastics, foil, & coated paper bag mfg	1.4	(Z)	1.2	.3	.9	.2	1.1	.3	42
322224	Uncoated paper & multiwall bag mfg	(Z)	1.3	.6	.5	.4	.3	.6	.2	14
322225	Laminated aluminum foil mfg for flexible packaging uses	13.5	.6	1.9	2.0	2.8	.1	2.2	9.0	11
322226	Surface-coated paperboard mfg . . . . .	.2	(Z)	.8	.4	.1	.1	.3	.1	7
32223	Stationery product mfg	1.0	.7	3.8	1.8	.8	.3	2.3	.2	34
322232	Envelope mfg . . . . .	.5	.6	3.2	1.5	.4	.3	1.9	.2	44
32229	Other converted paper product mfg	7.5	15.7	14.2	8.6	6.3	2.7	14.8	4.9	11
322291	Sanitary paper product mfg	5.8	10.3	11.1	6.5	4.8	2.1	9.5	4.2	14
322299	All other converted paper product mfg	1.7	5.3	3.1	2.1	1.4	.6	5.2	.7	9
323	Printing & related support activities	159.2	20.1	59.5	36.0	117.7	14.0	38.6	32.4	5
3231	Printing & related support activities	159.2	20.1	59.5	36.0	117.7	14.0	38.6	32.4	5
32311	Printing	158.2	19.1	57.5	35.1	116.3	13.5	37.9	32.1	5
323110	Commercial lithographic printing	87.2	5.1	37.8	20.0	61.2	7.0	18.1	23.9	8
323111	Commercial gravure printing	59.0	7.3	5.9	6.4	47.4	4.0	8.8	5.7	5
323112	Commercial flexographic printing	2.7	3.1	3.9	1.6	3.5	.7	3.4	.6	19
323113	Commercial screen printing	2.7	.9	5.2	3.9	.2	.4	3.4	.9	24
323115	Digital printing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	11
323116	Manifold business form printing . . . . .	.1	.8	.8	.6	(D)	(D)	.8	(D)	21
323117	Book printing	5.1	1.4	2.3	2.0	2.8	1.1	1.9	1.1	22
323119	Other commercial printing	(D)	(D)	.6	.3	.1	.1	.7	(Z)	58
32312	Support activities for printing	1.0	1.0	2.0	1.0	1.4	.6	.8	.3	36
323121	Tradebinding & related work . . . . .	.7	.8	.3	.1	1.1	(Z)	.3	.1	47
323122	Prepress services . . . . .	.3	.2	1.8	.8	.3	.5	.5	.1	52
324	Petroleum & coal products mfg	2 522.2	754.9	469.0	616.0	1 423.2	511.7	716.1	479.1	4
3241	Petroleum & coal products mfg	2 522.2	754.9	469.0	616.0	1 423.2	511.7	716.1	479.1	4
32411	Petroleum refineries	2 444.9	717.1	434.5	587.5	1 385.7	486.4	676.4	460.4	4
324110	Petroleum refineries	2 444.9	717.1	434.5	587.5	1 385.7	486.4	676.4	460.4	4
32412	Asphalt paving, roofing, & saturated materials mfg	31.7	10.4	23.9	10.5	19.6	4.9	23.4	7.6	8
324121	Asphalt paving mixture & block mfg	5.6	1.2	.7	2.7	1.3	1.1	1.3	1.1	34
324122	Asphalt shingle & coating materials mfg	26.1	9.2	23.3	7.8	18.4	3.8	22.1	6.5	7
32419	Other petroleum & coal products mfg	45.6	27.4	10.6	17.9	17.9	20.4	16.4	11.1	9
324191	Petroleum lubricating oil & grease mfg	13.7	14.8	8.3	11.8	7.1	5.7	9.3	2.9	6
324199	All other petroleum & coal products mfg	31.9	12.6	2.4	6.1	10.8	14.7	7.1	8.1	15
325	Chemical mfg	1 697.5	1 986.2	1 533.4	1 111.5	1 307.3	764.8	1 225.6	807.9	2
3251	Basic chemical mfg	858.5	1 080.1	603.6	517.6	659.6	433.2	580.0	351.7	4
32511	Petrochemical mfg	153.9	64.9	49.1	36.3	149.9	22.4	47.1	12.1	8
325110	Petrochemical mfg	153.9	64.9	49.1	36.3	149.9	22.4	47.1	12.1	8
32512	Industrial gas mfg	28.1	33.2	15.8	18.0	14.6	12.8	21.0	10.8	2
325120	Industrial gas mfg	28.1	33.2	15.8	18.0	14.6	12.8	21.0	10.8	2
32513	Dye & pigment mfg	41.0	64.4	64.2	31.4	15.0	52.7	43.7	26.8	4
325131	Inorganic dye & pigment mfg	30.9	33.8	46.8	22.3	10.4	43.8	16.7	18.3	6
325132	Synthetic organic dye & pigment mfg	10.1	30.5	17.3	9.2	4.5	8.8	26.9	8.5	3
32518	Other basic inorganic chemical mfg	178.9	274.5	125.0	139.1	81.8	147.1	125.7	84.7	10
325181	Alkalies & chlorine mfg	21.4	42.8	12.5	18.6	12.0	18.6	16.7	10.8	1
325182	Carbon black mfg	8.8	.9	1.7	*2.2	1.8	1.7	1.7	3.9	1
325188	All other basic inorganic chemical mfg	148.7	230.8	110.8	118.3	67.9	126.8	107.4	69.9	12
32519	Other basic organic chemical mfg	456.6	643.1	349.5	292.8	398.3	198.3	342.6	217.3	4
325191	Gum & wood chemical mfg	4.7	4.2	3.6	2.5	2.5	.9	4.6	2.2	8
325192	Cyclic crude & intermediate mfg	24.2	52.6	30.0	25.8	8.5	10.9	40.8	20.9	1
325193	Ethyl alcohol mfg	41.2	14.8	4.2	5.0	33.7	5.4	7.2	9.0	9
325199	All other basic organic chemical mfg	386.5	571.5	311.7	259.5	353.7	181.1	290.0	185.3	4
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	361.9	377.0	412.2	230.7	391.1	163.1	210.1	156.2	3
32521	Resin & synthetic rubber mfg	319.7	324.1	394.8	209.1	368.6	149.4	163.5	147.9	3
325211	Plastics material & resin mfg	280.1	231.8	277.4	174.1	210.6	137.2	131.7	135.4	4
325212	Synthetic rubber mfg	39.6	92.3	117.4	35.0	158.1	12.2	31.8	12.1	5
32522	Artificial & synthetic fibers & filaments mfg	42.2	52.9	17.4	21.6	22.4	13.7	46.5	8.3	4
325221	Cellulosic organic fiber mfg	1.3	6.2	1.8	2.8	2.0	1.6	2.3	.6	1
325222	Noncellulosic organic fiber mfg	40.8	46.7	15.6	18.8	20.4	12.0	44.2	7.7	5
3253	Pesticide, fertilizer, & other agricultural chemical mfg	175.5	158.3	132.4	95.1	95.4	63.0	105.7	107.0	3
32531	Fertilizer mfg	137.7	71.9	96.8	51.2	70.3	38.9	77.1	69.0	2
325311	Nitrogenous fertilizer mfg	26.2	19.8	12.0	9.8	22.6	4.1	7.8	13.7	1
325312	Phosphatic fertilizer mfg	98.8	48.6	82.2	38.9	34.8	33.5	67.4	55.1	1
325314	Fertilizer (mixing only) mfg	12.7	3.5	2.6	2.5	12.9	1.3	2.0	.2	20
32532	Pesticide & other agricultural chemical mfg	37.8	86.4	35.7	43.9	25.2	24.2	28.5	38.0	7
325320	Pesticide & other agricultural chemical mfg	37.8	86.4	35.7	43.9	25.2	24.2	28.5	38.0	7

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
325	Chemical mfg—Con.					
3254	Pharmaceutical & medicine mfg	430.7	224.6	38.4	54.2	113.5
32541	Pharmaceutical & medicine mfg	430.7	224.6	38.4	54.2	113.5
325411	Medicinal & botanical mfg	128.0	98.7	4.1	6.5	18.7
325412	Pharmaceutical preparation mfg	266.8	116.3	30.8	40.1	79.6
325413	In-vitro diagnostic substance mfg	8.0	(D)	(D)	(D)	5.4
325414	Biological product (except diagnostic) mfg	27.9	8.2	(D)	(D)	9.7
3255	Paint, coating, & adhesive mfg	137.6	47.2	21.3	13.7	55.4
32551	Paint & coating mfg	86.4	25.6	12.8	11.3	36.7
325510	Paint & coating mfg	86.4	25.6	12.8	11.3	36.7
32552	Adhesive mfg	51.2	21.5	8.5	2.5	18.7
325520	Adhesive mfg	51.2	21.5	8.5	2.5	18.7
3256	Soap, cleaning compound, & toilet preparation mfg	209.5	104.3	30.7	16.8	57.7
32561	Soap & cleaning compound mfg	141.1	82.3	19.7	6.3	32.8
325611	Soap & other detergent mfg	46.2	26.4	4.3	2.2	13.3
325612	Polish & other sanitation good mfg	32.3	15.7	6.7	1.5	8.5
325613	Surface active agent mfg	62.6	40.2	8.7	2.7	11.0
32562	Toilet preparation mfg	68.4	22.0	11.1	10.5	24.8
325620	Toilet preparation mfg	68.4	22.0	11.1	10.5	24.8
3259	Other chemical product mfg	279.8	152.5	32.0	20.8	74.5
32591	Printing ink mfg	8.2	2.3	.2	.2	5.5
325910	Printing ink mfg	8.2	2.3	.2	.2	5.5
32592	Explosives mfg	13.8	8.4	1.5	.8	3.0
325920	Explosives mfg	13.8	8.4	1.5	.8	3.0
32599	All other chemical product & preparation mfg	255.6	139.7	30.2	19.7	66.0
325991	Custom compounding of purchased resin	49.3	21.9	7.3	2.3	17.8
325992	Photographic film, paper, plate, & chemical mfg	65.4	43.1	4.3	7.5	10.4
325998	All other miscellaneous chemical product & preparation mfg	140.9	74.7	18.6	9.9	37.7
326	Plastics & rubber products mfg	503.2	214.0	79.4	50.2	159.6
3261	Plastics product mfg	390.4	176.9	57.7	36.2	119.7
32611	Unsupported plastics film, sheet, & bag mfg	155.9	74.6	25.0	16.6	39.6
326111	Unsupported plastics bag mfg	15.1	3.1	5.3	2.3	4.4
326112	Unsupported plastics packaging film & sheet mfg	57.8	30.4	5.2	7.1	15.1
326113	Unsupported plastics film & sheet (except packaging) mfg	83.0	41.1	14.6	7.2	20.1
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	17.8	6.6	4.2	1.5	5.4
326121	Unsupported plastics profile shape mfg	8.3	1.5	2.3	1.1	3.4
326122	Plastics pipe & pipe fitting mfg	9.5	5.2	1.9	.4	2.0
32613	Laminated plastics plate, sheet, & shape mfg	16.5	11.0	1.0	.6	3.9
326130	Laminated plastics plate, sheet, & shape mfg	16.5	11.0	1.0	.6	3.9
32614	Polystyrene foam product mfg	17.5	8.8	2.1	1.1	5.4
326140	Polystyrene foam product mfg	17.5	8.8	2.1	1.1	5.4
32615	Urethane & other foam product (except polystyrene) mfg	7.0	1.5	2.5	.7	2.3
326150	Urethane & other foam product (except polystyrene) mfg	7.0	1.5	2.5	.7	2.3
32616	Plastics bottle mfg	1.8	.1	.1	.2	1.5
326160	Plastics bottle mfg	1.8	.1	.1	.2	1.5
32619	Other plastics product mfg	173.9	74.3	22.7	15.5	61.4
326191	Plastics plumbing fixture mfg	22.7	12.5	3.0	.4	6.8
326192	Resilient floor covering mfg	18.0	9.8	1.6	1.3	5.4
326199	All other plastics product mfg	133.2	52.0	18.1	13.8	49.3
3262	Rubber product mfg	112.8	37.1	21.7	14.0	40.0
32621	Tire mfg	56.5	17.0	12.0	9.9	17.6
326211	Tire mfg (except retreading)	54.6	16.5	11.8	9.4	16.8
326212	Tire retreading	1.9	.5	.2	.5	.8
32622	Rubber & plastics hoses & belting mfg	10.1	1.5	2.8	1.0	4.8
326220	Rubber & plastics hoses & belting mfg	10.1	1.5	2.8	1.0	4.8
32629	Other rubber product mfg	46.1	18.6	6.9	3.1	17.5
326291	Rubber product mfg for mechanical use	28.4	11.3	4.2	2.4	10.6
326299	All other rubber product mfg	17.7	7.3	2.7	.7	7.0
327	Nonmetallic mineral product mfg	696.0	398.0	125.6	50.5	121.9
3271	Clay product & refractory mfg	64.7	32.6	13.3	2.8	16.0
32711	Pottery, ceramics, & plumbing fixture mfg	22.6	10.2	4.5	1.1	6.8
327111	Vitreous china plumbing fixture & bathroom accessories mfg	3.6	2.2	.1	(Z)	1.3
327112	Vitreous china, fine earthenware, & other pottery product mfg	8.0	3.4	.8	.4	3.3
327113	Porcelain electrical supply mfg	11.0	4.5	3.7	.6	2.2
32712	Clay building material & refractories mfg	42.1	22.4	8.8	1.7	9.2
327121	Brick & structural clay tile mfg	22.8	13.0	6.8	.7	2.3
327122	Ceramic wall & floor tile mfg	7.0	4.0	.2	.8	2.0
327124	Clay refractory mfg	3.0	.9	.6	(Z)	1.5
327125	Nonclay refractory mfg	9.0	4.4	1.1	.2	3.3
3272	Glass & glass product mfg	120.0	39.0	21.6	15.4	43.9
32721	Glass & glass product mfg	120.0	39.0	21.6	15.4	43.9
327211	Flat glass mfg	40.4	10.0	7.2	5.4	17.8
327212	Other pressed & blown glass & glassware mfg	38.7	16.1	7.2	3.4	12.0
327213	Glass container mfg	25.8	8.8	5.7	4.7	6.6
327215	Glass product mfg made of purchased glass	15.1	4.2	1.5	1.8	7.5
3273	Cement & concrete product mfg	313.2	190.6	68.3	20.0	34.4
32731	Cement mfg	237.9	170.5	52.8	4.7	9.9
327310	Cement mfg	237.9	170.5	52.8	4.7	9.9
32732	Ready-mix concrete mfg	52.0	14.1	10.2	12.0	15.7
327320	Ready-mix concrete mfg	52.0	14.1	10.2	12.0	15.7
32733	Concrete pipe, brick, & block mfg	8.3	2.8	1.6	.6	3.1
327331	Concrete block & brick mfg	5.1	1.5	1.2	.3	2.1
327332	Concrete pipe mfg	3.2	1.4	.5	.3	1.0
32739	Other concrete product mfg	15.1	3.2	3.7	2.6	5.6
327390	Other concrete product mfg	15.1	3.2	3.7	2.6	5.6

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
325	Chemical mfg—Con.									
3254	Pharmaceutical & medicine mfg	111.7	144.2	174.9	93.8	66.7	32.6	146.4	91.3	6
32541	Pharmaceutical & medicine mfg	111.7	144.2	174.9	93.8	66.7	32.6	146.4	91.3	6
325411	Medicinal & botanical mfg	36.5	46.5	45.0	22.7	15.1	12.0	40.8	37.4	5
325412	Pharmaceutical preparation mfg	73.0	86.5	107.3	65.1	46.0	19.8	87.2	48.7	10
325413	In-vitro diagnostic substance mfg . . . . .	.4	1.3	6.2	1.8	(D)	(D)	5.5	(D)	20
325414	Biological product (except diagnostic) mfg	1.7	9.8	16.4	4.2	(D)	(D)	12.9	(D)	12
3255	Paint, coating, & adhesive mfg	48.3	25.6	63.7	36.7	19.2	14.7	52.7	14.3	8
32551	Paint & coating mfg	30.5	14.4	41.6	22.6	10.4	10.4	33.7	9.3	8
325510	Paint & coating mfg	30.5	14.4	41.6	22.6	10.4	10.4	33.7	9.3	8
32552	Adhesive mfg	17.8	11.2	22.1	14.1	8.8	4.2	19.0	5.0	15
325520	Adhesive mfg	17.8	11.2	22.1	14.1	8.8	4.2	19.0	5.0	15
3256	Soap, cleaning compound, & toilet preparation mfg	58.7	94.3	56.5	60.0	31.9	21.9	59.0	36.8	10
32561	Soap & cleaning compound mfg	52.7	60.4	28.0	48.5	16.4	12.7	30.5	33.0	10
325611	Soap & other detergent mfg	14.8	18.3	13.1	5.1	3.1	5.3	13.1	19.6	22
325612	Polish & other sanitation good mfg	12.8	15.3	4.2	9.5	5.3	3.6	7.1	6.8	29
325613	Surface active agent mfg	25.1	26.7	10.8	33.9	7.9	3.8	10.4	6.6	3
32562	Toilet preparation mfg	6.0	33.9	28.5	11.5	15.6	9.2	28.4	3.7	23
325620	Toilet preparation mfg	6.0	33.9	28.5	11.5	15.6	9.2	28.4	3.7	23
3259	Other chemical product mfg	82.9	106.8	90.0	77.5	43.4	36.3	71.9	50.7	4
32591	Printing ink mfg	2.1	2.5	3.6	2.1	2.2	.7	3.1	.1	27
325910	Printing ink mfg	2.1	2.5	3.6	2.1	2.2	.7	3.1	.1	27
32592	Explosives mfg	2.1	4.9	6.7	5.0	1.4	2.6	4.6	.2	6
325920	Explosives mfg	2.1	4.9	6.7	5.0	1.4	2.6	4.6	.2	6
32599	All other chemical product & preparation mfg	78.6	97.3	79.7	70.3	37.9	33.0	64.0	50.4	5
325991	Custom compounding of purchased resin	18.0	12.5	18.8	13.4	9.7	2.2	15.1	8.9	12
325992	Photographic film, paper, plate, & chemical mfg	19.2	24.9	21.3	21.0	11.0	6.8	8.4	18.2	2
325998	All other miscellaneous chemical product & preparation mfg	41.5	60.0	39.5	35.8	17.3	24.0	40.6	23.3	7
326	Plastics & rubber products mfg	238.6	84.6	180.0	118.7	133.8	54.0	141.1	55.7	5
3261	Plastics product mfg	194.8	62.7	132.9	91.6	107.9	43.7	99.6	47.4	6
32611	Unsupported plastics film, sheet, & bag mfg	77.3	29.4	49.1	35.4	42.9	17.9	38.2	21.6	6
326111	Unsupported plastics bag mfg	6.7	3.4	5.0	4.9	4.8	1.1	3.0	1.3	23
326112	Unsupported plastics packaging film & sheet mfg	32.3	4.3	21.1	10.7	21.2	3.5	14.6	7.7	6
326113	Unsupported plastics film & sheet (except packaging) mfg	38.3	21.7	23.0	19.7	16.8	13.3	20.5	12.7	9
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	10.1	2.2	5.5	3.4	4.1	1.3	5.7	3.3	17
326121	Unsupported plastics profile shape mfg	3.7	1.2	3.5	1.6	2.5	.4	3.5	.3	25
326122	Plastics pipe & pipe fitting mfg	6.4	1.0	2.0	1.8	1.6	.8	2.2	3.1	24
32613	Laminated plastics plate, sheet, & shape mfg	12.0	1.3	3.3	1.9	10.2	.6	2.8	1.0	5
326130	Laminated plastics plate, sheet, & shape mfg	12.0	1.3	3.3	1.9	10.2	.6	2.8	1.0	5
32614	Polystyrene foam product mfg	9.2	2.8	5.5	2.5	8.3	1.1	3.3	2.2	22
326140	Polystyrene foam product mfg	9.2	2.8	5.5	2.5	8.3	1.1	3.3	2.2	22
32615	Urethane & other foam product (except polystyrene) mfg	3.3	.4	3.3	2.0	1.0	1.0	1.5	1.5	22
326150	Urethane & other foam product (except polystyrene) mfg	3.3	.4	3.3	2.0	1.0	1.0	1.5	1.5	22
32616	Plastics bottle mfg . . . . .	.1	.8	.9	.2	(Z)	.3	1.3	(Z)	32
326160	Plastics bottle mfg . . . . .	.1	.8	.9	.2	(Z)	.3	1.3	(Z)	32
32619	Other plastics product mfg	82.7	25.9	65.3	46.2	41.5	21.6	46.9	17.8	11
326191	Plastics plumbing fixture mfg	12.0	5.3	5.4	6.2	2.6	9.4	2.2	2.3	54
326192	Resilient floor covering mfg	10.9	2.1	5.0	2.8	9.1	.5	3.9	1.7	5
326199	All other plastics product mfg	59.8	18.5	54.9	37.2	29.8	11.6	40.7	13.9	10
3262	Rubber product mfg	43.8	21.9	47.1	27.0	25.8	10.2	41.4	8.3	5
32621	Tire mfg	24.9	10.1	21.5	14.0	11.9	4.2	21.5	4.7	6
326211	Tire mfg (except retreading)	24.1	10.0	20.5	13.3	11.5	4.0	21.4	4.4	6
326212	Tire retreading . . . . .	.8	.1	1.0	.7	.4	.2	.2	.4	21
32622	Rubber & plastics hoses & belting mfg	2.8	2.2	5.1	2.9	1.3	.6	4.5	.9	11
326220	Rubber & plastics hoses & belting mfg	2.8	2.2	5.1	2.9	1.3	.6	4.5	.9	11
32629	Other rubber product mfg	16.1	9.6	20.5	10.1	12.6	5.4	15.4	2.6	9
326291	Rubber product mfg for mechanical use	10.8	4.5	13.2	7.5	7.1	2.1	9.7	2.1	13
326299	All other rubber product mfg	5.3	5.2	7.3	2.6	5.5	3.3	5.7	.6	11
327	Nonmetallic mineral product mfg	483.0	76.4	136.6	134.8	226.0	93.4	128.3	113.5	4
3271	Clay product & refractory mfg	36.6	13.0	15.1	16.6	14.5	9.7	13.5	10.4	9
32711	Pottery, ceramics, & plumbing fixture mfg	9.3	7.5	7.7	7.1	4.4	2.6	5.8	2.7	7
327111	Vitreous china plumbing fixture & bathroom accessories mfg	1.2	1.4	1.1	.6	.5	.6	1.6	.2	2
327112	Vitreous china, fine earthenware, & other pottery product mfg	3.3	2.0	2.7	3.7	.5	.7	2.4	.6	9
327113	Porcelain electrical supply mfg	4.8	4.2	2.0	2.8	3.3	1.3	1.8	1.8	11
32712	Clay building material & refractories mfg	27.3	5.5	9.3	9.5	10.1	7.1	7.7	7.7	13
327121	Brick & structural clay tile mfg	18.0	2.7	2.1	4.7	5.2	5.6	1.6	5.7	24
327122	Ceramic wall & floor tile mfg	3.2	1.3	2.6	2.3	1.4	.4	2.0	.9	9
327124	Clay refractory mfg	1.4	.3	1.2	.6	.7	.2	1.2	.2	20
327125	Nonclay refractory mfg	4.4	1.2	3.4	1.7	2.7	.9	2.8	.9	7
3272	Glass & glass product mfg	50.4	21.4	48.1	19.0	29.3	12.3	41.1	18.1	7
32721	Glass & glass product mfg	50.4	21.4	48.1	19.0	29.3	12.3	41.1	18.1	7
327211	Flat glass mfg	18.8	2.8	18.8	4.4	14.8	2.7	8.7	9.7	13
327212	Other pressed & blown glass & glassware mfg	16.0	10.1	12.7	8.0	7.4	7.1	12.7	3.4	8
327213	Glass container mfg	13.1	5.4	7.3	3.0	5.4	2.0	10.7	4.7	6
327215	Glass product mfg made of purchased glass	2.6	3.2	9.3	3.6	1.7	.5	8.9	.3	39
3273	Cement & concrete product mfg	244.4	24.0	44.8	67.6	100.2	43.0	42.3	60.1	8
32731	Cement mfg	219.4	8.3	10.2	36.7	91.1	34.8	23.6	51.7	8
327310	Cement mfg	219.4	8.3	10.2	36.7	91.1	34.8	23.6	51.7	8
32732	Ready-mix concrete mfg	18.1	10.8	23.1	24.2	7.4	5.5	7.9	6.9	27
327320	Ready-mix concrete mfg	18.1	10.8	23.1	24.2	7.4	5.5	7.9	6.9	27
32733	Concrete pipe, brick, & block mfg	3.2	1.2	3.8	2.3	.7	.8	3.8	.7	11
327331	Concrete block & brick mfg	2.2	.4	2.5	1.4	.5	.4	2.5	.3	11
327332	Concrete pipe mfg	1.0	.9	1.3	.9	.2	.4	1.3	.4	20
32739	Other concrete product mfg	3.7	3.8	7.6	4.4	1.0	1.8	7.0	.9	13
327390	Other concrete product mfg	3.7	3.8	7.6	4.4	1.0	1.8	7.0	.9	13

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
327	Nonmetallic mineral product mfg—Con.					
3274	Lime & gypsum product mfg	59.8	41.1	8.2	6.2	4.2
32741	Lime mfg	29.8	23.1	4.4	.7	1.6
327410	Lime mfg	29.8	23.1	4.4	.7	1.6
32742	Gypsum product mfg	29.9	18.0	3.8	5.5	2.6
327420	Gypsum product mfg	29.9	18.0	3.8	5.5	2.6
3279	Other nonmetallic mineral product mfg	138.3	94.7	14.2	6.1	23.3
32791	Abrasive product mfg	14.5	9.5	.6	.4	3.9
327910	Abrasive product mfg	14.5	9.5	.6	.4	3.9
32799	All other nonmetallic mineral product mfg	123.8	85.1	13.6	5.7	19.3
327991	Cut stone & stone product mfg	3.7	.9	1.2	.4	1.2
327992	Ground or trested mineral & earth mfg	19.5	6.9	7.4	1.8	3.4
327993	Mineral wool mfg	58.3	36.8	4.6	3.1	13.8
327999	All other miscellaneous nonmetallic mineral product mfg	42.3	40.5	.5	.4	.9
331	Primary metal mfg	2 291.1	1 238.3	273.2	219.3	560.4
3311	Iron & steel mills & ferroalloy mfg	1 197.4	653.2	154.6	121.5	268.1
33111	Iron & steel mills & ferroalloy mfg	1 197.4	653.2	154.6	121.5	268.1
331111	Iron & steel mills	1 167.1	636.6	145.0	120.6	264.9
331112	Electrometallurgical ferroalloy product mfg	30.3	16.6	9.7	.9	3.2
3312	Steel product mfg from purchased steel	82.0	39.3	12.1	4.4	26.2
33121	Iron & steel pipes & tubes mfg from purchased steel	11.6	3.0	3.0	1.4	4.2
331210	Iron & steel pipes & tubes mfg from purchased steel	11.6	3.0	3.0	1.4	4.2
33122	Rolling & drawing of purchased steel	70.4	36.3	9.1	3.0	22.0
331221	Cold-rolled steel shape mfg	40.3	21.7	6.9	.8	10.9
331222	Steel wire drawing	30.1	14.7	2.1	2.2	11.1
3313	Alumina & aluminum production & processing	331.1	181.4	34.8	33.3	81.6
33131	Alumina & aluminum production & processing	331.1	181.4	34.8	33.3	81.6
331311	Alumina refining	18.2	5.0	5.5	.7	7.0
331312	Primary aluminum production	126.3	89.3	5.5	14.1	17.3
331314	Secondary smelting & alloying of aluminum	64.6	29.3	9.4	1.3	24.6
331315	Aluminum sheet, plate, & foil mfg	76.9	39.0	7.7	11.7	18.5
331316	Aluminum extruded product mfg	41.6	18.1	5.8	4.9	12.8
331319	Other aluminum rolling & drawing	3.5	.7	.8	.6	1.4
3314	Nonferrous metal (except aluminum) production & processing	227.4	128.0	33.2	21.5	44.6
33141	Nonferrous metal (except aluminum) smelting & refining	54.5	21.9	20.5	5.5	6.6
331411	Primary smelting & refining of copper	4.5	2.5	.1	.1	1.8
331419	Other nonferrous metal primary smelting & refining	49.9	19.4	20.3	5.4	4.8
33142	Copper rolling, drawing, extruding, & alloying	48.8	32.8	3.9	4.6	7.6
331421	Copper rolling, drawing, & extruding	37.6	26.5	2.9	2.9	5.3
331422	Copper wire (except mechanical) drawing	6.0	3.0	.4	1.4	1.1
331423	Secondary smelting, refining, & alloying of copper	5.2	3.2	.6	.3	1.2
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	124.0	73.4	8.8	11.4	30.5
331491	Other nonferrous metal rolling, drawing, & extruding	42.4	19.9	3.2	4.3	15.0
331492	Other nonferrous metal secondary smelting, refining, & alloying	81.7	53.5	5.6	7.1	15.5
3315	Foundries	453.1	236.2	38.5	38.5	139.9
33151	Ferrous metal foundries	387.7	208.0	27.9	28.2	123.5
331511	Iron foundries	317.1	181.7	21.0	20.8	93.5
331512	Steel investment foundries	21.1	9.6	2.9	4.2	4.4
331513	Steel foundries (except investment)	49.4	16.7	3.9	3.2	25.7
33152	Nonferrous metal foundries	65.4	28.1	10.6	10.3	16.3
331521	Aluminum die-casting foundries	31.9	16.0	5.4	3.7	6.7
331522	Nonferrous (except aluminum) die-casting foundries	7.4	2.7	.8	1.5	2.5
331524	Aluminum foundries (except die-casting)	15.0	6.7	2.8	1.6	3.9
331525	Copper foundries (except die-casting)	7.5	1.3	.6	3.2	2.4
331528	Other nonferrous foundries (except die-casting)	3.6	1.4	1.0	.3	.9
332	Fabricated metal product mfg	763.3	353.1	84.1	92.4	233.8
3321	Forging & stamping	52.1	26.8	4.0	3.5	17.8
33211	Forging & stamping	52.1	26.8	4.0	3.5	17.8
332111	Iron & steel forging	4.0	1.2	.8	.5	1.4
332112	Nonferrous forging	19.3	13.7	1.1	.7	3.9
332114	Custom roll forming	2.8	1.1	.2	.4	1.1
332115	Crown & closure mfg	5.3	4.3	.6	(Z)	.3
332116	Metal stamping	14.8	5.0	1.0	1.1	7.6
332117	Powder metallurgy part mfg	5.8	1.4	.2	.7	3.5
3322	Cutlery & handtool mfg	22.7	9.9	2.9	2.7	7.3
33221	Cutlery & handtool mfg	22.7	9.9	2.9	2.7	7.3
332211	Cutlery & flatware (except precious) mfg	3.9	1.9	.6	.6	.8
332212	Hand & edge tool mfg	12.8	5.3	2.2	1.0	4.4
332213	Saw blade & handsaw mfg	3.3	1.3	.2	.9	.9
332214	Kitchen utensil, pot, & pan mfg	2.7	1.4	(Z)	.1	1.1
3323	Architectural & structural metals mfg	54.3	24.5	6.2	3.3	20.3
33231	Plate work & fabricated structural product mfg	23.0	8.8	3.4	1.6	9.2
332311	Prefabricated metal building & component mfg	1.9	.6	.5	.1	.7
332312	Fabricated structural metal mfg	17.9	7.1	2.1	1.2	7.5
332313	Plate work mfg	3.2	1.2	.8	.3	1.0
33232	Ornamental & architectural metal products mfg	31.2	15.7	2.8	1.7	11.0
332321	Metal window & door mfg	17.1	7.6	1.9	1.0	6.6
332322	Sheet metal work mfg	12.2	7.6	.9	.5	3.3
332323	Ornamental & architectural metal work mfg	1.9	.5	.1	.1	1.1
3324	Boiler, tank, & shipping container mfg	94.0	57.3	11.6	5.0	20.1
33241	Power boiler & heat exchanger mfg	4.0	2.6	.2	.6	.6
332410	Power boiler & heat exchanger mfg	4.0	2.6	.2	.6	.6
33242	Metal tank (heavy gauge) mfg	4.4	2.3	.5	.1	1.6
332420	Metal tank (heavy gauge) mfg	4.4	2.3	.5	.1	1.6
33243	Metal can, box, & other metal container (light gauge) mfg	85.5	52.4	11.0	4.2	17.9
332431	Metal can mfg	76.0	49.3	8.7	3.7	14.3
332439	Other metal container mfg	9.5	3.2	2.3	.5	3.5

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NAICS code	Industry	Media			Cost category					Relative standard error PAOC	
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation		
327	Nonmetallic mineral product mfg—Con.										
3274	Lime & gypsum product mfg	48.9	3.4	7.4	11.9	21.3	9.8	7.7	9.1	8	
32741	Lime mfg	24.3	2.9	2.6	7.9	5.2	6.4	3.6	6.7	15	
327410	Lime mfg	24.3	2.9	2.6	7.9	5.2	6.4	3.6	6.7	15	
32742	Gypsum product mfg	24.6	.5	4.8	4.0	16.1	3.4	4.1	2.4	5	
327420	Gypsum product mfg	24.6	.5	4.8	4.0	16.1	3.4	4.1	2.4	5	
3279	Other nonmetallic mineral product mfg	102.6	14.5	21.2	19.6	60.6	18.7	23.6	15.8	6	
32791	Abrasive product mfg	8.4	1.6	4.5	2.8	4.7	1.6	3.8	1.7	4	
327910	Abrasive product mfg	8.4	1.6	4.5	2.8	4.7	1.6	3.8	1.7	4	
32799	All other nonmetallic mineral product mfg	94.2	12.8	16.7	16.8	55.9	17.1	19.9	14.1	7	
327991	Cut stone & stone product mfg	.5	1.6	1.7	1.6	.4	.8	.7	.1	25	
327992	Ground or trested mineral & earth mfg	14.2	4.2	1.2	3.9	5.2	6.8	2.0	1.6	20	
327993	Mineral wool mfg	38.5	6.9	12.9	7.4	22.3	6.5	14.4	7.7	3	
327999	All other miscellaneous nonmetallic mineral product mfg	41.1	.2	1.0	3.9	27.9	3.0	2.7	4.7	17	
331	Primary metal mfg	989.5	638.4	663.1	406.7	598.9	313.8	666.1	305.6	4	
3311	Iron & steel mills & ferroalloy mfg	467.2	394.6	335.6	203.3	291.1	156.9	391.0	155.0	7	
33111	Iron & steel mills & ferroalloy mfg	467.2	394.6	335.6	203.3	291.1	156.9	391.0	155.0	7	
331111	Iron & steel mills	449.1	389.4	328.5	197.4	278.0	152.2	388.3	151.0	7	
331112	Electrometallurgical ferroalloy product mfg	18.2	5.2	7.0	5.9	13.1	4.7	2.7	4.0	1	
3312	Steel product mfg from purchased steel	18.1	39.7	24.2	21.8	10.0	15.7	26.4	8.1	5	
33121	Iron & steel pipes & tubes mfg from purchased steel	2.9	3.9	4.8	3.2	.9	1.4	5.3	.8	16	
331210	Iron & steel pipes & tubes mfg from purchased steel	2.9	3.9	4.8	3.2	.9	1.4	5.3	.8	16	
33122	Rolling & drawing of purchased steel	15.1	35.9	19.4	18.6	9.1	14.3	21.1	7.2	6	
331221	Cold-rolled steel shape mfg	11.0	19.6	9.6	9.1	5.7	8.5	13.2	3.7	3	
331222	Steel wire drawing	4.1	16.3	9.7	9.4	3.4	5.8	8.0	3.5	12	
3313	Alumina & aluminum production & processing	166.8	54.1	110.1	60.3	86.7	51.2	73.7	59.1	3	
33131	Alumina & aluminum production & processing	166.8	54.1	110.1	60.3	86.7	51.2	73.7	59.1	3	
331311	Alumina refining	6.7	2.3	9.1	2.0	6.1	2.5	5.6	1.9	1	
331312	Primary aluminum production	89.2	12.5	24.5	26.8	46.4	19.7	18.2	15.2	1	
331314	Secondary smelting & alloying of aluminum	38.6	2.2	23.7	10.0	14.8	7.1	21.9	10.8	14	
331315	Aluminum sheet, plate, & foil mfg	26.0	17.2	33.7	9.5	11.3	15.1	12.8	28.3	4	
331316	Aluminum extruded product mfg	5.4	19.1	17.2	11.5	6.0	6.5	14.9	2.7	6	
331319	Other aluminum rolling & drawing	.9	.7	1.9	.6	2.1	.3	.2	.2	6	
3314	Nonferrous metal (except aluminum) production & processing	94.4	83.3	49.6	55.0	41.9	53.0	49.7	27.7	3	
33141	Nonferrous metal (except aluminum) smelting & refining	24.9	17.2	12.4	13.2	17.0	8.6	9.3	6.3	3	
331411	Primary smelting & refining of copper	1.7	1.7	1.2	.7	.6	.6	1.8	.9	1	
331419	Other nonferrous metal primary smelting & refining	23.3	15.5	11.2	12.5	16.3	8.1	7.6	5.5	4	
33142	Copper rolling, drawing, extruding, & alloying	17.1	23.9	7.8	12.9	8.7	9.7	9.8	7.8	6	
331421	Copper rolling, drawing, & extruding	10.0	22.2	5.4	9.6	5.1	8.6	7.6	6.8	7	
331422	Copper wire (except mechanical) drawing	3.4	1.2	1.4	1.2	2.2	.3	1.8	.5	15	
331423	Secondary smelting, refining, & alloying of copper	3.6	.6	1.0	2.1	1.4	.8	.4	.5	1	
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	52.4	42.2	29.4	29.0	16.3	34.6	30.6	13.5	4	
331491	Other nonferrous metal rolling, drawing, & extruding	6.3	23.6	12.5	12.5	2.7	5.6	17.8	3.8	9	
331492	Other nonferrous metal secondary smelting, refining, & alloying	46.1	18.7	16.9	16.4	13.7	29.1	12.8	9.7	4	
3315	Foundries	242.8	66.6	143.7	66.2	169.1	36.8	125.3	55.7	4	
33151	Ferrous metal foundries	218.7	44.8	124.1	49.0	152.1	30.3	104.5	51.7	5	
331511	Iron foundries	187.3	39.1	90.6	39.1	130.6	23.3	78.1	46.1	6	
331512	Steel investment foundries	8.9	4.3	8.0	5.6	6.0	1.3	6.2	2.0	21	
331513	Steel foundries (except investment)	22.5	1.5	25.5	4.3	15.6	5.7	20.2	3.6	6	
33152	Nonferrous metal foundries	24.1	21.7	19.6	17.2	17.0	6.5	20.8	4.0	7	
331521	Aluminum die-casting foundries	13.5	12.3	6.0	9.9	10.5	3.0	6.6	1.8	3	
331522	Nonferrous (except aluminum) die-casting foundries	2.1	2.6	2.8	2.1	.6	1.4	2.9	.6	7	
331524	Aluminum foundries (except die-casting)	5.7	4.2	5.1	3.0	4.2	1.2	5.4	1.1	5	
331525	Copper foundries (except die-casting)	1.6	1.6	4.3	1.1	.9	.4	4.8	.4	57	
331528	Other nonferrous foundries (except die-casting)	1.2	1.0	1.4	1.1	.7	.5	1.1	.1	1	
332	Fabricated metal product mfg	196.9	284.2	282.2	206.9	158.7	111.8	207.4	78.5	8	
3321	Forging & stamping	18.9	19.4	13.8	10.8	9.8	6.0	16.3	9.2	8	
33211	Forging & stamping	18.9	19.4	13.8	10.8	9.8	6.0	16.3	9.2	8	
332111	Iron & steel forging	1.1	1.5	1.4	1.2	.9	.5	1.0	.4	16	
332112	Nonferrous forging	9.2	6.8	3.3	2.5	.8	3.0	5.5	7.5	3	
332114	Custom roll forming	.7	1.0	1.1	.5	1.0	.3	.9	.1	9	
332115	Crown & closure mfg	4.6	.5	.2	.6	3.5	.1	.5	.5	2	
332116	Metal stamping	2.1	8.2	4.4	4.6	2.2	1.8	5.8	.4	25	
332117	Powder metallurgy part mfg	1.3	1.2	3.2	1.3	1.3	.2	2.6	.3	28	
3322	Cutlery & handtool mfg	6.0	7.5	9.2	8.5	5.1	2.8	4.9	1.5	12	
33221	Cutlery & handtool mfg	6.0	7.5	9.2	8.5	5.1	2.8	4.9	1.5	12	
332211	Cutlery & flatware (except precious) mfg	1.8	1.0	1.1	1.4	1.2	.2	.7	.4	3	
332212	Hand & edge tool mfg	3.1	4.8	4.9	5.1	2.4	1.8	2.7	.9	19	
332213	Saw blade & handsaw mfg	.5	.9	1.9	1.5	.4	.5	.7	.3	22	
332214	Kitchen utensil, pot, & pan mfg	.6	.9	1.2	.6	1.1	.3	.7	(Z)	23	
3323	Architectural & structural metals mfg	17.9	14.1	22.2	12.7	11.6	5.2	21.7	3.2	5	
33231	Plate work & fabricated structural product mfg	7.7	4.9	10.4	5.7	4.6	2.0	9.3	1.5	6	
332311	Prefabricated metal building & component mfg	.5	.7	.7	.8	(Z)	.2	.9	(Z)	38	
332312	Fabricated structural metal mfg	5.7	4.0	8.2	4.1	3.9	1.4	7.3	1.3	5	
332313	Plate work mfg	1.4	.3	1.5	.9	.7	.4	1.2	.1	28	
33232	Ornamental & architectural metal products mfg	10.3	9.2	11.8	7.0	7.0	3.2	12.3	1.7	8	
332321	Metal window & door mfg	4.3	5.7	7.1	4.2	2.5	1.6	7.9	.9	10	
332322	Sheet metal work mfg	5.5	3.2	3.5	2.4	4.3	1.4	3.4	.7	12	
332323	Ornamental & architectural metal work mfg	.4	.3	1.1	.3	.2	.3	1.0	.1	23	
3324	Boiler, tank, & shipping container mfg	46.7	24.9	22.4	20.0	37.7	9.5	12.6	14.2	8	
33241	Power boiler & heat exchanger mfg	1.2	1.2	1.6	1.5	.5	.2	1.2	.6	40	
332410	Power boiler & heat exchanger mfg	1.2	1.2	1.6	1.5	.5	.2	1.2	.6	40	
33242	Metal tank (heavy gauge) mfg	1.5	1.9	1.1	1.6	.5	.8	1.1	.5	31	
332420	Metal tank (heavy gauge) mfg	1.5	1.9	1.1	1.6	.5	.8	1.1	.5	31	
33243	Metal can, box, & other metal container (light gauge) mfg	44.0	21.8	19.7	16.9	36.7	8.4	10.3	13.1	9	
332431	Metal can mfg	40.1	20.0	15.9	14.7	33.3	7.6	8.0	12.3	10	
332439	Other metal container mfg	3.9	1.8	3.8	2.2	3.5	.8	2.3	.8	15	

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
332	Fabricated metal product mfg—Con.					
3325	Hardware mfg	23.0	13.4	2.2	1.9	5.6
33251	Hardware mfg	23.0	13.4	2.2	1.9	5.6
332510	Hardware mfg	23.0	13.4	2.2	1.9	5.6
3326	Spring & wire product mfg	13.9	7.1	2.1	1.3	3.4
33261	Spring & wire product mfg	13.9	7.1	2.1	1.3	3.4
332618	Other fabricated wire product mfg	12.2	6.8	1.3	1.2	2.9
3327	Machine shops, turned product, & screw, nut, & bolt mfg	140.6	36.4	18.3	42.4	43.5
33271	Machine shops	98.9	20.3	13.2	36.7	28.6
332710	Machine shops	98.9	20.3	13.2	36.7	28.6
33272	Turned product & screw, nut, & bolt mfg	41.8	16.2	5.1	5.7	14.8
332721	Precision turned product mfg	14.8	3.8	2.4	2.6	6.1
332722	Bolt, nut, screw, rivet, & washer mfg	26.9	12.4	2.7	3.1	8.7
3328	Coating, engraving, heat treating, & allied activities	230.3	119.4	26.3	15.0	69.6
33281	Coating, engraving, heat treating, & allied activities	230.3	119.4	26.3	15.0	69.6
332811	Metal heat treating	12.8	7.5	1.3	.9	3.1
332812	Metal coating/engraving (exc jewelry/silverware)/allied services	74.0	39.6	8.3	5.8	20.3
332813	Electroplating, plating, polishing, anodizing, & coloring	143.5	72.3	16.7	8.3	46.3
3329	Other fabricated metal product mfg	132.3	58.3	10.4	17.5	46.2
33291	Metal valve mfg	48.7	22.0	3.7	8.0	14.9
332911	Industrial valve mfg	16.3	5.9	.7	3.4	6.3
332912	Fluid power valve & hose fitting mfg	14.1	6.2	1.5	1.4	5.0
332913	Plumbing fixture fitting & trim mfg	6.1	3.2	.6	1.0	1.2
332919	Other metal valve & pipe fitting mfg	12.3	6.7	.9	2.3	2.5
33299	All other fabricated metal product mfg	83.7	36.3	6.7	9.4	31.2
332991	Ball & roller bearing mfg	12.8	4.5	1.7	2.1	4.4
332992	Small arms ammunition mfg	18.0	9.8	.3	2.2	5.6
332993	Ammunition (except small arms) mfg	8.0	4.6	.7	4	2.4
332994	Small arms mfg	3.2	1.4	.5	.2	1.1
332995	Other ordnance & accessories mfg	3.1	1.3	.3	.2	1.3
332996	Fabricated pipe & pipe fitting mfg	6.3	.6	.3	.8	4.6
332998	Enameled iron & metal sanitary ware mfg	10.6	6.3	.2	1.8	2.3
332999	All other miscellaneous fabricated metal product mfg	21.3	7.7	2.5	1.8	9.3
333	Machinery mfg	315.8	108.4	49.8	34.3	123.2
3331	Agriculture, construction, & mining machinery mfg	51.8	19.5	5.6	6.7	19.9
33311	Agricultural implement mfg	19.6	10.2	1.9	2.5	4.9
333111	Farm machinery & equipment mfg	12.3	6.3	1.2	2.0	2.7
333112	Lawn & garden tractor & home lawn & garden equipment mfg	7.3	3.9	.7	.5	2.2
33312	Construction machinery mfg	22.9	6.9	2.2	3.2	10.6
333120	Construction machinery mfg	22.9	6.9	2.2	3.2	10.6
33313	Mining & oil & gas field machinery mfg	9.4	2.4	1.5	1.1	4.4
333131	Mining machinery & equipment mfg	1.4	.3	.1	.1	.9
333132	Oil & gas field machinery & equipment mfg	7.9	2.1	1.4	.9	3.5
3332	Industrial machinery mfg	35.1	18.8	4.1	1.5	10.6
3333	Commercial & service industry machinery mfg	32.6	7.4	5.9	5.3	14.1
33331	Commercial & service industry machinery mfg	32.6	7.4	5.9	5.3	14.1
333314	Optical instrument & lens mfg	5.5	1.2	1.7	1.1	1.5
333315	Photographic & photocopying equipment mfg	3.1	.7	1.1	.3	1.0
333319	Other commercial & service industry machinery mfg	22.9	5.3	2.8	3.9	11.0
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	33.1	10.0	6.5	3.3	13.2
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	33.1	10.0	6.5	3.3	13.2
333411	Air purification equipment mfg	1.9	.2	.1	.1	1.5
333412	Industrial & commercial fan & blower mfg	1.6	.8	.1	.1	.7
333414	Heating equipment (except warm air furnaces) mfg	3.8	1.0	.8	.2	1.8
333415	AC & warm air heating & commercial/industrial refig equip mfg	25.7	8.0	5.4	3.0	9.3
3335	Metalworking machinery mfg	28.7	7.9	8.4	2.3	10.1
3336	Engine, turbine, & power transmission equipment mfg	59.9	22.6	7.1	6.2	23.9
33361	Engine, turbine, & power transmission equipment mfg	59.9	22.6	7.1	6.2	23.9
333611	Turbine & turbine generator set unit mfg	12.5	5.4	1.0	.7	5.1
333612	Speed changer, industrial high-speed drive, & gear mfg	4.1	.7	.2	.1	3.0
333613	Mechanical power transmission equipment mfg	8.1	1.8	1.0	.6	4.7
333618	Other engine equipment mfg	35.2	14.8	4.9	4.5	11.1
3339	Other general-purpose machinery mfg	74.6	22.1	12.3	8.8	31.4
33391	Pump & compressor mfg	12.5	2.0	1.4	3.3	5.9
33392	Material handling equipment mfg	17.6	8.3	4.6	1.4	3.4
33399	All other general-purpose machinery mfg	44.4	11.8	6.3	4.1	22.2
333991	Power-driven handtool mfg	3.4	.9	.1	.3	2.0
333992	Welding & soldering equipment mfg	(D)	(D)	(D)	(D)	2.3
333993	Packaging machinery mfg	2.3	(D)	(D)	(D)	2.0
333994	Industrial process furnace & oven mfg	1.2	.5	.5	—	.2
333995	Fluid power cylinder & actuator mfg	10.2	4.6	1.9	.6	3.1
333996	Fluid power pump & motor mfg	5.7	1.3	1.2	1.6	1.6
333999	All other miscellaneous general-purpose machinery mfg	18.3	4.1	2.1	1.3	10.8
334	Computer & electronic product mfg	623.8	338.4	54.5	63.9	167.0
3341	Computer & peripheral equipment mfg	43.7	19.1	2.2	16.0	6.5
3342	Communications equipment mfg	60.7	14.5	8.7	4.0	33.5
3343	Audio & video equipment mfg	1.1	.5	.1	.2	.3
33431	Audio & video equipment mfg	1.1	.5	.1	.2	.3
334310	Audio & video equipment mfg	1.1	.5	.1	.2	.3
3344	Semiconductor & other electronic component mfg	466.4	293.6	38.3	32.5	102.0
33441	Semiconductor & other electronic component mfg	466.4	293.6	38.3	32.5	102.0
334411	Electron tube mfg	10.8	5.5	.4	.8	4.1
334412	Bare printed circuit board mfg	87.8	53.6	16.5	7.4	10.2
334413	Semiconductor & related device mfg	292.8	184.1	16.7	20.2	71.8
334414	Electronic capacitor mfg	8.4	2.5	.5	.5	4.8
334415	Electronic resistor mfg	1.8	.4	.7	.2	.5

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
332	Fabricated metal product mfg—Con.									
3325	Hardware mfg	5.0	12.1	6.0	9.6	4.6	2.8	4.3	1.9	18
33251	Hardware mfg	5.0	12.1	6.0	9.6	4.6	2.8	4.3	1.9	18
332510	Hardware mfg	5.0	12.1	6.0	9.6	4.6	2.8	4.3	1.9	18
3326	Spring & wire product mfg	2.9	7.5	3.5	4.4	2.1	2.8	3.4	1.3	28
33261	Spring & wire product mfg	2.9	7.5	3.5	4.4	2.1	2.8	3.4	1.3	28
332618	Other fabricated wire product mfg	1.9	7.3	2.9	4.1	1.7	2.6	3.0	.8	32
3327	Machine shops, turned product, & screw, nut, & bolt mfg	21.0	40.3	79.3	23.9	20.6	15.1	67.1	14.0	36
33271	Machine shops	14.6	23.6	60.6	8.7	12.6	9.5	56.7	11.4	51
332710	Machine shops	14.6	23.6	60.6	8.7	12.6	9.5	56.7	11.4	51
33272	Turned product & screw, nut, & bolt mfg	6.4	16.7	18.6	15.1	8.0	5.6	10.4	2.6	10
332721	Precision turned product mfg	2.2	4.6	8.1	5.5	1.6	1.7	4.8	1.2	24
332722	Bolt, nut, screw, rivet, & washer mfg	4.2	12.1	10.6	9.6	6.4	3.9	5.6	1.4	7
3328	Coating, engraving, heat treating, & allied activities	48.6	110.4	71.3	73.4	47.0	49.8	42.4	17.7	9
33281	Coating, engraving, heat treating, & allied activities	48.6	110.4	71.3	73.4	47.0	49.8	42.4	17.7	9
332811	Metal heat treating	1.8	7.9	3.2	3.6	2.7	2.4	3.5	.5	10
332812	Metal coating/engraving (exc jewelry/silverware)/allied services	23.5	27.8	22.7	22.5	17.0	12.0	13.1	9.3	15
332813	Electroplating, plating, polishing, anodizing, & coloring	23.3	74.8	45.4	47.3	27.2	35.4	25.8	7.9	12
3329	Other fabricated metal product mfg	29.8	47.9	54.7	43.6	20.4	18.0	34.9	15.4	5
33291	Metal valve mfg	12.2	18.3	18.2	15.6	5.6	5.3	11.5	10.8	9
332911	Industrial valve mfg	6.4	3.9	6.0	4.4	2.6	1.8	4.6	3.0	16
332912	Fluid power valve & hose fitting mfg	2.3	6.1	5.6	7.7	1.4	1.4	2.8	.8	18
332913	Plumbing fixture fitting & trim mfg . . . . .	.5	4.1	1.5	1.9	.5	1.2	1.9	.6	19
332919	Other metal valve & pipe fitting mfg	3.1	4.1	5.1	1.6	1.1	.9	2.2	6.5	18
33299	All other fabricated metal product mfg	17.5	29.6	36.5	28.0	14.9	12.7	23.4	4.7	6
332991	Ball & roller bearing mfg	2.5	5.1	5.1	3.7	2.3	1.9	4.5	.4	14
332992	Small arms ammunition mfg . . . . .	.5	9.2	8.2	6.4	1.6	3.9	5.5	.6	1
332993	Ammunition (except small arms) mfg	1.3	2.0	4.7	4.6	.8	.8	1.7	.2	3
332994	Small arms mfg . . . . .	.3	1.0	1.9	1.0	.6	.9	.6	.1	1
332995	Other ordnance & accessories mfg . . . . .	.5	1.0	1.5	1.6	.4	.2	.6	.3	1
332996	Fabricated pipe & pipe fitting mfg . . . . .	.5	2.1	3.7	.8	2.1	.2	3.2	.1	33
332998	Enameled iron & metal sanitary ware mfg	3.9	3.1	3.5	3.2	2.1	1.4	2.8	1.1	6
332999	All other miscellaneous fabricated metal product mfg	7.9	6.0	7.5	6.7	4.9	3.4	4.3	1.9	19
333	Machinery mfg	71.7	97.1	147.0	94.6	38.2	30.1	116.9	36.0	5
3331	Agriculture, construction, & mining machinery mfg	14.4	15.4	22.1	16.6	5.5	5.8	18.6	5.4	8
33311	Agricultural implement mfg	5.5	7.2	6.9	5.7	1.3	2.9	7.3	2.3	11
333111	Farm machinery & equipment mfg	4.7	2.7	4.9	3.3	.8	1.2	4.7	2.2	16
333112	Lawn & garden tractor & home lawn & garden equipment mfg . . . . .	.8	4.5	2.0	2.4	.6	1.7	2.6	(Z)	9
33312	Construction machinery mfg	7.2	5.3	10.3	5.9	3.9	2.1	8.1	2.9	12
333120	Construction machinery mfg	7.2	5.3	10.3	5.9	3.9	2.1	8.1	2.9	12
33313	Mining & oil & gas field machinery mfg	1.7	2.8	4.8	5.0	.3	.7	3.3	.2	24
333131	Mining machinery & equipment mfg . . . . .	.1	.6	.7	.6	.1	.1	.6	(Z)	22
333132	Oil & gas field machinery & equipment mfg	1.6	2.2	4.1	4.4	.2	.6	2.6	.2	28
3332	Industrial machinery mfg	11.3	11.5	12.3	6.0	2.4	3.7	13.7	9.2	26
3333	Commercial & service industry machinery mfg	3.3	6.2	23.1	^a 14.6	1.7	2.2	^a 13.0	1.2	6
33331	Commercial & service industry machinery mfg	3.3	6.2	23.1	^a 14.6	1.7	2.2	^a 13.0	1.2	6
333314	Optical instrument & lens mfg . . . . .	.5	1.6	3.4	2.6	.2	.9	1.6	.2	26
333315	Photographic & photocopying equipment mfg	1.4	.6	3.1	1.0	.8	.1	.4	.7	15
333319	Other commercial & service industry machinery mfg	1.2	3.7	18.1	^a 10.6	^a .6	^a 1.0	^a 10.5	^a .3	5
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	5.6	11.1	16.4	10.1	3.1	2.9	15.0	2.0	12
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	5.6	11.1	16.4	10.1	3.1	2.9	15.0	2.0	12
333411	Air purification equipment mfg . . . . .	.2	.2	1.5	.2	.1	.1	1.4	(Z)	63
333412	Industrial & commercial fan & blower mfg . . . . .	.5	.5	.7	.5	.2	.3	.5	^a .2	13
333414	Heating equipment (except warm air furnaces) mfg . . . . .	.7	1.0	2.1	1.4	.1	.5	1.7	.2	38
333415	AC & warm air heating & commercial/industrial refig equip mfg	4.2	9.4	12.1	8.0	2.7	2.0	11.4	1.6	14
3335	Metalworking machinery mfg	11.4	8.0	9.4	7.2	6.9	2.5	7.6	4.6	30
3336	Engine, turbine, & power transmission equipment mfg	9.7	24.8	25.4	18.3	6.1	5.7	22.1	7.6	10
33361	Engine, turbine, & power transmission equipment mfg	9.7	24.8	25.4	18.3	6.1	5.7	22.1	7.6	10
333611	Turbine & turbine generator set unit mfg	2.1	5.2	5.1	5.8	^a 1.6	.4	4.3	.4	14
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	.1	1.4	2.6	.8	1.2	.1	1.8	.2	33
333613	Mechanical power transmission equipment mfg	1.2	2.1	4.8	3.1	.7	.6	^a 3.6	1.1	23
333618	Other engine equipment mfg	6.2	16.1	12.9	8.5	2.6	4.6	12.5	6.9	15
3339	Other general-purpose machinery mfg	16.1	20.1	38.3	21.8	12.6	7.3	26.8	6.0	8
33391	Pump & compressor mfg . . . . .	.7	3.1	8.8	3.6	.5	.8	6.9	.7	27
33392	Material handling equipment mfg	8.5	2.3	6.8	4.6	5.1	2.2	3.9	1.8	15
33399	All other general-purpose machinery mfg	7.0	14.7	22.7	13.6	7.0	4.4	15.9	3.5	9
333991	Power-driven handtool mfg . . . . .	.1	1.6	1.6	1.1	.1	.2	2.0	(Z)	25
333992	Welding & soldering equipment mfg	(D)	(D)	2.6	.6	.4	(D)	1.5	(D)	17
333993	Packaging machinery mfg . . . . .	.1	.3	1.9	1.0	.6	(D)	.6	(D)	55
333994	Industrial process furnace & oven mfg	1.0	(Z)	.2	.4	.4	.1	.2	.1	4
333995	Fluid power cylinder & actuator mfg	1.5	4.1	4.6	3.7	.8	2.5	2.4	.9	15
333996	Fluid power pump & motor mfg . . . . .	.6	2.8	2.2	1.6	1.8	.4	1.6	^a .3	20
333999	All other miscellaneous general-purpose machinery mfg	3.3	5.5	9.4	5.1	3.0	1.1	7.6	1.5	15
334	Computer & electronic product mfg	164.6	270.9	188.3	185.3	142.4	86.2	144.5	65.4	10
3341	Computer & peripheral equipment mfg	7.5	14.1	22.2	10.1	11.2	2.4	14.5	5.4	32
3342	Communications equipment mfg	9.6	28.6	22.5	16.4	29.6	3.2	10.1	1.4	12
3343	Audio & video equipment mfg . . . . .	.5	—	.5	.6	.2	(Z)	.2	.1	17
33431	Audio & video equipment mfg . . . . .	.5	—	.5	.6	.2	(Z)	.2	.1	17
334310	Audio & video equipment mfg . . . . .	.5	—	.5	.6	.2	(Z)	.2	.1	17
3344	Semiconductor & other electronic component mfg	135.4	215.1	116.0	139.5	95.5	76.8	98.1	56.5	13
33441	Semiconductor & other electronic component mfg	135.4	215.1	116.0	139.5	95.5	76.8	98.1	56.5	13
334411	Electron tube mfg	3.0	4.6	3.2	3.0	4.9	.9	2.0	.1	4
334412	Bare printed circuit board mfg	26.6	45.3	15.9	33.4	22.5	17.8	8.9	5.2	17
334413	Semiconductor & related device mfg	98.9	120.0	73.9	73.8	57.7	44.7	69.3	47.3	16
334414	Electronic capacitor mfg	1.1	1.7	5.6	2.7	.6	.4	4.5	.2	7
334415	Electronic resistor mfg . . . . .	.9	.3	.6	.6	.3	.2	.4	.2	49

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
334	Computer & electronic product mfg—Con.					
3344	Semiconductor & other electronic component mfg—Con.					
33441	Semiconductor & other electronic component mfg—Con.					
334417	Electronic connector mfg	10.0	6.3	1.0	.6	2.1
334418	Printed circuit assembly (electronic assembly) mfg	47.8	38.3	1.7	2.1	5.7
334419	Other electronic component mfg	6.9	2.9	.8	.7	2.5
3345	Navigational, measuring, medical, & control instruments mfg	42.8	9.8	4.2	7.4	21.5
33451	Navigational, measuring, medical, & control instruments mfg	42.8	9.8	4.2	7.4	21.5
334510	Electromedical & electrotherapeutic apparatus mfg	4.3	1.0	.3	.8	2.1
334511	Search, detection, navigation, & guidance instrument mfg	21.1	5.1	3.0	3.3	9.7
334512	Automatic environmental control mfg	2.0	.5	.2	.5	.8
334513	Industrial process control instrument mfg	1.4	.1	(Z)	.5	.8
334514	Totalizing fluid meter & counting device mfg	5.2	.8	.1	1.4	2.9
334515	Electricity measuring & testing instrument mfg	2.2	1.1	.2	.3	.7
334516	Analytical laboratory instrument mfg	4.2	.4	.1	.2	3.5
334517	Irradiation apparatus mfg	1.2	.5	.1	.2	.4
334519	Other measuring & controlling device mfg	1.2	.3	.1	.1	.6
3346	Mfg & reproducing magnetic & optical media	9.1	1.0	1.1	3.8	3.3
33461	Mfg & reproducing magnetic & optical media	9.1	1.0	1.1	3.8	3.3
334612	Prerecorded CD (except software), tape, & record reproducing ..	2.0	.3	.1	.7	.9
334613	Magnetic & optical recording media mfg	7.0	.7	.9	3.1	2.3
335	Electrical equipment, appliance, & component mfg	190.8	80.8	28.6	20.7	60.7
3351	Electric lighting equipment mfg	27.6	13.5	2.9	2.7	8.6
33511	Electric lamp bulb & part mfg	11.7	4.5	1.3	1.5	4.4
335110	Electric lamp bulb & part mfg	11.7	4.5	1.3	1.5	4.4
33512	Lighting fixture mfg	15.9	9.0	1.6	1.1	4.2
335122	Commercial/industrial/institutional electric lighting fixture mfg	2.5	.7	1.0	.1	.8
335129	Other lighting equipment mfg	12.5	8.2	.5	.9	2.9
3352	Household appliance mfg	29.9	12.1	4.6	3.7	9.5
33521	Small electrical appliance mfg	4.2	1.7	.7	.7	1.1
335211	Electric housewares & household fan mfg	3.7	1.4	.7	.7	.9
33522	Major appliance mfg	25.7	10.4	3.9	3.0	8.4
335221	Household cooking appliance mfg	5.4	1.7	.8	.6	2.2
335222	Household refrigerator & home freezer mfg	7.4	2.2	1.7	1.0	2.5
335224	Household laundry equipment mfg	5.9	2.8	.7	.7	1.7
335228	Other major household appliance mfg	7.0	3.7	.6	.7	2.1
3353	Electrical equipment mfg	36.4	9.7	7.3	3.4	16.1
3359	Other electrical equipment & component mfg	96.9	45.6	13.9	10.9	26.6
33591	Battery mfg	36.6	18.4	4.4	4.6	11.2
335911	Storage battery mfg	30.3	13.5	4.1	4.3	8.4
335912	Primary battery mfg	6.3	3.0	.3	.3	2.8
33592	Communication & energy wire & cable mfg	4.9	1.5	.5	1.6	1.3
33593	Wiring device mfg	15.5	4.1	3.3	2.3	5.9
335931	Current-carrying wiring device mfg	6.5	1.9	1.1	1.3	2.2
335932	Noncurrent-carrying wiring device mfg	9.0	2.2	2.1	1.0	3.7
33599	All other electrical equipment & component mfg	39.9	23.6	5.7	2.4	8.2
335991	Carbon & graphite product mfg	30.1	19.0	4.7	1.6	4.9
335999	All other miscellaneous electrical equipment & component mfg ..	9.8	4.6	.9	.9	3.4
336	Transportation equipment mfg	1 319.1	592.8	173.0	157.3	396.1
3361	Motor vehicle mfg	396.6	229.6	31.0	51.6	84.4
33611	Automobile & light duty motor vehicle mfg	369.1	217.1	29.3	45.3	77.4
336111	Automobile mfg	176.3	103.7	13.9	21.1	37.6
336112	Light truck & utility vehicle mfg	192.8	113.4	15.5	24.2	39.7
33612	Heavy duty truck mfg	27.5	12.4	1.7	6.3	7.0
336120	Heavy duty truck mfg	27.5	12.4	1.7	6.3	7.0
3362	Motor vehicle body & trailer mfg	36.8	12.7	5.0	1.7	17.4
33621	Motor vehicle body & trailer mfg	36.8	12.7	5.0	1.7	17.4
336211	Motor vehicle body mfg	12.5	4.9	1.3	.6	5.7
336212	Truck trailer mfg	4.5	.5	.4	.2	3.5
336213	Motor home mfg	10.6	4.9	1.5	.5	3.7
336214	Travel trailer & camper mfg	9.2	2.4	1.8	.4	4.5
3363	Motor vehicle parts mfg	549.1	219.8	75.8	70.9	182.7
33631	Motor vehicle gasoline engine & engine parts mfg	119.6	44.1	18.2	15.5	41.8
336311	Carburetor, piston, piston ring, & valve mfg	14.9	3.9	2.1	3.2	5.6
336312	Gasoline engine & engine parts mfg	104.7	40.2	16.0	12.3	36.2
33632	Motor vehicle electrical & electronic equipment mfg	69.1	28.2	3.5	8.7	28.8
336321	Vehicular lighting equipment mfg	8.2	6.6	.3	(Z)	1.2
336322	Other motor vehicle electrical & electronic equipment mfg	61.0	21.6	3.2	8.6	27.6
33633	Motor vehicle steering & suspension component (except spring) mfg	24.4	8.3	4.0	5.9	6.2
336330	Motor vehicle steering & suspension component (except spring) mfg	24.4	8.3	4.0	5.9	6.2
33634	Motor vehicle brake system mfg	30.6	14.0	3.1	.8	12.7
336340	Motor vehicle brake system mfg	30.6	14.0	3.1	.8	12.7
33635	Motor vehicle transmission & power train parts mfg	124.5	58.1	21.5	19.1	25.8
336350	Motor vehicle transmission & power train parts mfg	124.5	58.1	21.5	19.1	25.8
33636	Motor vehicle seating & interior trim mfg	10.1	.7	1.0	2.0	6.5
336360	Motor vehicle seating & interior trim mfg	10.1	.7	1.0	2.0	6.5
33637	Motor vehicle metal stamping	63.7	24.6	12.3	9.6	17.2
336370	Motor vehicle metal stamping	63.7	24.6	12.3	9.6	17.2
33639	Other motor vehicle parts mfg	107.1	41.9	12.3	9.2	43.7
336391	Motor vehicle air-conditioning mfg	12.3	9.2	.2	.6	2.3
336399	All other motor vehicle parts mfg	94.8	32.7	12.1	8.6	41.4

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
334	Computer & electronic product mfg—Con.									
3344	Semiconductor & other electronic component mfg—Con.									
33441	Semiconductor & other electronic component mfg—Con.									
334417	Electronic connector mfg	.7	7.0	2.3	3.5	1.4	2.1	2.3	.8	35
334418	Printed circuit assembly (electronic assembly) mfg	3.1	32.9	11.8	19.4	7.0	10.1	8.8	2.6	65
334419	Other electronic component mfg	1.0	3.3	2.6	3.1	1.1	.6	1.8	.2	15
3345	Navigational, measuring, medical, & control instruments mfg	8.0	11.8	23.0	16.5	3.9	3.3	17.4	1.6	10
33451	Navigational, measuring, medical, & control instruments mfg	8.0	11.8	23.0	16.5	3.9	3.3	17.4	1.6	10
334510	Electromedical & electrotherapeutic apparatus mfg	1.1	.6	2.6	1.4	.4	.2	2.2	.2	16
334511	Search, detection, navigation, & guidance instrument mfg	5.2	6.6	9.2	8.9	1.4	1.8	7.8	1.2	16
334512	Automatic environmental control mfg	.2	.4	1.4	.8	.5	.1	.5	.1	7
334513	Industrial process control instrument mfg	(Z)	.2	1.2	.5	.1	(Z)	.8	—	30
334514	Totalizing fluid meter & counting device mfg	.4	1.3	3.4	1.8	.9	.4	2.1	.1	18
334515	Electricity measuring & testing instrument mfg	.3	1.2	.8	.8	.6	.3	.5	(Z)	9
334516	Analytical laboratory instrument mfg	.3	.6	3.3	1.5	.1	.1	2.4	(Z)	44
334517	Irradiation apparatus mfg	.2	.4	.5	.4	(Z)	.4	.3	—	29
334519	Other measuring & controlling device mfg	.2	.4	.6	.3	.1	(Z)	.7	—	14
3346	Mfg & reproducing magnetic & optical media	3.7	1.5	4.0	2.3	1.9	.4	4.1	.4	8
33461	Mfg & reproducing magnetic & optical media	3.7	1.5	4.0	2.3	1.9	.4	4.1	.4	8
334612	Prerecorded CD (except software), tape, & record reproducing ..	—	.5	1.5	.6	.1	.2	1.0	(Z)	32
334613	Magnetic & optical recording media mfg	3.6	1.0	2.4	1.5	1.8	.2	3.0	.4	3
335	Electrical equipment, appliance, & component mfg	62.2	59.5	69.1	58.6	42.9	18.7	51.9	18.7	6
3351	Electric lighting equipment mfg	8.8	7.1	11.7	8.5	4.0	2.2	9.0	3.8	19
33511	Electric lamp bulb & part mfg	2.1	2.7	6.8	3.6	1.7	.7	5.2	.4	19
335110	Electric lamp bulb & part mfg	2.1	2.7	6.8	3.6	1.7	.7	5.2	.4	19
33512	Lighting fixture mfg	6.7	4.3	4.9	4.9	2.3	1.5	3.8	3.4	30
335122	Commercial/industrial/institutional electric lighting fixture mfg	.9	.8	.8	.6	.1	.7	.9	.2	25
335129	Other lighting equipment mfg	5.7	3.4	3.4	3.9	2.1	.7	2.5	3.3	37
3352	Household appliance mfg	4.0	15.7	10.2	10.2	5.5	3.6	9.1	1.6	3
33521	Small electrical appliance mfg	.4	2.4	1.4	1.1	2.2	.3	.6	(Z)	2
335211	Electric housewares & household fan mfg	.4	2.1	1.1	.8	2.2	.3	.4	(Z)	2
33522	Major appliance mfg	3.6	13.3	8.9	9.0	3.3	3.3	8.6	1.5	3
335221	Household cooking appliance mfg	.3	3.2	1.9	1.3	.6	.7	2.5	.3	13
335222	Household refrigerator & home freezer mfg	.4	3.9	3.1	4.0	.2	1.0	1.9	.2	1
335224	Household laundry equipment mfg	.7	3.5	1.7	1.5	1.0	.8	2.0	.6	1
335228	Other major household appliance mfg	2.1	2.7	2.2	2.2	1.5	.8	2.1	.4	2
3353	Electrical equipment mfg	9.0	12.0	15.3	12.6	7.9	2.3	11.6	2.0	19
3359	Other electrical equipment & component mfg	40.3	24.8	31.9	27.4	25.4	10.7	22.2	11.3	7
33591	Battery mfg	10.6	11.8	14.2	10.6	7.6	5.3	8.9	4.2	10
335911	Storage battery mfg	9.3	9.4	11.6	8.6	6.6	4.7	6.7	3.8	11
335912	Primary battery mfg	1.3	2.4	2.6	2.0	1.0	.6	2.3	.5	2
33592	Communication & energy wire & cable mfg	1.4	.4	3.1	2.1	.1	.2	2.6	(Z)	48
33593	Wiring device mfg	4.1	6.0	5.4	5.2	2.6	1.1	5.0	1.6	11
335931	Current-carrying wiring device mfg	.7	3.4	2.4	2.3	1.5	.7	1.6	.3	7
335932	Noncurrent-carrying wiring device mfg	3.4	2.5	3.0	2.9	1.0	.4	3.4	1.3	18
33599	All other electrical equipment & component mfg	24.3	6.5	9.2	9.5	15.2	4.2	5.6	5.4	11
335991	Carbon & graphite product mfg	22.1	2.4	5.7	6.2	12.7	2.2	3.8	5.3	5
335999	All other miscellaneous electrical equipment & component mfg ..	2.2	4.2	3.5	3.3	2.5	2.0	1.9	.1	42
336	Transportation equipment mfg	484.8	394.6	439.7	338.7	377.1	102.5	360.7	140.2	3
3361	Motor vehicle mfg	220.7	76.1	99.7	69.0	147.0	24.6	95.3	60.7	5
33611	Automobile & light duty motor vehicle mfg	210.0	68.8	90.3	62.8	143.0	19.6	86.7	57.1	5
336111	Automobile mfg	101.0	30.5	44.8	27.3	82.8	10.2	44.2	11.8	5
336112	Light truck & utility vehicle mfg	109.0	38.3	45.5	35.5	60.2	9.4	42.5	45.2	8
33612	Heavy duty truck mfg	10.7	7.4	9.5	6.2	4.0	5.1	8.6	3.6	11
336120	Heavy duty truck mfg	10.7	7.4	9.5	6.2	4.0	5.1	8.6	3.6	11
3362	Motor vehicle body & trailer mfg	14.9	3.5	18.4	8.9	7.1	4.7	14.2	1.9	14
33621	Motor vehicle body & trailer mfg	14.9	3.5	18.4	8.9	7.1	4.7	14.2	1.9	14
336211	Motor vehicle body mfg	4.9	1.0	6.6	3.5	2.5	1.3	4.7	.5	33
336212	Truck trailer mfg	.7	.4	3.4	.8	.4	.7	2.2	.3	12
336213	Motor home mfg	6.2	.7	3.6	2.2	2.3	1.3	3.9	.9	10
336214	Travel trailer & camper mfg	3.2	1.4	4.7	2.4	1.9	1.4	3.4	.1	32
3363	Motor vehicle parts mfg	146.8	206.3	196.1	138.9	173.4	42.4	141.5	53.0	5
33631	Motor vehicle gasoline engine & engine parts mfg	34.8	45.1	39.6	30.6	35.4	9.7	28.6	15.2	11
336311	Carburetor, piston, piston ring, & valve mfg	5.4	4.8	4.7	4.1	6.4	1.7	1.5	1.0	7
336312	Gasoline engine & engine parts mfg	29.5	40.3	34.9	26.4	29.0	8.0	27.1	14.2	12
33632	Motor vehicle electrical & electronic equipment mfg	19.9	24.0	25.3	11.2	24.0	3.7	20.8	9.4	9
336321	Vehicular lighting equipment mfg	6.7	.3	1.2	.9	2.6	1.2	1.7	1.7	1
336322	Other motor vehicle electrical & electronic equipment mfg	13.2	23.7	24.1	10.3	21.5	2.5	19.1	7.7	10
33633	Motor vehicle steering & suspension component (except spring) mfg	4.5	14.2	5.7	7.2	3.4	3.1	9.6	1.2	17
336330	Motor vehicle steering & suspension component (except spring) mfg	4.5	14.2	5.7	7.2	3.4	3.1	9.6	1.2	17
33634	Motor vehicle brake system mfg	10.1	8.0	12.5	7.6	6.0	2.5	10.1	4.4	26
336340	Motor vehicle brake system mfg	10.1	8.0	12.5	7.6	6.0	2.5	10.1	4.4	26
33635	Motor vehicle transmission & power train parts mfg	32.1	57.8	34.7	31.9	53.5	7.1	25.1	6.9	8
336350	Motor vehicle transmission & power train parts mfg	32.1	57.8	34.7	31.9	53.5	7.1	25.1	6.9	8
33636	Motor vehicle seating & interior trim mfg	1.2	1.3	7.6	1.9	.7	.8	6.7	(Z)	47
336360	Motor vehicle seating & interior trim mfg	1.2	1.3	7.6	1.9	.7	.8	6.7	(Z)	47
33637	Motor vehicle metal stamping	17.9	24.2	21.5	20.6	14.9	2.5	17.4	8.3	16
336370	Motor vehicle metal stamping	17.9	24.2	21.5	20.6	14.9	2.5	17.4	8.3	16
33639	Other motor vehicle parts mfg	26.2	31.8	49.1	28.0	35.5	12.9	23.1	7.5	11
336391	Motor vehicle air-conditioning mfg	3.5	6.1	2.7	5.8	2.7	.9	2.2	.7	1
336399	All other motor vehicle parts mfg	22.7	25.6	46.4	22.2	32.8	12.0	21.0	6.8	12

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	Industry	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
336	Transportation equipment mfg—Con.					
3364	Aerospace product & parts mfg	214.0	91.2	40.0	16.5	66.3
33641	Aerospace product & parts mfg	214.0	91.2	40.0	16.5	66.3
336411	Aircraft mfg	41.0	15.0	7.6	.9	17.5
336412	Aircraft engine & engine parts mfg	73.3	27.6	22.7	8.1	14.8
336413	Other aircraft part & auxiliary equipment mfg	60.6	27.4	7.0	4.7	21.4
336414	Guided missile & space vehicle mfg	16.7	9.9	1.4	.9	4.5
336415	Guided missile & space vehicle propulsion unit & parts mfg	19.0	10.2	1.0	1.1	6.7
336419	Other guided missile & space vehicle parts & auxiliary equip mfg	3.6	1.1	.2	.8	1.4
3365	Railroad rolling stock mfg	17.0	8.7	1.7	.7	5.9
33651	Railroad rolling stock mfg	17.0	8.7	1.7	.7	5.9
336510	Railroad rolling stock mfg	17.0	8.7	1.7	.7	5.9
3366	Ship & boat building	61.4	18.1	14.5	7.0	21.9
33661	Ship & boat building	61.4	18.1	14.5	7.0	21.9
336611	Ship building & repairing	35.7	11.6	6.0	5.4	12.7
336612	Boat building	25.7	6.5	8.5	1.5	9.2
3369	Other transportation equipment mfg	44.1	12.8	5.0	8.9	17.5
33699	Other transportation equipment mfg	44.1	12.8	5.0	8.9	17.5
336991	Motorcycle, bicycle, & parts mfg	(D)	4.9	(D)	(D)	(D)
336992	Military armored vehicle, tank, & tank component mfg	(D)	2.6	(D)	(D)	3.2
336999	All other transportation equipment mfg	9.4	5.2	(D)	(D)	(D)
337	Furniture & related product mfg	133.0	50.8	26.4	9.4	46.5
3371	Household & institutional furniture & kitchen cabinet mfg	86.1	35.2	17.9	6.3	26.6
33711	Wood kitchen cabinet & counter top mfg	39.8	21.0	4.5	3.3	11.0
337110	Wood kitchen cabinet & counter top mfg	39.8	21.0	4.5	3.3	11.0
33712	Household & institutional furniture mfg	46.2	14.2	13.5	2.9	15.6
337121	Upholstered household furniture mfg	3.9	1.1	1.2	.4	1.3
337122	Nonupholstered wood household furniture mfg	34.1	11.6	10.6	1.8	10.1
337124	Metal household furniture mfg	2.5	.6	.1	.1	1.7
337125	Household furniture (except wood & metal) mfg	1.1	.3	.1	.2	.6
337127	Institutional furniture mfg	3.3	.7	.5	.4	1.8
337129	Wood television, radio, & sewing machine cabinet mfg	1.3	(Z)	1.0	.1	.1
3372	Office furniture (including fixtures) mfg	43.6	14.7	7.3	2.9	18.7
33721	Office furniture (including fixtures) mfg	43.6	14.7	7.3	2.9	18.7
337211	Wood office furniture mfg	15.5	5.9	3.5	1.2	4.9
337212	Custom architectural woodwork & millwork mfg	5.3	1.4	.9	.2	2.8
337214	Office furniture (except wood) mfg	9.8	2.9	1.5	.9	4.6
337215	Showcase, partition, shelving, & locker mfg	12.9	4.6	1.4	.6	6.4
3379	Other furniture related product mfg	3.2	.8	1.0	.2	1.2
339	Miscellaneous mfg	115.5	41.9	15.3	12.1	46.2
3391	Medical equipment & supplies mfg	53.1	14.8	7.6	6.0	24.7
33911	Medical equipment & supplies mfg	53.1	14.8	7.6	6.0	24.7
339111	Laboratory apparatus & furniture mfg	4.8	1.1	1.0	1.1	1.6
339112	Surgical & medical instrument mfg	17.4	5.0	2.9	1.8	7.7
339113	Surgical appliance & supplies mfg	20.2	6.6	2.7	2.0	8.9
339114	Dental equipment & supplies mfg	3.0	.5	.4	.2	1.8
339115	Ophthalmic goods mfg	7.3	1.3	.5	.9	4.6
3399	Other miscellaneous mfg	62.4	27.1	7.7	6.1	21.5
33991	Jewelry & silverware mfg	10.0	5.3	1.1	1.6	2.0
339911	Jewelry (except costume) mfg	2.4	1.3	.6	.2	.4
339913	Jewelers' material & lapidary work mfg	5.2	2.8	.4	.9	1.1
339914	Costume jewelry & novelty mfg	1.7	1.0	.1	.4	.2
33992	Sporting & athletic goods mfg	7.5	2.4	1.6	.7	2.8
339920	Sporting & athletic goods mfg	7.5	2.4	1.6	.7	2.8
33993	Doll, toy, & game mfg	3.0	.2	.1	.1	2.5
33994	Office supplies (except paper) mfg	4.7	2.0	.7	.8	1.3
339941	Pen & mechanical pencil mfg	1.1	.2	.2	.3	.4
339942	Lead pencil & art good mfg	1.1	.6	(Z)	.1	.4
339944	Carbon paper & inked ribbon mfg	2.3	1.2	.4	.3	.3
33995	Sign mfg	4.8	1.4	1.5	.2	1.7
339950	Sign mfg	4.8	1.4	1.5	.2	1.7
33999	All other miscellaneous mfg	32.5	15.7	2.8	2.8	11.3
339991	Gasket, packing, & sealing device mfg	14.1	6.7	1.1	1.6	4.8
339992	Musical instrument mfg	2.8	1.0	.4	.3	1.2
339993	Fastener, button, needle, & pin mfg	1.8	.8	.5	.1	.4
339994	Broom, brush, & mop mfg	2.4	.8	(Z)	.4	1.1
339999	All other miscellaneous mfg	10.6	5.9	.7	.3	3.6

Table 5. Pollution Abatement Operating Costs—Industry by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	Industry	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
336	Transportation equipment mfg—Con.									
3364	Aerospace product & parts mfg	59.2	83.9	70.9	80.8	27.6	19.6	71.4	14.7	11
33641	Aerospace product & parts mfg	59.2	83.9	70.9	80.8	27.6	19.6	71.4	14.7	11
336411	Aircraft mfg	13.9	8.8	18.2	22.2	2.3	4.4	10.6	1.4	9
336412	Aircraft engine & engine parts mfg	19.6	35.1	18.6	19.6	9.3	7.9	32.4	4.1	29
336413	Other aircraft part & auxiliary equipment mfg	19.2	21.4	20.0	21.4	10.1	4.4	17.5	7.2	8
336414	Guided missile & space vehicle mfg	3.8	8.3	4.5	6.5	3.6	.6	5.0	1.0	1
336415	Guided missile & space vehicle propulsion unit & parts mfg	2.4	8.0	8.6	10.0	1.7	1.5	5.0	.8	1
336419	Other guided missile & space vehicle parts & auxiliary equip mfg . . . . .	.3	2.2	1.0	1.0	.6	.9	.9	.2	1
3365	Railroad rolling stock mfg	2.4	6.9	7.6	5.5	1.6	3.2	3.8	2.9	15
33651	Railroad rolling stock mfg	2.4	6.9	7.6	5.5	1.6	3.2	3.8	2.9	15
336510	Railroad rolling stock mfg	2.4	6.9	7.6	5.5	1.6	3.2	3.8	2.9	15
3366	Ship & boat building	34.7	7.5	19.1	17.8	5.8	4.4	28.0	5.4	10
33661	Ship & boat building	34.7	7.5	19.1	17.8	5.8	4.4	28.0	5.4	10
336611	Ship building & repairing	19.9	6.0	9.8	11.1	2.4	2.1	17.4	2.7	4
336612	Boat building	14.9	1.5	9.3	6.7	3.4	2.3	10.6	2.7	22
3369	Other transportation equipment mfg	6.0	10.3	27.9	17.8	14.5	3.7	6.6	1.6	3
33699	Other transportation equipment mfg	6.0	10.3	27.9	17.8	14.5	3.7	6.6	1.6	3
336991	Motorcycle, bicycle, & parts mfg	(D)	(D)	(D)	(D)	(D)	.3	(D)	1.0	(X)
336992	Military armored vehicle, tank, & tank component mfg	3.1	(D)	(D)	5.2	(D)	.2	(D)	.1	(X)
336999	All other transportation equipment mfg	(D)	5.1	(D)	(D)	(D)	3.1	(D)	.5	5
337	Furniture & related product mfg	69.1	13.0	50.9	35.5	37.8	11.4	34.2	14.1	6
3371	Household & institutional furniture & kitchen cabinet mfg	50.8	5.4	29.9	23.1	27.4	6.0	18.5	11.1	6
33711	Wood kitchen cabinet & counter top mfg	24.4	.5	14.8	10.9	11.2	2.5	10.8	4.4	10
337110	Wood kitchen cabinet & counter top mfg	24.4	.5	14.8	10.9	11.2	2.5	10.8	4.4	10
33712	Household & institutional furniture mfg	26.4	4.8	15.0	12.2	16.2	3.5	7.7	6.6	7
337121	Upholstered household furniture mfg	1.3	.5	2.1	.5	2.0	.1	1.1	.1	28
337122	Nonupholstered wood household furniture mfg	22.5	2.1	9.5	8.7	12.6	2.4	4.6	5.8	8
337124	Metal household furniture mfg	2.4	1.7	.3	.9	.1	.5	.5	.6	11
337125	Household furniture (except wood & metal) mfg . . . . .	.1	.1	.8	.4	.2	.1	.4	.1	11
337127	Institutional furniture mfg	1.0	.3	2.1	1.4	.5	.3	.9	.1	30
337129	Wood television, radio, & sewing machine cabinet mfg	1.0	.1	.2	.2	.8	(Z)	.2	(Z)	1
3372	Office furniture (including fixtures) mfg	17.3	7.0	19.3	11.6	9.7	5.0	14.5	2.7	13
33721	Office furniture (including fixtures) mfg	17.3	7.0	19.3	11.6	9.7	5.0	14.5	2.7	13
337211	Wood office furniture mfg	8.8	.8	5.8	3.7	4.9	1.5	3.7	1.7	21
337212	Custom architectural woodwork & millwork mfg	2.7	.2	2.5	1.7	.8	1.2	1.3	.2	30
337214	Office furniture (except wood) mfg	2.7	2.4	4.8	3.0	1.6	.8	4.0	.5	24
337215	Showcase, partition, shelving, & locker mfg	3.1	3.7	6.1	3.2	2.4	1.6	5.4	.3	26
3379	Other furniture related product mfg . . . . .	.9	.6	1.7	.8	.6	.3	1.2	.3	22
339	Miscellaneous mfg	33.8	28.1	53.6	35.1	21.8	10.2	41.9	6.6	5
3391	Medical equipment & supplies mfg	13.3	9.7	30.1	17.3	8.8	2.8	21.4	2.8	7
33911	Medical equipment & supplies mfg	13.3	9.7	30.1	17.3	8.8	2.8	21.4	2.8	7
339111	Laboratory apparatus & furniture mfg	1.4	1.2	2.2	1.6	.9	.1	1.1	1.1	11
339112	Surgical & medical instrument mfg	2.9	3.8	10.6	6.7	2.5	1.1	6.5	.6	13
339113	Surgical appliance & supplies mfg	7.3	3.1	9.8	5.8	4.5	.6	8.3	.9	14
339114	Dental equipment & supplies mfg . . . . .	.3	.3	2.3	.9	.2	.4	1.5	.1	11
339115	Ophthalmic goods mfg	1.3	1.2	4.9	2.1	.7	.5	3.8	.2	7
3399	Other miscellaneous mfg	20.5	18.4	23.5	17.8	13.0	7.3	20.5	3.7	6
33991	Jewelry & silverware mfg	1.4	5.5	3.0	4.0	1.3	1.9	2.5	.3	21
339911	Jewelry (except costume) mfg . . . . .	.1	1.6	.8	1.2	.2	.2	.8	.1	29
339913	Jewelers' material & lapidary work mfg	1.1	2.5	1.5	2.1	.3	1.3	1.3	.2	37
339914	Costume jewelry & novelty mfg	(D)	1.1	(D)	.5	.7	(D)	.2	(D)	8
33992	Sporting & athletic goods mfg	2.4	2.1	3.0	2.5	1.3	1.0	2.3	.3	11
339920	Sporting & athletic goods mfg	2.4	2.1	3.0	2.5	1.3	1.0	2.3	.3	11
33993	Doll, toy, & game mfg . . . . .	.1	—	2.9	.6	.1	.2	2.2	(Z)	36
33994	Office supplies (except paper) mfg	2.0	1.0	1.7	1.1	.9	.5	1.3	.9	6
339941	Pen & mechanical pencil mfg . . . . .	.2	.3	.7	.2	.2	.1	.6	(Z)	8
339942	Lead pencil & art good mfg . . . . .	.1	.7	.3	.5	.1	.1	.3	.1	12
339944	Carbon paper & inked ribbon mfg	1.7	—	.6	.3	.6	.3	.3	.7	10
33995	Sign mfg	2.3	1.1	1.4	1.7	.2	.6	1.8	.5	30
339950	Sign mfg	2.3	1.1	1.4	1.7	.2	.6	1.8	.5	30
33999	All other miscellaneous mfg	12.3	8.7	11.5	8.0	9.2	3.2	10.5	1.7	8
339991	Gasket, packing, & sealing device mfg	5.4	4.1	4.6	3.9	3.9	1.2	4.3	.8	13
339992	Musical instrument mfg	1.1	.4	1.4	.8	.8	.2	1.0	.2	19
339993	Fastener, button, needle, & pin mfg . . . . .	.7	.8	.3	.3	.5	.6	.3	.1	13
339994	Broom, brush, & mop mfg . . . . .	.4	.4	1.5	1.1	.4	(Z)	.7	.1	25
339999	All other miscellaneous mfg	4.3	2.9	3.4	1.7	3.5	1.0	3.9	.5	15

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
	United States	20 677.6	10 762.8	3 599.4	1 748.3	4 567.0
	Alabama	536.8	325.9	58.5	26.9	125.5
311	Food mfg	25.5	16.4	3.0	.8	5.3
313	Textile mills	4.5	2.1	(Z)	.1	2.2
321	Wood product mfg	29.4	14.7	6.9	.6	7.1
322	Paper mfg	75.5	52.4	4.2	2.5	16.4
324	Petroleum & coal products mfg	36.8	25.7	6.6	.3	4.2
325	Chemical mfg	125.7	70.5	15.1	6.0	34.1
326	Plastics & rubber products mfg	18.9	6.8	5.8	1.5	4.8
327	Nonmetallic mineral product mfg	31.2	26.4	1.4	.4	3.0
331	Primary metal mfg	122.8	74.8	9.5	10.0	28.5
332	Fabricated metal product mfg	7.2	3.2	1.1	.2	2.7
333	Machinery mfg	3.6	.8	.6	.4	1.8
334	Computer & electronic product mfg	1.3	.1	.1	.2	.8
336	Transportation equipment mfg	44.1	29.0	3.7	3.1	8.3
337	Furniture & related product mfg	7.9	1.3	.2	.7	5.7
339	Miscellaneous mfg	1.1	.6	(Z)	(Z)	.4
	Balance of state	1.5	.9	.2	(Z)	.3
	Alaska	16.6	6.9	4.1	.3	5.3
311	Food mfg	2.1	.9	.8	.1	.2
324	Petroleum & coal products mfg	11.4	3.2	3.3	—	4.9
325	Chemical mfg	3.0	2.7	—	.2	.2
	Arizona	137.7	79.5	13.4	11.9	32.9
311	Food mfg	7.0	2.7	.8	1.2	2.4
312	Beverage & tobacco product mfg	2.6	.5	.7	.3	1.0
321	Wood product mfg	2.6	.1	(Z)	1.0	1.5
323	Printing & related support activities	2.7	—	—	1.0	1.7
325	Chemical mfg	12.8	4.4	3.3	2.1	3.0
326	Plastics & rubber products mfg	4.8	2.6	.6	.2	1.4
327	Nonmetallic mineral product mfg	11.0	8.0	1.1	.6	1.3
331	Primary metal mfg	6.1	3.3	.4	.9	1.5
332	Fabricated metal product mfg	3.2	1.8	.2	(Z)	1.2
334	Computer & electronic product mfg	50.1	39.5	1.2	2.4	7.0
335	Electrical equipment, appliance, & component mfg	8.7	5.3	1.1	.2	2.0
336	Transportation equipment mfg	22.2	9.4	2.9	1.9	8.1
339	Miscellaneous mfg	1.1	.6	(Z)	.1	.4
	Balance of state	2.7	1.2	1.0	.1	.4
	Arkansas	311.7	155.1	47.9	35.1	73.6
311	Food mfg	51.3	33.8	7.1	4.1	6.2
314	Textile product mills	1.1	.9	.1	.1	—
321	Wood product mfg	33.3	10.6	20.9	.3	1.5
322	Paper mfg	67.5	41.9	3.6	4.1	17.9
323	Printing & related support activities	1.6	.9	—	—	.8
324	Petroleum & coal products mfg	1.4	1.0	.4	—	—
325	Chemical mfg	43.6	18.8	3.2	2.2	19.4
326	Plastics & rubber products mfg	15.4	4.9	2.1	2.5	5.9
327	Nonmetallic mineral product mfg	7.3	5.8	.4	.7	.4
331	Primary metal mfg	62.8	24.5	6.8	18.7	12.9
332	Fabricated metal product mfg	11.1	6.8	.4	.6	3.2
335	Electrical equipment, appliance, & component mfg	3.8	1.1	1.5	.5	.8
336	Transportation equipment mfg	9.5	2.9	1.3	1.2	4.1
	Balance of state	2.1	1.2	.3	.1	.5
	California	1 877.1	706.9	747.8	141.4	280.9
311	Food mfg	137.7	60.1	25.0	5.8	46.7
312	Beverage & tobacco product mfg	54.8	21.5	14.8	5.0	13.5
314	Textile product mills	2.3	1.3	.2	.3	.4
316	Leather & allied product mfg	3.7	.5	.3	.4	2.6
321	Wood product mfg	20.6	11.2	2.8	1.8	4.8
322	Paper mfg	59.2	29.6	7.9	3.0	18.7
323	Printing & related support activities	13.4	5.4	4.3	1.4	2.3
324	Petroleum & coal products mfg	950.5	271.2	598.1	53.6	27.6
325	Chemical mfg	112.2	46.5	18.0	17.2	30.5
326	Plastics & rubber products mfg	32.1	11.1	5.7	4.0	11.3
327	Nonmetallic mineral product mfg	70.6	31.1	24.1	5.7	9.7
331	Primary metal mfg	59.1	30.7	7.1	6.0	15.3
332	Fabricated metal product mfg	62.5	35.3	4.9	4.3	18.0
333	Machinery mfg	11.3	3.7	2.0	.9	4.6
334	Computer & electronic product mfg	184.3	101.1	20.2	21.7	41.4
335	Electrical equipment, appliance, & component mfg	12.2	4.3	1.8	1.0	5.1
336	Transportation equipment mfg	74.8	35.4	7.9	8.0	23.5
337	Furniture & related product mfg	5.7	2.3	.9	.2	2.2
339	Miscellaneous mfg	9.8	4.1	1.8	1.1	2.7
	Colorado	80.3	42.3	12.5	6.0	19.4
311	Food mfg	15.4	9.3	4.0	.1	2.1
312	Beverage & tobacco product mfg	6.4	3.0	1.0	.5	1.9
321	Wood product mfg	1.2	.7	—	.3	.2
325	Chemical mfg	20.9	8.7	5.9	1.4	4.9
326	Plastics & rubber products mfg	3.3	(Z)	(Z)	.3	2.9
327	Nonmetallic mineral product mfg	8.6	6.4	.4	.4	1.4
331	Primary metal mfg	6.2	3.7	—	1.7	.8
332	Fabricated metal product mfg	4.1	3.2	.2	.3	.3
333	Machinery mfg	2.5	.6	.6	.4	1.0
335	Electrical equipment, appliance, & component mfg	1.7	(Z)	—	—	1.6

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
	United States	8 629.1	6 725.2	5 323.3	4 095.9	5 712.3	2 811.2	5 209.7	2 848.4	2
	Alabama	230.3	172.1	134.3	93.0	140.7	61.1	141.5	100.5	7
311	Food mfg	2.9	19.7	2.9	3.9	8.9	3.4	7.2	2.1	6
313	Textile mills	1.2	2.9	.4	.5	1.0	1.1	2.6	.3	9
321	Wood product mfg	21.5	1.6	6.3	3.3	12.0	2.5	5.0	6.6	24
322	Paper mfg	22.7	32.8	20.0	11.3	18.5	12.1	17.5	16.2	1
324	Petroleum & coal products mfg	20.3	12.5	4.0	5.1	12.1	6.8	6.9	5.9	32
325	Chemical mfg	40.2	54.4	31.1	30.2	24.3	14.4	37.8	19.0	9
326	Plastics & rubber products mfg	14.9	1.0	3.0	10.9	2.3	.9	4.1	.7	44
327	Nonmetallic mineral product mfg	25.5	2.3	3.4	3.0	13.1	4.4	4.9	5.8	38
331	Primary metal mfg	53.2	28.0	41.6	12.9	40.0	12.4	35.5	21.9	15
332	Fabricated metal product mfg	3.8	1.2	2.3	2.1	1.6	1.2	1.2	1.2	17
333	Machinery mfg .....	.4	1.2	2.0	.4	.3	.3	2.4	.1	45
334	Computer & electronic product mfg .....	.1	.3	.9	.3	.3	(Z)	.6	.1	17
336	Transportation equipment mfg	21.4	11.4	11.4	6.3	^a 4.9	2.3	11.2	19.4	35
337	Furniture & related product mfg	1.4	2.0	4.5	1.9	.9	.2	4.0	.9	37
339	Miscellaneous mfg	(Z)	.8	.3	.4	(Z)	(Z)	.5	.1	18
	Balance of state .....	.8	.4	.3	.4	.6	.1	.2	.2	7
	Alaska	6.9	4.6	5.1	7.7	3.4	.5	4.2	.9	59
311	Food mfg .....	.8	.9	.5	.3	.4	.1	1.2	.1	1
324	Petroleum & coal products mfg	4.0	3.0	4.4	6.7	.7	.3	2.9	.7	86
325	Chemical mfg	2.1	.8	.2	.6	2.3	.1	.1	—	1
	Arizona	45.6	51.5	40.6	38.1	35.1	18.1	27.0	19.5	25
311	Food mfg	1.6	3.0	2.4	1.3	(D)	(D)	(D)	.9	48
312	Beverage & tobacco product mfg .....	.6	1.3	.6	1.1	(Z)	(Z)	.7	.7	43
321	Wood product mfg .....	.3	(Z)	2.2	1.3	.3	(D)	.8	(D)	65
323	Printing & related support activities	1.7	—	1.1	1.0	1.7	(D)	(D)	(D)	95
325	Chemical mfg	2.9	5.4	4.5	1.3	4.3	.5	1.1	5.6	69
326	Plastics & rubber products mfg	2.7	.5	1.6	1.1	(D)	(D)	1.0	1.1	24
327	Nonmetallic mineral product mfg	8.0	1.6	1.4	2.7	2.9	3.1	1.3	1.0	8
331	Primary metal mfg	3.6	.5	2.0	.9	2.1	.5	1.6	1.0	18
332	Fabricated metal product mfg .....	.9	1.1	1.3	1.3	.3	.2	.9	.5	22
334	Computer & electronic product mfg	8.1	31.2	10.8	17.7	9.9	10.1	8.3	4.2	63
335	Electrical equipment, appliance, & component mfg	4.6	1.2	2.9	2.4	1.6	^a 2	1.8	2.8	56
336	Transportation equipment mfg	8.4	4.9	8.9	4.5	9.3	2.0	5.1	1.4	16
339	Miscellaneous mfg .....	.7	.1	.3	.6	.3	(D)	(D)	(Z)	1
	Balance of state	1.5	.7	.6	1.0	.7	.2	.7	.3	19
	Arkansas	114.3	117.3	80.1	54.4	71.5	49.7	65.0	71.0	8
311	Food mfg	3.4	39.7	8.2	8.3	7.3	11.2	15.6	8.9	21
314	Textile product mills .....	.2	.8	.2	.1	(D)	.3	.4	.8	1
321	Wood product mfg	30.1	1.4	1.8	3.7	14.8	4.4	3.1	7.2	41
322	Paper mfg	25.4	21.8	20.2	8.6	12.7	5.6	10.1	30.5	4
323	Printing & related support activities	1.4	(Z)	.2	(D)	(D)	(D)	(D)	.4	46
324	Petroleum & coal products mfg	1.3	(Z)	.1	.2	.6	.3	—	.4	72
325	Chemical mfg	5.7	26.3	11.7	10.6	11.1	3.4	5.8	12.7	28
326	Plastics & rubber products mfg	4.9	3.4	7.1	3.1	5.9	1.5	3.3	1.7	22
327	Nonmetallic mineral product mfg	6.6	.2	.5	1.8	2.6	.8	.8	1.3	43
331	Primary metal mfg	29.1	12.5	21.2	8.0	12.1	17.8	19.0	5.9	7
332	Fabricated metal product mfg	1.9	6.1	3.1	4.3	1.2	2.2	2.5	1.0	19
335	Electrical equipment, appliance, & component mfg	1.1	1.7	1.0	(D)	(D)	(D)	(D)	(D)	4
336	Transportation equipment mfg	2.6	2.4	4.4	3.2	1.3	1.6	2.9	.3	28
	Balance of state .....	.6	1.1	.4	.8	.3	.2	.6	.2	21
	California	1 038.9	477.5	360.7	396.3	595.8	227.2	442.4	215.3	4
311	Food mfg	36.5	78.0	23.3	18.5	29.0	14.0	58.9	17.2	11
312	Beverage & tobacco product mfg	4.0	41.4	9.5	6.8	7.3	3.5	32.0	5.1	16
314	Textile product mills .....	.4	1.4	.5	.4	.2	.7	.7	.3	1
316	Leather & allied product mfg .....	.3	.2	3.2	(Z)	1.1	(Z)	(Z)	2.5	67
321	Wood product mfg	12.6	1.6	6.4	4.4	6.8	1.1	4.7	3.7	31
322	Paper mfg	10.6	32.2	16.4	11.5	10.3	8.5	21.7	7.2	20
323	Printing & related support activities	9.2	1.3	2.9	1.9	6.7	.4	2.3	2.1	28
324	Petroleum & coal products mfg	702.7	150.1	97.7	178.8	368.0	126.0	160.9	116.7	4
325	Chemical mfg	40.1	35.8	36.3	25.1	28.5	12.7	35.7	10.3	9
326	Plastics & rubber products mfg	13.2	3.0	15.8	8.9	7.7	1.3	8.8	5.3	17
327	Nonmetallic mineral product mfg	52.7	5.7	12.1	12.1	24.6	7.4	15.1	11.3	13
331	Primary metal mfg	14.5	19.4	15.2	13.8	12.2	14.5	15.2	3.3	5
332	Fabricated metal product mfg	18.0	23.8	20.7	22.0	9.8	10.3	13.2	7.2	17
333	Machinery mfg	2.7	2.9	5.7	4.5	1.1	.5	4.0	1.2	17
334	Computer & electronic product mfg	71.5	54.5	58.4	60.4	50.7	18.5	40.1	14.6	27
335	Electrical equipment, appliance, & component mfg	3.3	5.7	3.2	2.9	3.0	^a 9	4.7	^a 7	26
336	Transportation equipment mfg	31.2	18.8	24.9	20.7	23.9	5.6	19.0	5.6	8
337	Furniture & related product mfg	1.5	.2	4.0	1.4	1.4	.2	2.1	.7	23
339	Miscellaneous mfg	3.9	1.4	4.5	2.0	3.4	1.0	2.9	.5	10
	Colorado	27.6	29.6	23.1	26.7	12.0	11.8	18.6	11.2	13
311	Food mfg	3.6	9.7	2.1	3.8	3.2	5.4	1.6	1.4	32
312	Beverage & tobacco product mfg	2.0	3.7	.8	2.1	.1	.8	2.3	1.1	22
321	Wood product mfg .....	.7	—	.5	—	.3	(Z)	.5	.3	98
325	Chemical mfg	9.7	4.2	7.0	6.0	3.3	1.3	6.1	4.2	39
326	Plastics & rubber products mfg .....	.1	—	3.2	2.3	.1	—	.9	(Z)	87
327	Nonmetallic mineral product mfg	6.6	1.0	1.1	2.2	1.8	1.3	1.5	1.7	20
331	Primary metal mfg	2.2	1.5	2.4	^a 1.1	(D)	(D)	^a 1.9	^a 9	5
332	Fabricated metal product mfg .....	.7	2.9	.4	2.2	.5	.4	.2	.7	29
333	Machinery mfg .....	.5	.8	1.2	1.0	.1	.6	.8	.1	49
335	Electrical equipment, appliance, & component mfg	(Z)	—	1.6	.2	.2	(Z)	.8	.5	57

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	State/Subsector	Activity				
		Total	Treatment	Prevention	Recycling	Disposal
Colorado—Con.						
336	Transportation equipment mfg	6.2	4.5	.1	.3	1.2
339	Miscellaneous mfg	1.5	.9	(Z)	(Z)	.5
	Balance of state	2.4	1.4	.2	.3	.6
	Connecticut	109.2	47.8	21.3	5.2	34.8
311	Food mfg	4.3	2.6	(D)	(D)	(D)
322	Paper mfg	7.0	4.3	(D)	(D)	1.2
323	Printing & related support activities	(D)	(D)	(D)	(D)	3.1
324	Petroleum & coal products mfg	(D)	(D)	(D)	(Z)	(D)
325	Chemical mfg	32.1	17.2	8.3	1.0	5.7
326	Plastics & rubber products mfg	3.1	1.3	.4	.4	1.0
327	Nonmetallic mineral product mfg	(D)	(D)	(D)	(D)	(D)
331	Primary metal mfg	6.2	4.6	.4	.4	.9
332	Fabricated metal product mfg	21.5	9.3	1.7	1.1	9.4
334	Computer & electronic product mfg	9.2	1.8	2.5	.1	2.6
335	Electrical equipment, appliance, & component mfg	4.8	.8	4.2	(Z)	1.7
336	Transportation equipment mfg	10.2	(D)	(D)	.5	5.9
339	Miscellaneous mfg	1.9	.4	.5	.1	.8
	Balance of state	2.4	.7	.3	.1	1.3
	Delaware	51.2	21.4	9.8	3.1	16.8
311	Food mfg	14.5	7.3	3.4	.2	3.6
325	Chemical mfg	31.8	11.9	6.0	2.8	11.0
326	Plastics & rubber products mfg	(D)	(D)	—	—	(D)
339	Miscellaneous mfg	(D)	—	.2	—	(D)
	Balance of state	2.6	(D)	.2	.1	(D)
	Florida	397.6	201.2	73.6	20.3	102.4
311	Food mfg	39.3	25.6	3.7	1.2	8.9
312	Beverage & tobacco product mfg	10.9	9.1	.5	.2	1.1
321	Wood product mfg	2.1	1.0	.5	.1	.6
322	Paper mfg	76.5	39.4	16.9	2.4	17.8
323	Printing & related support activities	1.6	.5	.4	.2	.5
325	Chemical mfg	157.3	68.3	36.7	9.9	42.4
326	Plastics & rubber products mfg	16.3	8.7	1.8	.8	5.1
327	Nonmetallic mineral product mfg	33.5	28.7	1.2	1.5	2.1
331	Primary metal mfg	9.5	3.4	1.3	.1	4.8
332	Fabricated metal product mfg	6.6	2.5	.8	1.2	2.1
333	Machinery mfg	4.5	.1	1.0	.3	3.1
334	Computer & electronic product mfg	10.8	6.3	1.1	.7	2.7
335	Electrical equipment, appliance, & component mfg	1.7	.7	.3	.1	.5
336	Transportation equipment mfg	17.7	5.5	6.2	1.0	5.1
339	Miscellaneous mfg	7.4	1.1	1.1	.7	4.6
	Balance of state	1.8	.4	.1	.1	1.3
	Georgia	562.0	287.0	71.4	70.0	133.6
311	Food mfg	92.0	47.4	9.4	20.5	14.7
312	Beverage & tobacco product mfg	10.4	6.9	(D)	(D)	(D)
313	Textile mills	21.4	6.9	2.5	3.5	8.6
314	Textile product mills	14.8	4.1	1.4	1.6	7.7
321	Wood product mfg	37.2	20.1	7.0	4.0	6.1
322	Paper mfg	143.0	103.7	10.6	7.5	21.2
323	Printing & related support activities	5.2	3.5	(Z)	.3	1.3
324	Petroleum & coal products mfg	2.9	.3	.5	(Z)	2.1
325	Chemical mfg	104.0	34.5	17.4	15.3	36.9
326	Plastics & rubber products mfg	12.3	4.1	1.2	3.6	3.4
327	Nonmetallic mineral product mfg	29.5	15.9	2.7	4.0	7.0
331	Primary metal mfg	27.7	14.0	2.9	3.5	7.3
332	Fabricated metal product mfg	7.4	4.5	(D)	(D)	1.3
333	Machinery mfg	14.8	3.6	7.0	1.0	3.2
334	Computer & electronic product mfg	3.7	2.6	(D)	(D)	1.0
335	Electrical equipment, appliance, & component mfg	8.0	2.2	1.2	1.4	3.2
336	Transportation equipment mfg	22.1	10.9	4.6	1.3	5.3
337	Furniture & related product mfg	2.5	1.1	(D)	(D)	(D)
339	Miscellaneous mfg	3.0	.8	1.1	(D)	(D)
	Hawaii	8.9	3.8	2.0	(D)	(D)
311	Food mfg	4.0	(D)	1.0	(D)	(D)
324	Petroleum & coal products mfg	3.0	(D)	.9	(D)	(D)
332	Fabricated metal product mfg	1.1	1.0	(Z)	(Z)	(Z)
	Idaho	102.4	59.5	14.1	8.8	19.9
311	Food mfg	31.2	20.8	4.7	.7	4.9
321	Wood product mfg	3.7	2.5	.4	.2	.6
322	Paper mfg	24.9	22.5	.1	.2	2.0
325	Chemical mfg	27.7	6.9	7.2	7.0	6.5
332	Fabricated metal product mfg	2.5	1.2	.1	.2	1.0
333	Machinery mfg	(D)	.1	1.4	.1	(D)
334	Computer & electronic product mfg	8.0	5.1	.1	.3	2.5
	Balance of state	(D)	.4	.2	(Z)	(D)
	Illinois	872.3	488.5	133.4	63.4	187.1
311	Food mfg	117.8	86.3	7.5	7.1	16.9
312	Beverage & tobacco product mfg	(D)	(D)	—	(D)	(D)
316	Leather & allied product mfg	(D)	(D)	(D)	(D)	(D)
321	Wood product mfg	(D)	4.9	2.2	(D)	(D)
322	Paper mfg	(D)	2.9	(D)	(D)	1.6
323	Printing & related support activities	18.1	4.5	3.2	6.4	4.0
324	Petroleum & coal products mfg	136.3	71.3	45.4	2.4	17.3
325	Chemical mfg	220.1	123.0	38.7	15.8	42.6
326	Plastics & rubber products mfg	22.4	8.1	2.8	3.9	7.6
327	Nonmetallic mineral product mfg	24.2	14.1	2.1	1.4	6.5

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Colorado—Con.										
336	Transportation equipment mfg	.3	4.4	1.5	4.0	(D)	(D)	1.2	(D)	11
339	Miscellaneous mfg	.2	.8	.5	1.0	(D)	.2	.1	(D)	25
	Balance of state	1.0	.5	.9	.8	.4	.3	.7	.2	12
	Connecticut	28.0	49.1	32.1	24.8	33.7	13.8	29.3	7.6	11
311	Food mfg	.4	2.9	1.0	1.0	.5	.5	2.1	.3	25
322	Paper mfg	4.0	1.2	1.7	.6	3.9	1.1	.9	.5	24
323	Printing & related support activities	3.2	(D)	.6	.4	(D)	(D)	1.0	(D)	(X)
324	Petroleum & coal products mfg	(D)	(D)	.1	(D)	(D)	(D)	(D)	(D)	(X)
325	Chemical mfg	6.2	15.2	10.7	5.9	14.3	(D)	(D)	(D)	28
326	Plastics & rubber products mfg	1.1	1.4	.6	.9	.7	.4	1.0	.2	52
327	Nonmetallic mineral product mfg	(D)	(D)	.3	(D)	(D)	(D)	(D)	(D)	(X)
331	Primary metal mfg	.7	4.9	.7	1.8	.7	2.5	(D)	(D)	38
332	Fabricated metal product mfg	3.6	12.8	5.2	6.8	3.7	3.0	7.0	.9	17
334	Computer & electronic product mfg	1.6	4.7	2.9	2.0	1.7	1.1	4.1	.3	30
335	Electrical equipment, appliance, & component mfg	2.0	1.6	1.2	.5	3.3	.1	.6	.3	63
336	Transportation equipment mfg	2.9	2.4	4.9	3.4	1.8	.7	4.1	.2	23
339	Miscellaneous mfg	.5	.5	1.0	.5	.1	.3	.8	.1	37
	Balance of state	.5	.6	1.3	.7	.3	.1	1.1	.3	25
	Delaware	10.7	23.0	17.5	12.0	4.9	10.0	16.7	7.6	11
311	Food mfg	.6	10.9	3.0	2.1	1.3	3.1	5.5	2.6	17
325	Chemical mfg	7.9	11.8	12.1	9.0	2.1	6.8	9.2	4.7	15
326	Plastics & rubber products mfg	(D)	(Z)	(D)	^a .2	(D)	^a .1	(D)	^a .2	(X)
339	Miscellaneous mfg	.1	(Z)	(D)	.1	(Z)	(Z)	(D)	(X)	(X)
	Balance of state	(D)	.3	(D)	.7	(D)	^a .2	(D)	^a .1	35
	Florida	154.2	138.8	104.6	85.9	86.3	59.6	89.4	76.3	6
311	Food mfg	6.5	24.7	8.2	8.0	5.9	4.0	8.9	12.5	8
312	Beverage & tobacco product mfg	.7	9.1	1.1	3.5	2.0	(D)	1.5	(D)	15
321	Wood product mfg	1.0	.1	1.0	.5	.4	.2	.6	.4	15
322	Paper mfg	30.0	29.4	17.2	14.7	14.0	12.0	22.3	13.4	5
323	Printing & related support activities	.4	.1	1.0	.3	.4	(D)	.6	(D)	31
325	Chemical mfg	59.7	50.6	47.0	28.4	33.4	27.6	29.3	38.5	7
326	Plastics & rubber products mfg	8.5	3.6	4.3	4.5	1.3	6.9	1.7	2.0	76
327	Nonmetallic mineral product mfg	29.8	1.3	2.4	3.4	21.6	2.6	2.2	3.8	27
331	Primary metal mfg	2.5	5.2	1.9	2.4	.8	4	4.7	1.2	36
332	Fabricated metal product mfg	2.4	1.8	2.5	3.1	1.6	.5	.9	.5	39
333	Machinery mfg	.5	.8	3.1	2.0	.1	(D)	2.2	(D)	43
334	Computer & electronic product mfg	1.5	5.8	3.5	5.5	.8	1.1	3.2	.2	27
335	Electrical equipment, appliance, & component mfg	.7	.3	.7	.5	.2	.4	.5	.1	24
336	Transportation equipment mfg	9.2	4.5	4.1	6.5	3.0	1.8	5.8	.6	44
339	Miscellaneous mfg	.6	1.3	5.6	2.4	.6	.2	3.7	.4	12
	Balance of state	.4	.3	1.1	.1	.2	(Z)	1.4	(Z)	29
	Georgia	194.2	213.2	154.7	98.6	120.3	100.8	148.9	93.4	6
311	Food mfg	26.9	53.2	11.9	14.4	21.8	15.7	29.4	10.7	23
312	Beverage & tobacco product mfg	3.0	4.7	2.7	(D)	(D)	(D)	4.8	2.8	1
313	Textile mills	4.8	8.8	7.7	5.1	3.5	2.6	8.9	1.3	26
314	Textile product mills	1.9	6.2	6.8	3.6	.9	2.0	7.6	.8	17
321	Wood product mfg	26.6	1.2	9.4	5.2	(D)	(D)	(D)	8.1	24
322	Paper mfg	47.2	56.7	39.1	18.2	25.1	27.4	30.3	42.1	5
323	Printing & related support activities	3.4	.7	1.1	.7	2.2	.6	1.3	.3	15
324	Petroleum & coal products mfg	(Z)	—	2.9	.1	.2	.2	2.3	(Z)	40
325	Chemical mfg	32.0	42.1	30.0	20.7	14.5	28.8	28.9	11.1	7
326	Plastics & rubber products mfg	4.6	1.7	6.0	3.3	4.0	.9	2.6	1.4	18
327	Nonmetallic mineral product mfg	16.4	5.8	7.3	7.1	6.3	5.1	7.8	3.2	12
331	Primary metal mfg	8.9	9.0	9.9	(D)	(D)	4.9	9.3	3.7	37
332	Fabricated metal product mfg	3.9	2.0	1.5	1.2	2.8	1.3	1.4	.6	8
333	Machinery mfg	5.5	4.8	4.6	3.1	3.7	.8	2.2	4.9	54
334	Computer & electronic product mfg	.2	2.1	1.3	1.2	.2	1.7	.3	.1	25
335	Electrical equipment, appliance, & component mfg	2.2	2.8	3.0	2.5	(D)	1.3	(D)	1.1	20
336	Transportation equipment mfg	5.8	8.8	7.5	3.8	10.1	3.6	4.2	.4	34
337	Furniture & related product mfg	.2	1.0	1.3	(D)	(D)	(D)	1.1	.4	29
339	Miscellaneous mfg	.5	1.7	.8	.8	.4	.2	1.4	.2	30
	Hawaii	3.6	3.0	2.4	3.1	1.4	1.5	1.5	1.4	28
311	Food mfg	2.1	.8	1.1	1.0	.7	.9	1.0	.5	27
324	Petroleum & coal products mfg	1.2	1.2	.6	1.5	.3	.2	.3	.7	69
332	Fabricated metal product mfg	.1	.8	.1	.3	.3	.3	.1	.1	66
	Idaho	41.6	38.9	21.9	24.3	19.2	17.1	23.7	18.1	6
311	Food mfg	6.8	20.6	3.9	6.4	4.3	4.1	10.5	5.9	19
321	Wood product mfg	2.8	.2	.6	.9	1.0	.3	.8	.7	11
322	Paper mfg	16.4	6.3	2.2	4.7	8.6	5.8	2.9	2.9	1
325	Chemical mfg	13.9	4.9	8.9	7.7	3.9	4.9	4.7	6.6	1
332	Fabricated metal product mfg	—	1.2	1.3	.8	.1	.4	1.0	.1	1
333	Machinery mfg	.7	—	(D)	1.5	.2	.1	(D)	—	(X)
334	Computer & electronic product mfg	1.0	5.2	1.8	^a 2.1	.7	1.4	1.8	1.9	1
	Balance of state	.1	.5	(D)	.1	.3	.1	(D)	(Z)	(X)
	Illinois	318.6	336.6	217.1	201.4	235.2	108.4	210.1	117.3	10
311	Food mfg	35.3	67.7	14.8	21.3	28.8	17.7	37.4	12.6	13
312	Beverage & tobacco product mfg	.2	(D)	(D)	(D)	(Z)	(D)	(D)	(D)	(X)
316	Leather & allied product mfg	.2	(D)	(D)	.4	(D)	(D)	(D)	(D)	(X)
321	Wood product mfg	6.7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
322	Paper mfg	2.0	(D)	2.6	1.9	(D)	(D)	(D)	(D)	(X)
323	Printing & related support activities	10.4	2.3	5.4	3.3	7.2	.9	4.0	2.8	14
324	Petroleum & coal products mfg	73.7	41.9	20.6	13.3	58.8	21.1	19.5	23.7	23
325	Chemical mfg	67.7	93.2	59.2	56.1	40.6	26.1	57.9	39.4	17
326	Plastics & rubber products mfg	8.9	3.8	9.6	5.5	4.3	2.6	7.9	2.1	11
327	Nonmetallic mineral product mfg	15.7	1.8	6.6	4.0	6.4	1.7	6.6	5.4	22

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
Illinois—Con.						
331	Primary metal mfg	139.1	102.1	5.7	4.1	27.1
332	Fabricated metal product mfg	78.2	39.2	10.1	6.2	22.7
333	Machinery mfg	44.5	12.8	6.1	5.9	19.8
334	Computer & electronic product mfg	8.2	3.0	1.2	1.5	2.6
335	Electrical equipment, appliance, & component mfg	6.5	2.3	1.3	1.3	1.7
336	Transportation equipment mfg	28.7	8.6	5.1	3.7	11.3
337	Furniture & related product mfg	3.4	.4	1.4	.6	1.1
339	Miscellaneous mfg	6.4	3.1	(D)	(D)	2.4
Indiana		793.9	417.2	83.8	100.1	192.8
311	Food mfg	37.4	25.0	2.7	2.0	7.7
316	Leather & allied product mfg	^a 1.0	.7	.1	.1	.2
321	Wood product mfg	12.2	6.8	1.9	1.5	2.0
322	Paper mfg	8.2	1.8	.4	1.4	4.6
323	Printing & related support activities	8.0	2.9	3.9	.2	1.1
324	Petroleum & coal products mfg	81.4	21.4	16.4	34.2	9.4
325	Chemical mfg	81.1	47.6	9.0	4.8	19.7
326	Plastics & rubber products mfg	22.8	10.4	2.8	2.8	6.9
327	Nonmetallic mineral product mfg	15.9	8.4	1.7	1.1	4.7
331	Primary metal mfg	365.9	220.2	19.8	33.4	92.5
332	Fabricated metal product mfg	38.4	23.4	2.1	2.6	10.2
333	Machinery mfg	11.1	3.6	1.2	2.2	4.2
334	Computer & electronic product mfg	1.4	.6	.2	.2	.5
335	Electrical equipment, appliance, & component mfg	4.7	2.0	1.0	.6	1.1
336	Transportation equipment mfg	85.0	34.4	17.5	10.8	22.4
337	Furniture & related product mfg	9.9	5.4	1.9	.2	2.4
339	Miscellaneous mfg	8.9	2.5	1.2	1.9	3.3
Iowa		234.1	126.3	28.0	14.9	65.0
311	Food mfg	80.5	47.0	8.4	1.9	23.2
312	Beverage & tobacco product mfg	2.7	.1	—	1.7	.9
316	Leather & allied product mfg	3.3	2.7	—	—	.7
321	Wood product mfg	4.7	2.0	.1	1.0	1.6
322	Paper mfg	2.4	1.2	.1	(Z)	1.1
323	Printing & related support activities	1.2	.6	.1	(Z)	.6
325	Chemical mfg	72.0	42.3	9.5	4.3	15.9
326	Plastics & rubber products mfg	5.5	1.1	1.7	1.2	1.5
327	Nonmetallic mineral product mfg	9.1	4.5	2.7	.4	1.5
331	Primary metal mfg	17.2	7.3	1.9	.4	7.6
332	Fabricated metal product mfg	10.4	5.5	.8	1.0	3.1
333	Machinery mfg	9.7	4.4	1.2	1.5	2.6
335	Electrical equipment, appliance, & component mfg	5.1	2.6	.5	.6	1.4
336	Transportation equipment mfg	6.8	3.7	.5	.7	2.0
337	Furniture & related product mfg	3.1	1.5	.3	.3	1.0
Kansas		147.9	76.7	19.4	10.9	40.9
311	Food mfg	20.9	12.4	2.4	.5	5.6
316	Leather & allied product mfg	2.2	1.7	.3	—	.1
322	Paper mfg	2.4	1.4	.1	.5	.4
323	Printing & related support activities	8.0	7.3	(Z)	.3	.4
324	Petroleum & coal products mfg	34.6	16.3	6.3	5.5	6.5
325	Chemical mfg	34.1	15.3	3.6	1.0	14.3
326	Plastics & rubber products mfg	4.5	1.3	.7	.4	2.1
327	Nonmetallic mineral product mfg	10.0	5.8	2.2	.8	1.1
331	Primary metal mfg	5.5	3.8	.3	.3	1.1
332	Fabricated metal product mfg	1.9	.7	.3	(Z)	.9
333	Machinery mfg	4.8	1.3	1.5	.1	1.9
335	Electrical equipment, appliance, & component mfg	3.1	.7	.7	.7	1.0
336	Transportation equipment mfg	13.5	8.2	.6	.4	4.3
337	Furniture & related product mfg	1.4	.3	.4	.3	.3
	Balance of state	1.0	(Z)	—	(Z)	.9
Kentucky		486.7	250.1	72.4	58.0	106.2
311	Food mfg	34.2	21.8	1.3	1.8	9.4
312	Beverage & tobacco product mfg	4.0	2.4	.6	.2	.8
313	Textile mills	(D)	(D)	(D)	—	(D)
321	Wood product mfg	6.3	4.3	.9	.6	.6
322	Paper mfg	26.0	13.4	.9	5.6	6.1
323	Printing & related support activities	10.7	5.5	.7	3.0	1.6
324	Petroleum & coal products mfg	(D)	(D)	.6	.1	(D)
325	Chemical mfg	125.8	80.9	14.1	7.9	22.9
326	Plastics & rubber products mfg	3.8	1.5	.4	.2	1.7
327	Nonmetallic mineral product mfg	12.3	4.6	4.1	.2	3.3
331	Primary metal mfg	118.6	66.0	30.7	2.8	19.0
332	Fabricated metal product mfg	86.2	16.8	13.0	32.5	23.9
333	Machinery mfg	9.8	5.1	1.0	.6	3.1
335	Electrical equipment, appliance, & component mfg	3.3	1.0	1.1	.5	.7
336	Transportation equipment mfg	28.9	18.0	1.7	1.5	7.7
337	Furniture & related product mfg	2.8	(D)	(D)	.5	1.2
339	Miscellaneous mfg	4.2	2.1	.3	.1	1.8
Louisiana		1 809.2	1 067.9	414.1	106.8	220.3
311	Food mfg	16.6	9.1	.9	.5	6.1
312	Beverage & tobacco product mfg	(D)	(D)	—	—	—
321	Wood product mfg	11.3	5.6	2.8	.9	2.1
322	Paper mfg	114.1	84.8	13.1	3.8	12.3
324	Petroleum & coal products mfg	840.9	498.4	223.4	68.7	50.3
325	Chemical mfg	795.1	453.7	166.7	30.7	144.0
326	Plastics & rubber products mfg	(D)	(D)	(D)	(D)	(D)
327	Nonmetallic mineral product mfg	(D)	(D)	(D)	(D)	(D)
333	Machinery mfg	(D)	(D)	(D)	(D)	(D)
335	Electrical equipment, appliance, & component mfg	8.8	6.8	(D)	.6	(D)

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Illinois—Con.										
331	Primary metal mfg	54.6	61.1	23.4	41.5	41.5	15.5	26.1	14.5	48
332	Fabricated metal product mfg	21.2	32.6	24.4	22.0	23.5	12.6	15.2	4.9	14
333	Machinery mfg	6.1	11.5	27.0	(D)	(D)	4.1	(D)	4.9	4
334	Computer & electronic product mfg	.4	3.7	4.1	4.6	.6	.5	2.0	.5	19
335	Electrical equipment, appliance, & component mfg	(D)	(D)	(D)	2.0	.8	.5	2.5	.7	20
336	Transportation equipment mfg	10.0	9.2	9.5	7.6	11.3	2.4	4.8	2.5	32
337	Furniture & related product mfg	(D)	(D)	1.6	1.4	.7	.5	.8	(Z)	6
339	Miscellaneous mfg	3.1	(D)	(D)	1.2	2.6	.3	2.2	.2	16
	Illinois	315.3	276.7	201.9	162.6	166.8	109.4	239.7	115.3	3
Indiana										
311	Food mfg	9.7	22.4	5.4	6.5	4.9	6.9	15.4	3.7	8
316	Leather & allied product mfg	.1	.7	.2	a.2	a.3	a.3	a.3	a.1	65
321	Wood product mfg	8.1	.6	3.5	.8	7.2	.6	2.5	1.1	31
322	Paper mfg	2.4	1.7	4.1	1.8	2.1	.2	3.2	.9	21
323	Printing & related support activities	6.1	.6	1.3	.9	4.6	.6	1.1	.8	14
324	Petroleum & coal products mfg	42.1	25.8	13.5	14.4	14.3	11.6	32.7	8.3	3
325	Chemical mfg	22.2	34.1	24.8	19.9	9.2	7.4	20.4	24.2	17
326	Plastics & rubber products mfg	7.8	4.4	10.6	4.2	7.6	2.8	7.1	1.2	18
327	Nonmetallic mineral product mfg	9.8	1.1	5.0	2.4	5.0	1.3	4.8	2.4	6
331	Primary metal mfg	152.4	129.9	83.6	68.5	81.9	60.4	101.7	53.4	2
332	Fabricated metal product mfg	10.2	16.9	11.3	9.0	7.2	6.3	11.4	4.5	9
333	Machinery mfg	2.3	3.3	5.5	3.6	.5	1.3	4.5	1.2	27
334	Computer & electronic product mfg	.2	.3	.9	.5	.1	.3	.4	.1	11
335	Electrical equipment, appliance, & component mfg	1.3	1.9	1.5	1.9	.2	.5	2.2	(Z)	42
336	Transportation equipment mfg	31.9	28.7	24.4	24.2	15.4	7.2	27.0	11.3	8
337	Furniture & related product mfg	6.2	1.5	2.2	1.5	4.2	1.5	2.2	.7	21
339	Miscellaneous mfg	2.5	2.4	4.0	2.3	2.5	.4	2.5	1.3	12
	Indiana	77.3	92.3	64.6	48.7	35.8	41.7	80.2	27.8	8
Iowa										
311	Food mfg	21.4	43.8	15.2	11.3	10.8	21.2	29.0	8.2	10
312	Beverage & tobacco product mfg	—	1.0	1.7	.2	(Z)	.1	2.4	—	1
316	Leather & allied product mfg	(Z)	2.5	.8	.4	(D)	1.3	1.5	(D)	1
321	Wood product mfg	1.9	1.2	1.7	1.4	.5	.5	1.9	.4	30
322	Paper mfg	1.3	(Z)	1.0	.5	.6	(D)	.9	(D)	1
323	Printing & related support activities	.6	.1	.5	(Z)	.4	(D)	.4	(D)	26
325	Chemical mfg	24.8	26.8	20.4	15.0	10.2	8.9	25.9	12.0	20
326	Plastics & rubber products mfg	3.0	.7	1.9	1.1	1.1	.7	2.3	.3	17
327	Nonmetallic mineral product mfg	7.1	.4	1.5	1.7	2.2	1.1	2.7	1.3	4
331	Primary metal mfg	6.0	3.8	7.4	3.3	4.8	3.5	3.7	1.9	15
332	Fabricated metal product mfg	3.6	3.3	3.6	4.7	1.6	.9	2.0	1.2	30
333	Machinery mfg	2.6	3.9	3.3	3.7	1.0	1.0	3.3	a.7	22
335	Electrical equipment, appliance, & component mfg	.8	2.0	2.0	2.4	(D)	.9	1.5	(D)	48
336	Transportation equipment mfg	2.6	2.0	2.3	2.1	1.2	.8	1.8	1.0	29
337	Furniture & related product mfg	1.6	.3	1.2	.8	.9	.4	.6	.4	21
	Iowa	61.1	44.6	42.2	41.3	31.0	19.7	36.0	20.0	14
Kansas										
311	Food mfg	4.4	10.3	6.2	4.5	3.2	4.2	7.3	1.6	11
316	Leather & allied product mfg	.2	1.7	.2	1.4	.7	.1	—	—	1
322	Paper mfg	(Z)	2.1	.3	1.1	(D)	(D)	(D)	(D)	84
323	Printing & related support activities	7.1	.1	.8	.5	5.8	.2	.9	.6	63
324	Petroleum & coal products mfg	17.8	9.3	7.5	12.9	4.1	5.0	4.3	8.3	54
325	Chemical mfg	12.5	12.7	9.0	7.2	5.9	4.5	10.6	6.0	13
326	Plastics & rubber products mfg	.9	.7	2.9	.6	1.1	(D)	2.2	(D)	37
327	Nonmetallic mineral product mfg	7.9	.7	1.3	2.8	3.4	1.9	1.1	.8	6
331	Primary metal mfg	3.1	.6	1.9	.9	(D)	(D)	1.8	(D)	39
332	Fabricated metal product mfg	.5	.5	.9	1.3	(D)	(D)	.5	(Z)	48
333	Machinery mfg	1.8	.8	2.2	1.1	(D)	(D)	2.4	(D)	47
335	Electrical equipment, appliance, & component mfg	.9	.8	1.4	.8	1.2	(D)	(D)	(D)	1
336	Transportation equipment mfg	3.5	4.2	5.8	6.0	2.8	1.4	3.1	.3	11
337	Furniture & related product mfg	.4	—	.9	(D)	.4	(D)	(D)	.4	3
	Balance of state	(Z)	(Z)	1.0	(D)	(D)	(D)	.8	(D)	75
	Kansas	195.0	150.6	141.1	80.4	110.6	65.9	166.1	63.8	12
Kentucky										
311	Food mfg	2.6	25.1	6.5	8.6	2.4	5.8	11.4	6.1	32
312	Beverage & tobacco product mfg	(D)	(D)	.6	.6	.8	.2	a.0	.3	2
313	Textile mills	(D)	.3	(D)	(D)	(D)	(D)	(D)	(X)	—
321	Wood product mfg	4.4	(D)	(D)	1.4	1.9	.8	1.1	1.1	17
322	Paper mfg	4.1	10.3	11.6	3.4	5.7	7.1	5.5	4.4	17
323	Printing & related support activities	5.7	.6	4.4	3.2	3.9	.4	1.3	1.9	3
324	Petroleum & coal products mfg	(D)	(D)	1.0	.4	.3	(D)	3.0	.1	(X)
325	Chemical mfg	47.8	59.4	18.6	26.7	25.4	14.2	43.5	16.0	17
326	Plastics & rubber products mfg	(D)	(D)	(D)	(D)	a.0	.3	1.5	(D)	18
327	Nonmetallic mineral product mfg	7.5	2.2	2.6	1.6	.9	3.0	3.6	3.1	10
331	Primary metal mfg	79.1	16.8	22.7	17.0	41.9	17.4	27.0	15.3	8
332	Fabricated metal product mfg	13.5	18.1	54.6	5.2	9.1	9.9	51.4	10.6	59
333	Machinery mfg	4.3	2.6	2.9	2.1	3.7	.9	3.0	.1	28
335	Electrical equipment, appliance, & component mfg	(D)	(D)	(D)	.8	1.1	.3	.9	a.2	3
336	Transportation equipment mfg	12.8	9.2	6.9	6.6	10.1	2.0	6.4	3.7	12
337	Furniture & related product mfg	(D)	.1	(D)	.8	.9	(D)	.8	(D)	26
339	Miscellaneous mfg	1.8	1.2	1.3	.7	.9	.6	1.9	.2	22
	Kentucky	195.0	150.6	141.1	80.4	110.6	65.9	166.1	63.8	12
Louisiana										
311	Food mfg	6.3	3.9	6.3	3.9	3.8	1.6	4.0	3.3	25
312	Beverage & tobacco product mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
321	Wood product mfg	7.2	1.5	2.5	2.3	5.7	.4	1.3	1.6	14
322	Paper mfg	55.9	40.6	17.6	9.3	51.3	12.5	13.0	27.9	27
324	Petroleum & coal products mfg	566.8	173.1	101.0	92.6	377.8	125.9	164.3	80.2	7
325	Chemical mfg	278.9	301.0	215.1	166.6	264.8	136.0	105.3	122.4	3
326	Plastics & rubber products mfg	(D)	(D)	(D)	(D)	(D)	a.5	(D)	(D)	(X)
327	Nonmetallic mineral product mfg	(D)	(D)	(Z)	(D)	(D)	(D)	(D)	(D)	(X)
333	Machinery mfg	.4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
335	Electrical equipment, appliance, & component mfg	(D)	(D)	2.1	2.6	1.9	1.6	1.0	1.7	37

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
Louisiana—Con.						
336	Transportation equipment mfg	7.4	(D)	(D)	1.2	2.8
339	Miscellaneous mfg	(D)	(D)	(D)	(D)	(D)
	Balance of state	(D)	(D)	(Z)	.7	.7
	Maine	88.4	56.4	6.2	4.1	21.7
311	Food mfg	5.0	3.9	.1	.6	.5
316	Leather & allied product mfg	1.2	.4	(Z)	.1	.7
321	Wood product mfg	7.4	6.1	.5	.3	.4
322	Paper mfg	56.9	35.4	3.8	1.8	15.9
326	Plastics & rubber products mfg	3.5	2.5	.2	.2	.6
332	Fabricated metal product mfg	2.5	1.9	.2	.2	.3
334	Computer & electronic product mfg	3.9	3.8	.1	(Z)	(Z)
335	Electrical equipment, appliance, & component mfg	1.1	.8	.2	(Z)	.1
336	Transportation equipment mfg	4.8	.6	1.0	.7	2.5
	Balance of state	2.0	1.1	.1	.1	.6
	Maryland	162.6	85.7	19.8	19.0	38.1
311	Food mfg	13.3	8.2	.6	.6	3.9
313	Textile mills	3.0	1.5	.1	.1	1.2
321	Wood product mfg	1.7	.1	(Z)	.5	1.1
323	Printing & related support activities	1.7	.7	.5	.3	.3
324	Petroleum & coal products mfg	3.9	1.9	.4	.1	1.5
325	Chemical mfg	36.2	13.3	2.2	11.3	9.4
326	Plastics & rubber products mfg	7.0	3.3	.6	.6	2.5
327	Nonmetallic mineral product mfg	9.0	3.0	5.6	.1	.3
331	Primary metal mfg	48.5	42.6	.4	.9	4.7
332	Fabricated metal product mfg	5.3	3.1	.5	.3	1.5
333	Machinery mfg	1.5	.1	.2	.1	1.0
334	Computer & electronic product mfg	3.3	.4	.4	1.0	1.5
336	Transportation equipment mfg	24.4	5.9	7.8	2.7	8.0
	Balance of state	3.7	1.6	.4	.5	1.2
	Massachusetts	201.1	94.0	14.7	15.9	76.5
311	Food mfg	17.4	6.6	1.1	.7	9.0
312	Beverage & tobacco product mfg	6.3	4.2	.5	.8	.8
313	Textile mills	7.4	5.9	(Z)	.2	1.2
322	Paper mfg	38.7	14.5	1.0	2.8	20.4
323	Printing & related support activities	8.0	5.4	.4	.9	1.3
324	Petroleum & coal products mfg	3.9	2.3	.4	(Z)	1.2
325	Chemical mfg	34.2	18.2	2.7	4.8	8.5
326	Plastics & rubber products mfg	10.9	4.5	1.5	.2	4.7
327	Nonmetallic mineral product mfg	2.5	1.7	.2	.1	.6
331	Primary metal mfg	5.6	2.3	1.0	.6	1.8
332	Fabricated metal product mfg	19.4	7.0	1.3	1.0	10.0
333	Machinery mfg	4.1	1.0	.3	.4	2.3
334	Computer & electronic product mfg	19.6	11.6	1.3	1.2	5.4
335	Electrical equipment, appliance, & component mfg	3.5	1.7	.5	.4	.9
336	Transportation equipment mfg	10.0	2.5	1.4	.9	5.2
339	Miscellaneous mfg	8.9	4.2	1.0	.7	3.1
	Michigan	752.2	374.7	89.3	89.7	198.5
311	Food mfg	29.0	10.0	4.6	2.1	12.3
312	Beverage & tobacco product mfg	5.7	2.7	.8	.2	1.9
316	Leather & allied product mfg	5.5	2.5	.5	.8	1.6
321	Wood product mfg	14.3	13.0	.6	.1	.5
322	Paper mfg	67.5	31.0	11.2	9.3	16.0
323	Printing & related support activities	5.3	2.6	1.0	.4	1.2
324	Petroleum & coal products mfg	1.0	.7	.1	.2	.1
325	Chemical mfg	110.5	47.7	9.5	20.0	33.2
326	Plastics & rubber products mfg	42.8	24.3	5.3	2.0	11.1
327	Nonmetallic mineral product mfg	31.0	22.7	3.0	2.3	3.0
331	Primary metal mfg	114.2	77.0	8.6	5.9	22.8
332	Fabricated metal product mfg	25.2	13.3	3.4	1.9	6.6
333	Machinery mfg	11.7	2.7	2.5	1.8	4.6
334	Computer & electronic product mfg	5.8	.9	.8	2.1	2.0
335	Electrical equipment, appliance, & component mfg	3.6	1.3	1.5	.1	.7
336	Transportation equipment mfg	266.6	116.8	34.1	39.3	76.4
337	Furniture & related product mfg	9.5	4.6	.7	.8	3.4
339	Miscellaneous mfg	2.0	.7	.4	.1	.9
	Balance of state	1.1	.2	.6	.1	.1
	Minnesota	357.3	237.6	29.6	23.7	66.4
311	Food mfg	84.7	57.6	5.1	6.8	15.2
316	Leather & allied product mfg	10.2	5.5	.8	.5	3.4
321	Wood product mfg	46.6	37.5	1.1	.9	7.0
322	Paper mfg	40.1	28.5	1.6	3.7	6.4
323	Printing & related support activities	8.7	3.4	2.3	.8	2.2
324	Petroleum & coal products mfg	48.6	40.4	3.6	.8	3.8
325	Chemical mfg	43.9	36.0	3.9	1.8	2.2
326	Plastics & rubber products mfg	2.2	.8	.5	.1	.8
327	Nonmetallic mineral product mfg	2.8	1.1	.4	.7	.7
331	Primary metal mfg	18.9	11.3	2.2	1.0	4.4

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Louisiana—Con.										
336	Transportation equipment mfg	2.6	1.0	3.8	1.9	1.4	(D)	2.7	(D)	19
339	Miscellaneous mfg	(Z)	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	(X)
	Balance of state	.4	(D)	.5	.5	(D)	(D)	(D)	(D)	(X)
	Maine	26.6	39.6	22.2	18.9	21.4	15.5	19.9	12.7	12
311	Food mfg	.5	4.1	.4	1.1	.9	.8	1.1	1.2	13
316	Leather & allied product mfg	(Z)	.9	.2	.2	(Z)	.3	.7	—	1
321	Wood product mfg	5.4	.6	1.3	1.2	4.3	.7	.9	.3	41
322	Paper mfg	12.0	29.4	15.5	13.0	8.6	11.7	12.8	10.8	16
326	Plastics & rubber products mfg	2.7	.1	.7	.4	1.9	.1	.9	.1	1
332	Fabricated metal product mfg	1.1	.9	.5	.8	.3	.9	.5	.1	10
334	Computer & electronic product mfg	1.9	1.9	.1	.1	3.2	.5	1.9	(Z)	87
335	Electrical equipment, appliance, & component mfg	.2	.7	.2	.4	.5	.1	.1	—	66
336	Transportation equipment mfg	1.5	.8	2.5	1.5	.6	.4	2.2	(Z)	23
	Balance of state	1.2	.2	.6	.2	.9	.1	.6	.2	17
	Maryland	54.6	66.3	41.6	40.9	49.6	18.5	42.8	10.8	12
311	Food mfg	1.1	9.7	2.6	1.9	3.4	1.8	4.8	^a 1.5	14
313	Textile mills	1.7	.7	.6	.5	1.2	(D)	1.1	(D)	30
321	Wood product mfg	.1	(Z)	1.5	.1	(Z)	(Z)	1.6	—	39
323	Printing & related support activities	1.2	.1	.5	.3	.7	.1	.4	.3	7
324	Petroleum & coal products mfg	2.3	.1	1.5	.1	(D)	(D)	2.0	(D)	25
325	Chemical mfg	8.2	20.0	8.1	12.1	(D)	(D)	10.7	4.3	22
326	Plastics & rubber products mfg	3.6	1.1	2.3	1.5	1.1	.8	1.9	1.7	38
327	Nonmetallic mineral product mfg	8.1	.5	.4	1.0	4.1	1.8	.9	1.2	25
331	Primary metal mfg	18.2	21.6	8.7	12.4	28.4	3.8	3.1	.9	1
332	Fabricated metal product mfg	1.6	2.5	1.1	1.7	1.5	.7	1.4	.1	25
333	Machinery mfg	.1	1.1	.3	.4	.1	(Z)	.9	(Z)	19
334	Computer & electronic product mfg	.2	.4	2.7	1.1	.4	.2	1.6	(Z)	65
336	Transportation equipment mfg	7.3	7.7	9.4	6.5	2.5	3.7	11.4	.4	67
	Balance of state	1.1	.8	1.8	1.3	.9	.4	1.0	(Z)	20
	Massachusetts	43.5	102.4	55.2	52.0	37.0	27.6	66.9	17.7	11
311	Food mfg	1.9	13.2	2.4	1.9	2.5	1.3	10.7	1.0	25
312	Beverage & tobacco product mfg	(D)	4.1	(D)	2.7	^a .9	.6	1.4	.7	14
313	Textile mills	4.5	1.8	1.0	1.0	2.9	.8	2.2	.5	21
322	Paper mfg	5.4	26.3	7.0	4.5	4.3	5.4	21.1	3.4	47
323	Printing & related support activities	5.0	1.3	1.7	1.2	3.6	.4	1.4	1.4	38
324	Petroleum & coal products mfg	2.1	.2	1.5	.4	1.7	.1	1.5	.2	7
325	Chemical mfg	5.7	19.2	9.3	8.5	3.5	10.5	7.1	4.6	8
326	Plastics & rubber products mfg	3.8	4.7	2.5	2.9	1.3	1.0	4.5	1.2	14
327	Nonmetallic mineral product mfg	1.3	.7	.5	.6	1.3	(D)	(D)	(D)	23
331	Primary metal mfg	1.9	1.8	1.9	1.5	(D)	.8	(D)	(D)	26
332	Fabricated metal product mfg	2.0	9.4	7.9	9.7	2.2	3.7	2.7	1.0	30
333	Machinery mfg	.1	1.9	2.1	1.1	1.7	(D)	1.0	(D)	15
334	Computer & electronic product mfg	3.4	10.1	6.1	10.0	3.4	1.6	4.1	.6	35
335	Electrical equipment, appliance, & component mfg	1.2	1.3	1.1	1.5	1.0	.2	.6	.3	44
336	Transportation equipment mfg	1.8	3.7	4.5	1.8	(D)	.4	4.3	(D)	21
339	Miscellaneous mfg	2.6	2.6	3.7	2.7	3.5	.5	2.0	.2	7
	Michigan	301.6	220.3	230.3	153.5	216.6	65.3	214.3	102.6	4
311	Food mfg	5.3	16.4	7.4	3.2	3.7	2.1	14.3	5.6	17
312	Beverage & tobacco product mfg	(Z)	3.6	2.1	.7	(D)	(D)	3.4	.7	6
316	Leather & allied product mfg	.6	3.0	1.9	1.1	.2	1.1	2.3	.7	6
321	Wood product mfg	12.9	.6	.7	1.0	8.7	1.3	.5	2.8	13
322	Paper mfg	17.9	31.0	18.6	12.4	20.1	9.9	14.8	10.3	25
323	Printing & related support activities	2.7	.4	2.2	2.4	.9	.6	1.0	.4	39
324	Petroleum & coal products mfg	.3	.6	.2	.5	.2	.2	(D)	(D)	1
325	Chemical mfg	31.8	30.9	47.8	24.4	17.4	9.0	38.5	21.2	6
326	Plastics & rubber products mfg	22.4	7.4	12.9	11.0	12.9	3.5	8.7	6.7	17
327	Nonmetallic mineral product mfg	25.4	1.1	4.5	4.9	(D)	4.9	6.4	(D)	16
331	Primary metal mfg	62.8	27.3	24.1	17.8	32.9	11.4	42.5	9.6	6
332	Fabricated metal product mfg	5.7	13.1	6.4	8.5	3.1	4.6	6.3	2.8	9
333	Machinery mfg	3.5	3.3	4.9	4.0	(D)	1.0	4.5	(D)	23
334	Computer & electronic product mfg	1.1	1.4	3.3	2.1	.4	.3	2.7	.1	29
335	Electrical equipment, appliance, & component mfg	1.0	1.4	1.2	2.0	.2	.6	.6	.3	43
336	Transportation equipment mfg	102.7	77.9	86.1	53.9	101.5	13.4	64.3	33.5	6
337	Furniture & related product mfg	4.4	.6	4.5	(D)	(D)	(D)	(D)	1.5	33
339	Miscellaneous mfg	.7	.2	1.1	(D)	(D)	(D)	.7	(D)	21
	Balance of state	.4	.3	.3	.6	(D)	(Z)	.2	(D)	57
	Minnesota	152.0	117.4	88.0	68.7	92.1	50.5	90.9	55.1	5
311	Food mfg	16.4	51.5	16.7	10.3	11.2	20.8	32.0	10.3	12
316	Leather & allied product mfg	.7	6.4	3.2	^a 1.8	(D)	(D)	4.5	(D)	55
321	Wood product mfg	38.0	1.2	7.3	5.1	19.4	4.3	6.3	11.4	9
322	Paper mfg	17.5	13.2	9.4	5.7	9.0	5.6	10.2	9.7	10
323	Printing & related support activities	5.2	.2	3.3	1.1	5.1	.2	1.7	.6	21
324	Petroleum & coal products mfg	26.3	17.9	4.4	^a 8.4	(D)	^a 6.3	^a 8.9	(D)	6
325	Chemical mfg	23.3	8.6	12.1	12.3	14.0	3.1	4.8	9.8	11
326	Plastics & rubber products mfg	1.3	(Z)	.9	.3	.6	.1	.8	.4	5
327	Nonmetallic mineral product mfg	.8	.7	1.3	.9	.6	.4	.7	.2	21
331	Primary metal mfg	9.9	3.0	6.1	4.6	5.0	1.6	5.0	2.7	6

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
Minnesota—Con.						
332	Fabricated metal product mfg	15.0	5.2	1.7	2.5	5.7
333	Machinery mfg	5.6	1.0	.3	.3	4.0
334	Computer & electronic product mfg	11.3	3.9	1.5	2.1	3.8
335	Electrical equipment, appliance, & component mfg	5.2	.8	2.1	.7	1.6
336	Transportation equipment mfg	7.2	2.1	2.2	.7	2.2
337	Furniture & related product mfg	3.3	1.5	.2	.2	1.4
339	Miscellaneous mfg	2.2	.7	.1	.2	1.3
Mississippi		180.7	78.3	34.5	12.7	55.2
311	Food mfg	30.7	16.1	3.6	3.2	7.8
313	Textile mills	(D)	(D)	(D)	—	(D)
321	Wood product mfg	10.2	6.9	(D)	(D)	1.5
322	Paper mfg	23.1	17.9	1.0	.6	3.7
323	Printing & related support activities	3.7	2.9	(Z)	.4	.4
324	Petroleum & coal products mfg	(D)	(D)	(D)	—	(D)
325	Chemical mfg	63.4	16.7	18.8	2.0	25.9
326	Plastics & rubber products mfg	5.3	2.8	(D)	(D)	(D)
331	Primary metal mfg	(D)	(D)	(D)	.1	(D)
332	Fabricated metal product mfg	3.9	1.8	(D)	(D)	1.4
333	Machinery mfg	5.8	2.0	.8	1.0	2.0
335	Electrical equipment, appliance, & component mfg	3.1	.4	.2	.1	2.4
336	Transportation equipment mfg	24.6	7.9	6.4	4.2	6.1
337	Furniture & related product mfg	1.7	.5	(D)	(D)	1.2
	Balance of state	(D)	(D)	.3	(D)	(D)
Missouri		381.1	217.9	40.2	50.6	72.5
311	Food mfg	31.0	8.2	3.4	1.8	17.5
312	Beverage & tobacco product mfg	(D)	(D)	(D)	(D)	(D)
316	Leather & allied product mfg	5.8	4.3	(Z)	.9	.6
321	Wood product mfg	5.6	2.7	(D)	(D)	2.0
322	Paper mfg	7.3	2.9	1.1	2.3	1.1
323	Printing & related support activities	(D)	(D)	(D)	(D)	1.1
324	Petroleum & coal products mfg	(D)	(D)	(D)	(D)	(D)
325	Chemical mfg	113.5	83.6	10.8	10.8	8.4
326	Plastics & rubber products mfg	15.6	9.2	1.1	1.1	4.2
327	Nonmetallic mineral product mfg	(D)	13.1	(D)	.3	.7
331	Primary metal mfg	26.6	9.0	1.7	13.1	2.9
332	Fabricated metal product mfg	27.1	14.4	2.7	2.9	7.1
333	Machinery mfg	9.7	3.4	2.1	.6	3.5
334	Computer & electronic product mfg	6.7	4.9	.3	.6	.8
335	Electrical equipment, appliance, & component mfg	8.1	(D)	(D)	(D)	(D)
336	Transportation equipment mfg	60.9	31.3	7.6	8.3	13.8
337	Furniture & related product mfg	(D)	(D)	(D)	(D)	(D)
339	Miscellaneous mfg	(D)	(D)	(D)	(D)	(D)
Montana		45.3	29.8	4.8	1.8	9.0
311	Food mfg	1.3	.6	.6	—	.1
321	Wood product mfg	2.6	2.5	(Z)	—	.1
322	Paper mfg	7.8	6.8	.1	—	.9
324	Petroleum & coal products mfg	26.6	15.2	3.7	.8	6.9
325	Chemical mfg	2.2	1.6	(Z)	.1	.5
331	Primary metal mfg	2.1	2.1	(Z)	—	—
333	Machinery mfg	1.9	.7	.3	.5	.4
Nebraska		117.8	46.1	16.2	5.0	50.5
311	Food mfg	36.7	21.2	3.5	1.8	10.3
316	Leather & allied product mfg	4.2	1.7	2.1	—	.4
325	Chemical mfg	12.1	5.6	2.5	.2	3.9
326	Plastics & rubber products mfg	2.2	.4	.8	.2	.8
327	Nonmetallic mineral product mfg	5.6	4.6	.4	.5	(Z)
331	Primary metal mfg	15.4	8.0	1.4	—	6.0
332	Fabricated metal product mfg	2.5	1.5	.3	.2	.6
334	Computer & electronic product mfg	25.2	.1	2.5	—	22.6
335	Electrical equipment, appliance, & component mfg	1.0	.4	.1	.1	.4
336	Transportation equipment mfg	8.5	1.6	1.5	1.7	3.6
339	Miscellaneous mfg	2.5	.7	.2	.2	1.4
	Balance of state	1.8	.3	1.0	.1	.5
Nevada		69.2	18.0	12.5	5.6	33.2
311	Food mfg	6.6	(D)	(D)	(D)	6.2
312	Beverage & tobacco product mfg	1.1	(D)	(D)	—	.7
322	Paper mfg	1.3	.3	(D)	(D)	.8
323	Printing & related support activities	3.7	(Z)	3.5	(Z)	.1
325	Chemical mfg	38.7	8.7	4.0	4.3	21.7
327	Nonmetallic mineral product mfg	8.1	2.6	3.4	.7	1.4
331	Primary metal mfg	6.0	4.7	.4	—	.8
334	Computer & electronic product mfg	1.7	.2	.2	.4	.8
	Balance of state	2.2	.8	.7	.1	.6
New Hampshire		26.7	9.4	4.5	2.9	10.0
311	Food mfg	1.0	.3	.1	(Z)	.7
312	Beverage & tobacco product mfg	4.2	2.3	(D)	(D)	(D)
321	Wood product mfg	2.0	.6	1.2	(D)	(D)
322	Paper mfg	2.0	.4	(D)	(D)	1.5
326	Plastics & rubber products mfg	2.6	1.9	(Z)	(D)	(D)

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Minnesota—Con.										
332	Fabricated metal product mfg	2.6	5.3	7.2	6.2	1.7	2.7	3.7	.8	20
333	Machinery mfg	4	1.5	3.7	1.8	.8	.4	2.4	.3	27
334	Computer & electronic product mfg	2.3	3.8	5.2	4.2	a1.6	1.1	3.0	1.3	27
335	Electrical equipment, appliance, & component mfg	2.0	1.3	2.0	1.8	.8	.2	2.3	.1	5
336	Transportation equipment mfg	3.3	1.7	2.2	2.4	1.9	.6	2.2	.1	44
337	Furniture & related product mfg	1.5	.3	1.5	.8	.7	.6	1.1	.1	47
339	Miscellaneous mfg	.7	.4	1.2	1.0	(D)	(D)	1.0	—	57
Mississippi		56.4	62.5	61.8	34.1	27.1	40.6	45.4	33.4	9
311	Food mfg	2.1	24.4	4.2	3.0	3.6	4.8	9.0	10.3	43
313	Textile mills	(D)	(D)	(D)	(D)	(D)	—	(D)	(D)	(X)
321	Wood product mfg	7.2	1.4	1.7	2.2	4.9	.6	1.2	1.4	17
322	Paper mfg	5.4	11.4	6.2	4.3	2.6	8.1	3.7	4.3	12
323	Printing & related support activities	2.9	.4	.5	.1	2.8	(Z)	.4	.4	1
324	Petroleum & coal products mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
325	Chemical mfg	18.2	13.2	32.0	14.1	7.9	20.9	10.4	10.1	12
326	Plastics & rubber products mfg	3.3	(D)	(D)	1.1	(D)	.6	(D)	2.0	41
331	Primary metal mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
332	Fabricated metal product mfg	.7	1.9	1.3	1.1	1.4	.3	.5	.6	36
333	Machinery mfg	1.8	(D)	(D)	2.0	.3	.8	2.7	.1	74
335	Electrical equipment, appliance, & component mfg	.3	.4	2.4	1.4	(D)	(D)	1.2	(D)	48
336	Transportation equipment mfg	13.0	5.1	6.5	3.3	2.2	3.2	13.0	2.9	5
337	Furniture & related product mfg	(D)	(D)	1.1	.4	.2	.3	.4	.4	32
	Balance of state	(D)	(D)	.3	(D)	(D)	(D)	(D)	.1	(X)
Missouri		150.2	130.2	100.7	89.0	93.0	50.1	87.7	61.3	6
311	Food mfg	3.1	21.4	6.4	2.8	2.0	4.7	19.5	1.9	32
312	Beverage & tobacco product mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
316	Leather & allied product mfg	(Z)	(D)	(D)	1.4	(D)	2.7	(D)	(D)	5
321	Wood product mfg	1.4	.2	4.0	1.2	2.5	.9	.6	.3	44
322	Paper mfg	1.5	2.3	3.4	.4	1.7	.8	2.1	2.3	1
323	Printing & related support activities	(D)	(D)	(D)	1.6	(D)	(D)	(D)	.8	(X)
324	Petroleum & coal products mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
325	Chemical mfg	31.1	55.8	26.7	28.6	20.4	16.1	21.4	26.9	11
326	Plastics & rubber products mfg	8.0	2.9	4.8	2.5	5.4	2.7	3.6	1.5	9
327	Nonmetallic mineral product mfg	(D)	(D)	(D)	4.4	3.2	(D)	1.3	(D)	(X)
331	Primary metal mfg	16.6	3.0	7.1	6.2	6.0	3.6	6.3	4.5	2
332	Fabricated metal product mfg	8.1	7.6	11.4	7.3	7.0	3.3	7.5	2.0	16
333	Machinery mfg	2.7	3.4	3.7	4.8	(D)	(D)	(D)	2.2	20
334	Computer & electronic product mfg	(D)	(D)	(D)	2.9	(D)	1.5	(D)	(D)	27
335	Electrical equipment, appliance, & component mfg	(D)	(D)	4.0	2.7	(D)	.5	(D)	(D)	16
336	Transportation equipment mfg	31.5	10.3	19.1	19.4	14.4	2.6	13.5	11.0	19
337	Furniture & related product mfg	(D)	(Z)	.6	(D)	(D)	.1	(D)	(D)	(X)
339	Miscellaneous mfg	(Z)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(X)
Montana		30.1	5.8	9.5	12.6	13.4	4.3	11.7	3.2	47
311	Food mfg	.7	.6	.1	.3	.4	.1	.5	(Z)	42
321	Wood product mfg	2.5	(Z)	.1	.3	1.7	(Z)	(Z)	.5	10
322	Paper mfg	5.4	1.6	.9	1.4	3.2	.9	1.6	.6	1
324	Petroleum & coal products mfg	17.6	1.9	7.2	8.7	6.1	1.7	8.4	1.7	80
325	Chemical mfg	1.4	.6	.1	.1	.3	1.1	.6	—	69
331	Primary metal mfg	1.8	.1	.2	1.2	.3	.3	(Z)	.3	1
333	Machinery mfg	.7	.7	.4	.3	.9	.2	.5	—	70
Nebraska		34.3	55.4	28.1	18.4	45.0	17.2	25.6	11.6	8
311	Food mfg	7.6	21.1	8.0	6.8	6.8	5.4	10.5	7.3	11
316	Leather & allied product mfg	1.1	2.7	.4	.7	.5	2.0	.5	.4	1
325	Chemical mfg	3.6	6.1	2.5	2.1	3.1	2.2	4.0	.9	24
326	Plastics & rubber products mfg	.7	.5	1.1	.6	.5	.1	.6	.4	19
327	Nonmetallic mineral product mfg	4.7	.3	.6	2.4	.9	.7	.7	.8	3
331	Primary metal mfg	9.2	4.9	1.3	1.4	3.5	4.4	5.5	.5	46
332	Fabricated metal product mfg	.3	1.5	.7	1.1	.3	.5	.5	.1	8
334	Computer & electronic product mfg	2.6	15.0	7.5	.8	22.7	1.1	.5	a.1	1
335	Electrical equipment, appliance, & component mfg	.3	.4	.4	.3	.2	.1	.1	.3	19
336	Transportation equipment mfg	2.6	2.4	3.4	1.3	5.4	.3	1.1	.4	7
339	Miscellaneous mfg	.7	.3	1.5	.5	.5	.2	1.3	(Z)	1
	Balance of state	.9	.1	.7	.4	.6	.1	.3	.3	12
Nevada		18.2	21.4	29.6	9.6	9.6	6.5	24.5	19.0	49
311	Food mfg	.1	3.3	3.3	.6	1.5	1.0	3.2	.3	65
312	Beverage & tobacco product mfg	.1	.9	.1	(Z)	(Z)	.2	.8	—	71
322	Paper mfg	.1	.9	.2	.2	.1	.3	.7	(Z)	21
323	Printing & related support activities	3.5	.1	.1	.3	2.7	.1	.1	.6	1
325	Chemical mfg	5.8	10.7	22.2	3.7	1.5	2.2	16.1	15.2	86
327	Nonmetallic mineral product mfg	6.1	.5	1.5	1.9	2.6	.9	1.5	1.2	14
331	Primary metal mfg	1.0	4.2	.7	1.5	.6	1.6	.9	1.4	5
334	Computer & electronic product mfg	.4	.4	.8	.6	.3	.2	.5	.2	92
	Balance of state	1.2	.5	.5	.9	.5	.1	.7	.1	35
New Hampshire		8.7	6.4	11.6	8.3	6.5	2.8	7.5	1.6	14
311	Food mfg	.1	.4	.6	.3	(D)	(D)	(D)	(D)	14
312	Beverage & tobacco product mfg	.9	2.1	1.2	.9	(D)	.9	(D)	(D)	40
321	Wood product mfg	1.7	.1	.2	1.5	.3	—	.2	—	93
322	Paper mfg	.1	(Z)	1.8	(D)	(D)	(D)	1.5	(D)	84
326	Plastics & rubber products mfg	1.9	(Z)	.6	.3	1.2	.1	.6	.4	9

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
New Hampshire—Con.						
327	Nonmetallic mineral product mfg	2.8	.9	(D)	(D)	(D)
331	Primary metal mfg	1.1	.2	(Z)	.3	.6
332	Fabricated metal product mfg	3.2	.4	1.0	.9	.9
333	Machinery mfg	2.2	.5	.1	.4	1.1
334	Computer & electronic product mfg	2.8	.8	.2	.4	1.4
	Balance of state	2.7	1.0	.3	.1	1.3
	New Jersey	408.1	201.9	54.9	45.2	106.1
311	Food mfg	17.7	10.6	(D)	(D)	4.2
312	Beverage & tobacco product mfg	14.6	9.9	(D)	(D)	(D)
316	Leather & allied product mfg	2.6	2.3	(D)	(D)	(D)
322	Paper mfg	29.4	11.0	2.1	1.1	15.3
323	Printing & related support activities	5.3	.7	2.0	.6	2.0
324	Petroleum & coal products mfg	86.0	49.9	17.5	12.0	6.6
325	Chemical mfg	165.2	78.4	19.5	21.2	46.1
326	Plastics & rubber products mfg	10.5	6.3	(D)	(D)	2.8
327	Nonmetallic mineral product mfg	16.6	7.8	2.1	4.0	2.7
331	Primary metal mfg	20.0	10.0	1.4	1.3	7.2
332	Fabricated metal product mfg	21.8	9.1	3.3	.5	8.8
333	Machinery mfg	4.7	2.8	(D)	(D)	(D)
334	Computer & electronic product mfg	1.9	.6	(D)	(D)	.9
335	Electrical equipment, appliance, & component mfg	1.8	1.2	(D)	(D)	.4
336	Transportation equipment mfg	5.3	.8	.5	1.3	2.7
339	Miscellaneous mfg	3.1	.4	(Z)	.1	2.6
	Balance of state	1.6	.1	.8	(Z)	.7
	New Mexico	23.6	8.7	3.4	4.4	7.1
311	Food mfg	4.9	1.6	2.0	.2	1.1
322	Paper mfg	1.8	(Z)	—	—	1.8
325	Chemical mfg	3.6	2.9	.1	.1	.5
327	Nonmetallic mineral product mfg	2.2	1.5	.3	—	.4
331	Primary metal mfg	1.3	.4	.2	.2	.5
334	Computer & electronic product mfg	8.8	2.2	.1	3.9	2.6
	New York	520.6	282.8	42.0	54.3	141.5
311	Food mfg	44.8	19.1	2.5	4.9	18.3
312	Beverage & tobacco product mfg	(D)	(D)	(D)	(D)	(D)
316	Leather & allied product mfg	(D)	(D)	(D)	(D)	(D)
321	Wood product mfg	3.3	3.2	(D)	(D)	(D)
322	Paper mfg	42.3	20.8	.7	.5	20.2
323	Printing & related support activities	4.5	2.2	.1	.9	1.4
325	Chemical mfg	121.4	65.4	11.9	15.2	28.9
326	Plastics & rubber products mfg	7.7	3.2	.5	.8	3.2
327	Nonmetallic mineral product mfg	16.2	7.5	3.8	1.2	3.6
331	Primary metal mfg	107.7	66.3	5.1	17.5	18.8
332	Fabricated metal product mfg	22.3	14.2	1.9	1.7	4.5
333	Machinery mfg	14.2	5.9	1.5	.8	6.1
334	Computer & electronic product mfg	61.1	44.4	.6	3.0	13.1
335	Electrical equipment, appliance, & component mfg	8.7	3.1	1.0	.9	3.8
336	Transportation equipment mfg	39.7	15.8	10.3	2.0	11.7
337	Furniture & related product mfg	(D)	(D)	1.4	(D)	3.1
339	Miscellaneous mfg	7.7	2.6	.5	1.3	3.2
	Balance of state	1.3	(D)	(D)	.2	.8
	North Carolina	762.6	418.5	107.7	55.3	181.2
311	Food mfg	41.0	23.5	5.9	1.2	10.4
312	Beverage & tobacco product mfg	16.6	13.1	(D)	(D)	(D)
313	Textile mills	101.2	70.8	4.9	9.1	16.3
314	Textile product mills	6.2	2.3	.4	.9	2.7
316	Leather & allied product mfg	3.0	1.9	(D)	(D)	(D)
321	Wood product mfg	38.4	24.8	5.1	2.0	6.5
322	Paper mfg	90.2	43.7	12.1	16.0	18.3
323	Printing & related support activities	4.9	1.9	.1	.6	2.3
324	Petroleum & coal products mfg	3.1	2.0	(D)	—	(D)
325	Chemical mfg	258.1	151.1	53.4	6.2	47.3
326	Plastics & rubber products mfg	26.0	13.9	2.5	1.6	8.0
327	Nonmetallic mineral product mfg	21.9	10.4	3.2	1.7	6.5
331	Primary metal mfg	36.6	11.2	5.6	2.0	17.8
332	Fabricated metal product mfg	25.2	10.2	2.8	3.7	8.5
333	Machinery mfg	17.7	10.7	1.0	1.7	4.2
334	Computer & electronic product mfg	18.4	5.4	.9	1.6	10.5
335	Electrical equipment, appliance, & component mfg	12.7	8.1	(D)	(D)	(D)
336	Transportation equipment mfg	23.5	7.1	2.2	5.1	9.0
337	Furniture & related product mfg	15.7	5.6	5.1	.5	4.5
339	Miscellaneous mfg	2.2	.6	(D)	.1	(D)
	North Dakota	39.2	22.1	8.7	(D)	(D)
311	Food mfg	16.5	7.9	6.2	.3	2.1
324	Petroleum & coal products mfg	17.0	12.7	(D)	(D)	1.7
333	Machinery mfg	3.1	(D)	(D)	(D)	2.1
	Balance of state	2.6	(D)	(D)	(D)	(D)
	Ohio	1 167.9	597.1	152.0	83.1	335.7
311	Food mfg	93.6	50.3	5.8	8.4	29.2
312	Beverage & tobacco product mfg	(D)	(D)	(D)	(D)	(D)
313	Textile mills	7.8	(D)	(D)	.4	(D)
321	Wood product mfg	(D)	2.4	(D)	(D)	(D)
322	Paper mfg	80.6	44.6	5.3	7.3	23.4
323	Printing & related support activities	10.4	6.3	.7	.5	2.9
324	Petroleum & coal products mfg	76.4	51.3	(D)	(D)	11.9
325	Chemical mfg	214.5	95.5	39.8	11.3	68.0
326	Plastics & rubber products mfg	49.4	18.8	10.8	4.2	15.6
327	Nonmetallic mineral product mfg	28.2	18.3	4.1	1.2	4.6

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
New Hampshire—Con.										
327	Nonmetallic mineral product mfg	2.1	.3	.4	.3	1.6	.4	.4	.1	11
331	Primary metal mfg	(Z)	.3	.8	(D)	.3	(D)	.6	(Z)	1
332	Fabricated metal product mfg	.7	.5	2.1	1.7	.4	.4	.8	(Z)	54
333	Machinery mfg	.1	.7	1.3	1.3	.3	.3	(D)	(D)	53
334	Computer & electronic product mfg	.2	.9	1.7	1.0	.4	.2	1.1	(Z)	23
	Balance of state	.7	1.0	1.0	.6	(D)	.2	1.5	(D)	18
	New Jersey	138.4	149.9	119.8	87.8	94.5	46.7	145.1	33.9	8
311	Food mfg	3.4	9.8	4.5	3.7	4.0	2.6	6.2	1.2	15
312	Beverage & tobacco product mfg	(D)	8.8	(D)	3.1	1.4	.8	7.6	1.7	17
316	Leather & allied product mfg	.2	2.4	.1	.2	1.2	.1	.9	.9	1
322	Paper mfg	4.7	7.8	17.0	4.9	3.9	4.5	14.6	1.7	25
323	Printing & related support activities	2.7	.6	2.0	1.5	2.1	.2	1.1	.4	31
324	Petroleum & coal products mfg	46.4	25.9	13.6	20.0	^a 18.3	14.6	22.2	10.8	22
325	Chemical mfg	40.7	75.4	49.1	39.0	35.1	17.0	62.1	12.0	12
326	Plastics & rubber products mfg	8.1	.7	1.8	1.9	4.4	.4	3.3	.5	13
327	Nonmetallic mineral product mfg	8.0	2.6	6.0	2.8	5.5	1.1	6.3	.8	16
331	Primary metal mfg	8.0	3.6	8.4	3.3	6.9	1.4	6.5	1.9	11
332	Fabricated metal product mfg	6.4	6.5	8.9	3.9	7.9	3.1	6.1	.8	54
333	Machinery mfg	2.7	1.7	.3	.9	1.3	.2	1.5	.9	52
334	Computer & electronic product mfg	.2	.6	1.1	.6	.6	(Z)	.6	(Z)	4
335	Electrical equipment, appliance, & component mfg	(D)	1.0	(D)	.5	^a .3	.5	.4	^a 1	25
336	Transportation equipment mfg	2.8	1.9	.6	.9	1.3	(Z)	3.0	(Z)	60
339	Miscellaneous mfg	.3	.2	2.7	.2	.2	.1	2.6	.1	79
	Balance of state	.8	.4	.4	.5	.2	.1	.7	.1	37
	New Mexico	7.5	6.8	9.2	7.7	4.0	3.8	4.9	3.2	12
311	Food mfg	.1	3.2	1.6	1.8	.7	.5	^a .7	1.2	38
322	Paper mfg	—	(Z)	1.8	—	—	—	1.8	—	66
325	Chemical mfg	2.9	.4	.4	.6	1.9	.1	.4	.7	1
327	Nonmetallic mineral product mfg	2.0	(Z)	.2	.4	.8	.5	^a .1	.1	66
331	Primary metal mfg	.5	.4	.4	.4	.1	.1	.5	.3	52
334	Computer & electronic product mfg	1.9	2.7	4.3	4.2	.5	2.6	.7	.9	4
	New York	134.8	225.8	160.1	130.1	85.4	66.0	131.2	108.0	7
311	Food mfg	3.9	24.6	16.3	5.7	5.6	4.2	25.0	4.2	16
312	Beverage & tobacco product mfg	(D)	7.1	(D)	3.1	(D)	1.4	(D)	(X)	(X)
316	Leather & allied product mfg	.1	(D)	(D)	^a .3	(D)	(D)	(D)	(X)	(X)
321	Wood product mfg	3.1	—	.2	.7	2.3	(D)	.2	(D)	71
322	Paper mfg	6.3	18.4	17.7	4.6	6.6	5.2	20.4	5.7	31
323	Printing & related support activities	2.1	1.1	1.3	.3	2.6	.2	1.2	.2	18
325	Chemical mfg	35.2	49.5	36.7	42.4	18.2	16.3	26.3	18.2	12
326	Plastics & rubber products mfg	3.2	.7	3.8	1.5	2.5	.3	3.0	.4	14
327	Nonmetallic mineral product mfg	10.0	3.0	3.2	4.4	4.5	1.8	2.5	3.0	8
331	Primary metal mfg	35.3	44.7	27.8	16.9	13.0	10.9	11.7	55.2	26
332	Fabricated metal product mfg	8.0	8.3	6.0	5.9	7.8	3.2	2.8	2.5	14
333	Machinery mfg	2.4	6.5	5.3	5.0	1.5	1.3	5.8	.6	25
334	Computer & electronic product mfg	10.6	36.7	13.9	15.7	8.8	14.6	10.6	11.3	3
335	Electrical equipment, appliance, & component mfg	1.2	3.4	4.0	3.3	1.4	.9	2.4	.7	41
336	Transportation equipment mfg	9.6	17.1	13.1	15.0	6.7	3.8	12.1	2.2	27
337	Furniture & related product mfg	(D)	(D)	3.3	1.7	(D)	(D)	(D)	1.2	(X)
339	Miscellaneous mfg	1.6	2.6	3.6	3.4	1.2	.9	1.9	^a 2	27
	Balance of state	.4	(D)	(D)	.3	(D)	(D)	.8	(D)	46
	North Carolina	291.3	274.1	197.3	148.0	191.1	106.6	210.8	106.1	9
311	Food mfg	8.2	23.9	8.9	8.8	8.5	7.7	11.3	4.6	10
312	Beverage & tobacco product mfg	9.5	5.2	1.9	2.9	4.8	1.5	4.3	3.1	1
313	Textile mills	59.0	28.8	13.5	4.8	66.3	6.0	20.3	3.8	34
314	Textile product mills	1.3	2.9	2.1	.5	1.0	.4	4.0	.3	29
316	Leather & allied product mfg	.2	2.2	.6	^a .6	^a .4	^a .9	^a .9	^a 2	1
321	Wood product mfg	23.2	6.2	9.0	6.6	16.6	3.1	6.0	6.1	12
322	Paper mfg	41.4	28.1	20.7	20.2	10.8	10.9	20.9	27.4	3
323	Printing & related support activities	3.0	.2	1.6	.5	2.7	.5	1.0	.2	33
324	Petroleum & coal products mfg	2.1	(Z)	1.0	.4	1.3	.3	1.1	.1	1
325	Chemical mfg	78.0	118.6	61.4	56.2	39.1	49.9	79.5	33.3	20
326	Plastics & rubber products mfg	11.5	4.8	9.8	4.8	6.5	3.4	9.3	2.0	6
327	Nonmetallic mineral product mfg	10.0	6.3	5.6	7.8	3.5	2.5	5.6	2.5	10
331	Primary metal mfg	14.0	7.2	15.4	3.7	6.8	5.8	12.2	8.0	36
332	Fabricated metal product mfg	3.8	12.3	9.1	9.1	5.3	4.5	4.6	1.8	37
333	Machinery mfg	4.7	7.2	5.8	3.8	2.0	2.4	5.1	4.5	16
334	Computer & electronic product mfg	1.5	6.8	10.1	2.9	.7	2.4	8.0	4.5	60
335	Electrical equipment, appliance, & component mfg	6.0	3.2	3.5	3.4	5.0	1.0	2.0	1.3	12
336	Transportation equipment mfg	3.0	8.6	11.9	6.9	2.2	2.4	10.9	1.1	30
337	Furniture & related product mfg	10.2	1.3	4.2	3.5	7.3	1.0	2.8	1.2	8
339	Miscellaneous mfg	.6	.4	1.2	.7	.3	.1	1.0	.2	31
	North Dakota	19.3	12.1	7.8	4.2	4.4	6.0	15.6	9.0	37
311	Food mfg	4.3	9.7	2.5	1.5	1.4	1.0	7.8	4.8	14
324	Petroleum & coal products mfg	13.6	1.7	1.7	1.6	2.1	4.8	4.6	3.9	82
333	Machinery mfg	.4	.2	2.5	.6	^a 2	^a 1	2.0	^a 2	46
	Balance of state	1.0	.5	1.2	.5	.8	.1	1.1	.1	19
	Ohio	431.6	377.2	359.1	241.2	291.8	157.2	356.5	121.2	5
311	Food mfg	22.7	46.1	24.9	15.9	14.0	12.1	43.3	8.3	16
312	Beverage & tobacco product mfg	(D)	2.6	(D)	.5	(D)	(D)	1.7	(D)	(X)
313	Textile mills	6.2	.3	1.3	1.1	4.8	.2	1.1	.7	14
321	Wood product mfg	2.7	.1	2.1	2.1	(D)	.2	^a 6	(D)	(X)
322	Paper mfg	24.0	30.7	25.9	17.2	12.4	16.5	23.5	11.1	9
323	Printing & related support activities	6.4	.5	3.4	2.4	3.3	.3	1.6	2.9	17
324	Petroleum & coal products mfg	32.5	25.7	18.2	12.7	^a 13.5	10.3	26.1	13.7	16
325	Chemical mfg	83.7	69.8	61.1	43.9	48.6	30.5	68.1	23.5	16
326	Plastics & rubber products mfg	24.8	8.9	15.7	9.7	10.5	10.2	13.5	5.5	14
327	Nonmetallic mineral product mfg	19.8	3.3	5.1	6.2	10.5	3.4	4.9	3.1	14

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
Ohio—Con.						
331	Primary metal mfg	278.3	127.0	48.8	10.8	91.8
332	Fabricated metal product mfg	78.2	39.2	8.6	5.3	25.0
333	Machinery mfg	14.0	3.7	1.3	2.5	6.4
334	Computer & electronic product mfg	(D)	(D)	(D)	(D)	(D)
335	Electrical equipment, appliance, & component mfg	20.4	9.1	2.9	2.5	6.0
336	Transportation equipment mfg	175.5	98.1	12.3	23.0	42.1
337	Furniture & related product mfg	17.2	15.2	(D)	(D)	1.1
339	Miscellaneous mfg	6.2	(D)	(D)	(D)	2.4
Oklahoma		185.2	66.0	55.4	7.1	56.6
311	Food mfg	16.6	10.0	1.1	.8	4.7
321	Wood product mfg	5.9	—	5.9	—	—
322	Paper mfg	40.7	15.1	1.1	.4	24.1
323	Printing & related support activities	(D)	(D)	(D)	—	.1
324	Petroleum & coal products mfg	(D)	7.7	38.2	(D)	(D)
325	Chemical mfg	14.6	6.6	2.1	.9	4.9
326	Plastics & rubber products mfg	13.2	7.2	1.5	1.5	3.0
327	Nonmetallic mineral product mfg	6.5	(D)	(D)	(D)	(D)
331	Primary metal mfg	7.5	3.2	.7	.2	3.7
332	Fabricated metal product mfg	6.8	2.6	4	1.4	2.2
333	Machinery mfg	9.5	3.3	1.9	1.1	3.2
334	Computer & electronic product mfg	(D)	(D)	.3	.1	.3
335	Electrical equipment, appliance, & component mfg	1.0	(D)	(D)	—	.9
336	Transportation equipment mfg	9.3	(D)	(D)	.5	3.6
337	Furniture & related product mfg	1.7	(D)	(D)	(D)	1.2
Oregon		225.2	133.6	24.3	21.7	45.6
311	Food mfg	14.5	7.9	.6	.3	5.7
321	Wood product mfg	32.6	17.8	5.8	2.9	6.0
322	Paper mfg	56.3	38.2	2.5	4.8	10.7
325	Chemical mfg	6.7	1.8	2.1	.8	2.0
326	Plastics & rubber products mfg	1.8	.5	.2	.1	1.0
327	Nonmetallic mineral product mfg	4.3	.2	3.3	.1	.7
331	Primary metal mfg	22.3	13.0	2.3	2.0	5.0
332	Fabricated metal product mfg	4.1	2.9	.5	.2	.5
333	Machinery mfg	12.1	9.4	.2	1.1	1.5
334	Computer & electronic product mfg	54.7	35.3	3.6	7.6	8.2
336	Transportation equipment mfg	9.5	3.3	2.2	1.3	2.7
337	Furniture & related product mfg	2.6	1.1	.5	.1	.8
	Balance of state	3.7	2.2	.4	.2	.9
Pennsylvania		880.1	396.5	168.8	93.5	221.3
311	Food mfg	55.8	23.7	7.7	2.3	22.0
312	Beverage & tobacco product mfg	12.7	5.0	.9	1.2	5.6
313	Textile mills	4.2	2.3	.2	.3	1.4
314	Textile product mills	1.5	.2	.3	.1	1.0
316	Leather & allied product mfg	1.1	.3	—	—	.8
321	Wood product mfg	11.1	5.6	.7	1.8	3.0
322	Paper mfg	54.6	28.5	7.9	8.1	10.0
323	Printing & related support activities	27.6	10.1	3.5	4.3	9.6
324	Petroleum & coal products mfg	153.9	95.2	53.1	.8	4.8
325	Chemical mfg	114.9	47.2	22.8	5.9	38.9
326	Plastics & rubber products mfg	14.0	4.2	1.0	2.7	6.1
327	Nonmetallic mineral product mfg	58.6	16.8	14.7	6.7	20.4
331	Primary metal mfg	214.6	96.7	34.0	36.8	47.2
332	Fabricated metal product mfg	56.1	25.6	7.9	8.4	14.1
333	Machinery mfg	8.5	1.4	2.9	.8	3.4
334	Computer & electronic product mfg	8.2	4.7	1.3	.9	1.3
335	Electrical equipment, appliance, & component mfg	7.9	4.7	.4	1.3	1.4
336	Transportation equipment mfg	60.3	19.1	6.8	9.5	24.8
337	Furniture & related product mfg	9.4	2.5	2.3	.7	3.9
339	Miscellaneous mfg	5.4	2.6	.3	1.0	1.6
Rhode Island		27.9	14.5	3.6	2.7	7.1
313	Textile mills	1.9	1.1	(D)	(D)	(D)
322	Paper mfg	(D)	2.0	(D)	(D)	(D)
325	Chemical mfg	10.6	7.2	.6	.7	2.0
326	Plastics & rubber products mfg	2.2	(D)	(D)	(D)	(D)
331	Primary metal mfg	(D)	(D)	(D)	(D)	(D)
332	Fabricated metal product mfg	1.5	.7	.2	.1	.5
334	Computer & electronic product mfg	(D)	(D)	.8	(D)	(D)
339	Miscellaneous mfg	3.7	1.1	.5	.3	1.9
	Balance of state	1.4	(D)	(D)	.2	(D)
South Carolina		584.2	287.0	104.6	49.5	143.2
311	Food mfg	11.4	4.2	1.8	1.8	3.6
313	Textile mills	32.7	17.1	4.1	5.0	6.6
314	Textile product mills	2.1	.5	(Z)	.7	.9
321	Wood product mfg	86.4	43.2	28.6	1.7	12.9
322	Paper mfg	101.1	45.4	19.8	6.5	29.4
323	Printing & related support activities	3.1	2.6	.2	(Z)	.4
325	Chemical mfg	154.2	98.6	10.0	3.9	41.8
326	Plastics & rubber products mfg	24.1	8.4	5.7	3.5	6.5
327	Nonmetallic mineral product mfg	16.9	11.7	.6	1.5	3.1
331	Primary metal mfg	93.5	32.2	28.8	20.1	12.5

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Ohio—Con.										
331	Primary metal mfg	79.6	90.4	108.4	51.2	62.0	41.2	106.0	17.9	12
332	Fabricated metal product mfg	25.2	27.0	26.0	20.2	16.4	12.3	17.0	12.3	8
333	Machinery mfg	2.7	3.9	7.4	4.8	1.2	.9	6.1	1.0	17
334	Computer & electronic product mfg	(D)	1.1	.9	1.1	(D)	(D)	.7	(D)	(X)
335	Electrical equipment, appliance, & component mfg	4.3	9.1	7.0	6.3	4.5	3.0	4.9	1.8	16
336	Transportation equipment mfg	74.7	55.9	44.9	38.7	78.3	12.6	33.5	12.3	6
337	Furniture & related product mfg	15.6	.3	1.3	5.9	6.2	.5	1.3	3.2	2
339	Miscellaneous mfg	2.1	1.4	2.7	1.4	.6	1.1	2.5	.5	24
Oklahoma		50.9	85.6	48.7	44.7	32.8	27.0	62.5	18.2	16
311	Food mfg	1.5	9.9	5.3	3.5	3.9	3.0	4.6	1.7	12
321	Wood product mfg	4.1	1.3	.5	.1	4.6	(Z)	.2	1.0	6
322	Paper mfg	2.9	24.1	13.7	4.2	2.7	5.4	25.0	3.5	49
323	Printing & related support activities	(D)	—	(D)	(D)	1.5	(D)	.1	—	(X)
324	Petroleum & coal products mfg	14.5	28.6	(D)	(D)	(D)	(D)	13.5	2.8	(X)
325	Chemical mfg	5.7	3.7	5.2	4.1	(D)	^a 1.6	3.7	(D)	30
326	Plastics & rubber products mfg	7.4	2.1	3.8	3.1	4.5	.6	2.6	2.4	8
327	Nonmetallic mineral product mfg	4.0	1.1	1.4	1.6	1.9	.6	1.5	.8	12
331	Primary metal mfg . . . . .	.6	2.9	3.9	1.8	1.5	2.4	.8	.9	41
332	Fabricated metal product mfg	1.0	4.3	1.5	1.7	(D)	(D)	3.0	(D)	31
333	Machinery mfg	3.6	2.5	3.4	3.0	1.3	1.6	2.3	1.2	23
334	Computer & electronic product mfg	(D)	.1	(D)	(D)	(D)	(Z)	.3	(D)	(X)
335	Electrical equipment, appliance, & component mfg	(D)	.5	(D)	.1	(Z)	.1	.9	—	69
336	Transportation equipment mfg	2.5	4.3	2.5	3.2	1.1	.3	3.8	.9	25
337	Furniture & related product mfg . . . . .	.9	.1	.8	.7	(Z)	.9	.1	—	85
Oregon		81.3	89.9	53.9	52.5	43.7	33.2	58.6	37.1	8
311	Food mfg	2.1	8.0	4.3	2.7	1.9	2.5	6.2	1.1	24
321	Wood product mfg	22.1	6.0	4.4	8.0	11.1	3.0	4.6	5.9	15
322	Paper mfg	17.9	24.3	14.1	11.3	15.5	10.1	12.4	7.0	7
325	Chemical mfg	2.3	1.6	2.8	1.8	1.3	(D)	(D)	1.3	23
326	Plastics & rubber products mfg . . . . .	.8	.3	.6	.1	(Z)	.8	.7	.2	46
327	Nonmetallic mineral product mfg	3.3	.3	.8	.8	.8	1.1	.7	1.0	1
331	Primary metal mfg	7.1	7.9	7.3	6.6	1.9	3.2	8.0	2.5	3
332	Fabricated metal product mfg	1.7	1.8	.6	1.4	1.1	.7	.7	.3	27
333	Machinery mfg	2.9	7.3	1.9	1.7	1.1	1.5	2.9	5.0	64
334	Computer & electronic product mfg	14.2	30.1	10.5	14.4	7.0	7.1	15.2	11.2	25
336	Transportation equipment mfg	2.9	1.7	4.9	2.6	.5	1.4	4.3	.6	20
337	Furniture & related product mfg	1.9	(Z)	.7	.5	.6	(D)	(D)	.4	17
	Balance of state	1.9	.6	1.1	.8	1.0	.7	.7	.5	12
Pennsylvania		357.8	250.4	271.9	197.0	258.0	107.3	218.3	99.4	4
311	Food mfg	7.0	35.8	12.9	8.3	15.5	8.7	19.5	3.8	17
312	Beverage & tobacco product mfg	2.1	7.4	3.3	1.7	^a 2.1	1.2	6.4	1.3	16
313	Textile mills . . . . .	.2	3.2	.7	1.0	.3	1.5	.8	.6	40
314	Textile product mills . . . . .	.1	.2	1.3	.2	^a 1.1	.1	1.1	(Z)	39
316	Leather & allied product mfg . . . . .	.1	.8	.2	.3	.2	.4	.1	(Z)	43
321	Wood product mfg	5.5	1.2	4.4	1.6	2.4	2.1	2.7	2.3	40
322	Paper mfg	16.7	22.4	15.4	9.0	11.8	11.8	16.0	5.9	11
323	Printing & related support activities	16.2	1.2	10.2	2.9	13.3	2.5	2.6	6.3	23
324	Petroleum & coal products mfg	108.0	37.1	8.8	42.1	62.6	15.6	25.0	8.6	8
325	Chemical mfg	34.2	41.9	38.8	26.5	31.6	12.9	29.6	14.3	15
326	Plastics & rubber products mfg	5.2	2.4	6.5	1.7	4.4	.6	5.2	2.1	15
327	Nonmetallic mineral product mfg	26.4	10.5	21.7	16.2	12.6	6.1	9.6	14.0	24
331	Primary metal mfg	46.1	46.1	77.0	42.4	54.9	27.0	67.3	22.9	8
332	Fabricated metal product mfg	20.8	14.6	20.7	11.1	20.2	5.4	9.4	10.0	11
333	Machinery mfg	1.6	1.7	5.3	2.7	.7	1.3	3.7	.2	24
334	Computer & electronic product mfg	1.9	3.5	2.8	3.0	.7	1.2	2.4	.8	39
335	Electrical equipment, appliance, & component mfg	3.9	1.8	2.2	2.3	3.1	.5	1.1	.9	9
336	Transportation equipment mfg	9.0	17.2	34.0	19.6	18.5	7.0	11.1	4.1	11
337	Furniture & related product mfg	5.1	.5	3.7	3.1	2.6	.5	2.6	.6	34
339	Miscellaneous mfg	2.4	.9	2.2	1.3	.4	.8	2.1	.8	30
Rhode Island		11.1	8.5	8.3	6.8	8.4	3.2	8.0	^a 1.6	17
313	Textile mills	1.3	(D)	(D)	.6	.9	.1	.3	—	17
322	Paper mfg	1.1	(D)	1.0	(D)	(D)	(D)	(D)	(D)	(X)
325	Chemical mfg	4.6	3.4	2.6	2.2	4.4	1.3	2.5	.2	20
326	Plastics & rubber products mfg	1.9	(D)	(D)	.5	1.2	.1	.2	.2	57
331	Primary metal mfg	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	(X)
332	Fabricated metal product mfg	(D)	.9	(D)	.6	.1	.2	.4	.1	22
334	Computer & electronic product mfg	(D)	(D)	(D)	(D)	(D)	(Z)	(D)	.2	(X)
339	Miscellaneous mfg . . . . .	.4	1.3	2.0	(D)	(D)	(D)	1.5	(D)	34
	Balance of state . . . . .	.1	.6	.8	.5	(D)	.2	.6	(D)	24
South Carolina		251.0	163.5	169.7	88.5	170.5	89.2	150.0	86.0	7
311	Food mfg	2.7	6.5	2.2	2.3	1.3	2.2	3.9	1.7	9
313	Textile mills	6.8	18.7	7.3	7.8	7.3	7.1	7.6	2.9	12
314	Textile product mills	(Z)	.5	1.6	.6	.1	(Z)	1.4	(Z)	22
321	Wood product mfg	64.4	5.0	17.1	2.9	66.1	3.9	2.5	11.0	30
322	Paper mfg	60.5	27.9	12.7	14.1	20.3	36.1	15.4	15.2	3
323	Printing & related support activities	2.6	.2	.4	.3	1.7	.3	.2	.6	18
325	Chemical mfg	37.8	58.3	58.1	27.5	21.2	20.3	48.5	36.8	9
326	Plastics & rubber products mfg	7.1	8.5	8.5	7.3	6.6	1.8	6.0	2.3	4
327	Nonmetallic mineral product mfg	11.7	3.0	2.2	2.2	3.2	1.3	3.9	6.4	12
331	Primary metal mfg	47.0	15.0	31.5	7.5	30.2	9.9	40.2	5.8	27

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Activity				
		Total	Treatment	Prevention	Recycling	Disposal
South Carolina—Con.						
332	Fabricated metal product mfg	7.0	3.8	.6	.6	2.1
333	Machinery mfg	12.8	5.0	1.0	1.2	5.5
334	Computer & electronic product mfg	6.3	2.4	.3	.7	3.0
335	Electrical equipment, appliance, & component mfg	6.7	3.1	.2	.5	2.9
336	Transportation equipment mfg	20.7	6.4	1.6	1.7	11.0
337	Furniture & related product mfg	1.5	.6	.5	—	.4
339	Miscellaneous mfg	3.2	1.7	.7	.1	.7
	South Dakota	23.8	10.6	6.0	1.6	5.5
311	Food mfg	3.9	(Z)	—	—	3.9
325	Chemical mfg	7.4	6.1	.2	.9	.3
327	Nonmetallic mineral product mfg	4.6	—	4.6	—	(Z)
333	Machinery mfg	1.4	.6	.3	.1	.4
339	Miscellaneous mfg	2.5	2.0	.5	(Z)	(Z)
	Balance of state	3.9	1.9	.6	.6	.8
	Tennessee	460.0	231.0	76.6	45.1	107.2
311	Food mfg	59.9	35.4	7.9	3.4	13.2
312	Beverage & tobacco product mfg	2.2	1.0	.3	.4	.5
313	Textile mills	6.2	4.7	.1	.1	1.3
314	Textile product mills	2.3	1.0	(Z)	(Z)	1.2
321	Wood product mfg	7.8	3.2	3.4	.3	.9
322	Paper mfg	45.8	28.2	6.8	4.0	6.8
323	Printing & related support activities	14.9	5.8	1.0	4.1	4.0
324	Petroleum & coal products mfg	17.1	8.0	6.0	—	3.1
325	Chemical mfg	146.3	80.4	14.7	15.6	35.7
326	Plastics & rubber products mfg	18.0	5.5	4.1	2.7	5.7
327	Nonmetallic mineral product mfg	13.9	5.2	5.1	1.0	2.6
331	Primary metal mfg	39.1	15.2	13.0	3.1	7.9
332	Fabricated metal product mfg	18.9	9.8	2.8	1.8	4.5
333	Machinery mfg	8.3	2.0	.9	1.0	4.5
334	Computer & electronic product mfg	2.9	(Z)	.1	2.3	.5
335	Electrical equipment, appliance, & component mfg	8.5	3.4	2.1	1.4	1.6
336	Transportation equipment mfg	41.5	20.3	7.3	3.2	10.6
337	Furniture & related product mfg	3.0	.5	1.0	.4	1.2
339	Miscellaneous mfg	3.3	1.2	.3	.4	1.4
	Texas	2 622.8	1 393.1	464.7	248.2	516.8
311	Food mfg	70.5	41.3	7.7	3.5	18.1
312	Beverage & tobacco product mfg	13.2	6.1	4.0	1.4	1.7
313	Textile mills	1.2	.2	—	—	1.0
321	Wood product mfg	29.1	11.2	6.8	.4	10.7
322	Paper mfg	33.0	18.5	4.1	1.9	8.5
323	Printing & related support activities	8.7	5.3	.8	.9	1.7
324	Petroleum & coal products mfg	863.9	458.9	242.4	76.2	86.4
325	Chemical mfg	1 282.1	687.7	169.0	128.9	296.5
326	Plastics & rubber products mfg	25.3	9.2	8.0	1.3	6.8
327	Nonmetallic mineral product mfg	67.8	49.7	5.9	2.9	9.3
331	Primary metal mfg	85.6	42.4	7.5	13.8	21.9
332	Fabricated metal product mfg	20.2	5.6	1.5	3.1	10.0
333	Machinery mfg	17.5	2.8	1.0	2.4	11.2
334	Computer & electronic product mfg	54.1	32.4	2.6	4.7	14.5
335	Electrical equipment, appliance, & component mfg	5.4	1.8	.2	1.6	1.8
336	Transportation equipment mfg	37.1	18.7	2.6	4.6	11.3
337	Furniture & related product mfg	3.4	.6	—	.3	2.5
339	Miscellaneous mfg	4.1	.8	.5	.3	2.5
	Utah	188.3	145.2	6.3	6.7	30.1
311	Food mfg	8.4	(D)	—	(D)	(D)
321	Wood product mfg	2.5	—	—	2.5	(Z)
322	Paper mfg	2.3	.7	(D)	(D)	(D)
324	Petroleum & coal products mfg	115.8	104.2	—	—	11.6
325	Chemical mfg	1.9	1.0	(Z)	.2	.6
327	Nonmetallic mineral product mfg	15.3	14.9	(D)	—	(D)
331	Primary metal mfg	5.8	(D)	(D)	(D)	(D)
332	Fabricated metal product mfg	2.6	.1	(D)	(D)	2.4
333	Machinery mfg	1.2	(D)	(D)	(D)	(D)
334	Computer & electronic product mfg	12.9	5.8	3.0	1.2	2.9
335	Electrical equipment, appliance, & component mfg	2.6	1.4	.1	.3	.9
336	Transportation equipment mfg	13.6	7.1	.6	1.1	4.8
339	Miscellaneous mfg	1.6	(D)	.3	(D)	(D)
	Balance of state	1.6	.3	.8	(D)	(D)
	Vermont	33.5	18.5	6.7	2.9	5.4
321	Wood product mfg	2.7	1.1	.8	.2	.6
322	Paper mfg	3.4	1.4	.7	.3	1.0
327	Nonmetallic mineral product mfg	1.6	.7	.3	.1	.5
334	Computer & electronic product mfg	7.4	4.1	1.1	.4	1.9
336	Transportation equipment mfg	15.3	10.7	3.0	1.5	—
337	Furniture & related product mfg	1.0	.1	.5	—	.4
	Balance of state	2.0	.6	.2	.2	1.1
	Virginia	389.6	189.4	77.9	40.7	81.7
311	Food mfg	20.3	9.4	2.4	1.7	6.7
312	Beverage & tobacco product mfg	34.5	21.7	3.0	3.4	6.5
313	Textile mills	19.4	16.4	(D)	(D)	2.1
314	Textile product mills	2.3	1.3	.7	(Z)	.3
321	Wood product mfg	25.2	9.5	10.2	1.1	4.3
322	Paper mfg	81.0	36.8	26.6	4.7	12.9
323	Printing & related support activities	11.8	4.7	.9	4.1	2.1
325	Chemical mfg	74.7	31.7	18.5	16.3	8.3
326	Plastics & rubber products mfg	23.2	9.2	3.6	1.7	8.7
327	Nonmetallic mineral product mfg	21.2	15.5	2.4	1.5	1.8

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

(Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million)

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
South Carolina—Con.										
332	Fabricated metal product mfg	1.2	3.7	2.1	2.3	1.2	1.2	1.7	.5	10
333	Machinery mfg	1.8	5.8	5.1	3.7	2.2	1.8	4.1	1.0	16
334	Computer & electronic product mfg	1.1	1.1	4.1	1.9	.3	.3	3.7	.1	6
335	Electrical equipment, appliance, & component mfg	1.4	2.4	2.9	2.8	.6	.4	2.7	.2	27
336	Transportation equipment mfg	3.2	5.0	12.6	3.8	7.9	1.6	6.8	.5	31
337	Furniture & related product mfg	1.1	.1	.3	.6	.3	.1	.3	.2	51
339	Miscellaneous mfg	.7	1.6	1.0	.9	.1	.9	1.6	.5	15
South Dakota		15.7	5.0	3.1	3.7	5.3	2.4	6.2	6.2	16
311	Food mfg	—	3.2	.7	—	—	—	3.9	(Z)	91
325	Chemical mfg	6.1	.7	.7	.5	2.3	.7	4	3.6	9
327	Nonmetallic mineral product mfg	4.6	—	(Z)	.3	1.8	.5	2	1.9	1
333	Machinery mfg	.8	(Z)	.6	.2	.2	.6	4	(Z)	68
339	Miscellaneous mfg	2.5	(Z)	.1	1.7	.4	(Z)	.4	—	1
	Balance of state	1.8	1.0	1.1	1.0	.6	.6	.9	.8	19
Tennessee		162.7	170.6	126.7	89.4	124.3	65.3	123.4	57.6	4
311	Food mfg	19.6	29.2	11.2	8.0	18.0	9.7	19.1	5.1	10
312	Beverage & tobacco product mfg	.7	.8	.7	.9	.2	.1	.5	.5	1
313	Textile mills	3.8	1.1	1.3	.7	3.3	.4	1.5	.3	14
314	Textile product mills	.4	.6	1.2	.6	.3	.3	1.0	.2	1
321	Wood product mfg	5.6	.3	1.9	1.4	3.6	.8	.7	1.3	17
322	Paper mfg	11.5	23.0	11.3	6.9	10.3	6.3	6.9	15.5	6
323	Printing & related support activities	11.6	1.4	2.0	2.0	7.8	1.6	1.3	2.1	11
324	Petroleum & coal products mfg	9.7	2.6	4.8	1.2	2.9	8.5	2.3	2.1	1
325	Chemical mfg	35.7	70.4	40.1	30.5	38.1	20.4	39.3	18.1	7
326	Plastics & rubber products mfg	7.8	3.2	6.9	5.4	5.1	1.5	5.0	1.0	9
327	Nonmetallic mineral product mfg	7.1	4.5	2.2	4.3	4.5	1.9	2.6	.7	26
331	Primary metal mfg	20.1	9.9	9.1	7.6	8.2	5.4	12.2	5.6	4
332	Fabricated metal product mfg	2.9	9.6	6.5	6.8	2.7	3.2	4.3	1.9	14
333	Machinery mfg	.9	2.9	4.5	2.7	1.4	.6	3.4	.2	25
334	Computer & electronic product mfg	(Z)	.1	2.8	.2	(Z)	(Z)	2.6	—	7
335	Electrical equipment, appliance, & component mfg	3.7	2.7	2.1	1.8	3.2	.4	2.7	.4	16
336	Transportation equipment mfg	19.6	6.6	15.3	7.0	12.9	3.6	15.6	*2.3	18
337	Furniture & related product mfg	1.1	.4	1.5	*3	1.4	.2	1.1	(Z)	39
339	Miscellaneous mfg	.7	1.3	1.3	.9	.4	.5	1.3	.3	11
Texas		1 235.4	728.4	659.0	445.5	928.4	325.5	560.2	363.2	3
311	Food mfg	11.0	40.3	19.2	12.0	11.1	10.4	28.3	8.6	13
312	Beverage & tobacco product mfg	2.8	8.4	2.0	2.7	1.4	2.6	4.7	1.8	6
313	Textile mills	.7	.4	.1	(D)	(D)	.5	(D)	(D)	54
321	Wood product mfg	17.1	3.0	9.0	2.0	12.6	1.8	8.2	4.5	19
322	Paper mfg	11.4	11.0	10.6	5.2	7.0	3.8	9.9	7.0	20
323	Printing & related support activities	6.1	.6	2.0	.8	4.5	.4	1.2	1.8	21
324	Petroleum & coal products mfg	593.5	151.0	119.3	133.9	366.3	96.7	139.5	127.4	8
325	Chemical mfg	441.2	438.2	402.6	228.3	440.5	176.5	273.8	163.0	4
326	Plastics & rubber products mfg	15.1	3.7	6.5	5.0	9.3	2.1	5.5	3.4	15
327	Nonmetallic mineral product mfg	53.3	4.8	9.7	10.1	26.5	7.7	9.1	14.4	10
331	Primary metal mfg	41.6	22.1	21.9	11.6	22.8	7.8	26.9	16.4	10
332	Fabricated metal product mfg	4.0	7.5	8.7	3.8	3.1	2.5	9.7	1.2	15
333	Machinery mfg	1.4	3.3	12.8	4.5	(D)	.5	10.7	(D)	19
334	Computer & electronic product mfg	20.9	20.1	13.0	(D)	(D)	*6.9	14.4	(D)	8
335	Electrical equipment, appliance, & component mfg	1.6	.7	3.1	1.9	1.1	.1	1.8	.6	30
336	Transportation equipment mfg	12.5	12.9	11.8	9.0	6.1	4.8	11.8	5.5	19
337	Furniture & related product mfg	.2	—	3.3	.7	(D)	(Z)	2.6	(D)	50
339	Miscellaneous mfg	1.2	.1	2.8	1.1	.7	.2	2.0	.1	41
Utah		125.2	30.5	32.6	*35.8	*71.7	*21.6	*34.6	*24.6	55
311	Food mfg	1.1	5.9	1.5	1.5	1.2	1.6	2.7	1.5	60
321	Wood product mfg	—	—	2.5	—	2.3	—	.1	—	97
322	Paper mfg	.4	.3	1.6	.6	(D)	(D)	.7	(D)	54
324	Petroleum & coal products mfg	96.1	8.1	11.6	*19.1	(D)	(D)	*21.4	(D)	88
325	Chemical mfg	1.0	.1	.8	.7	.6	.1	.5	.1	8
327	Nonmetallic mineral product mfg	15.2	.1	(Z)	1.9	12.2	.5	(Z)	.7	73
331	Primary metal mfg	2.2	1.3	2.4	1.0	1.0	.6	2.3	.9	17
332	Fabricated metal product mfg	.9	(Z)	1.7	.4	1.0	.5	.6	.2	65
333	Machinery mfg	.2	.7	.3	.3	(Z)	.1	.2	.5	29
334	Computer & electronic product mfg	4.4	6.3	2.2	1.8	4.2	2.3	1.7	2.9	40
335	Electrical equipment, appliance, & component mfg	1.7	.2	.8	.2	.5	(Z)	.4	1.5	2
336	Transportation equipment mfg	.8	6.8	6.0	7.1	1.9	1.1	3.0	.5	8
339	Miscellaneous mfg	.2	.6	.8	.7	.1	.2	.6	(Z)	39
	Balance of state	1.1	.1	.4	.5	.6	(Z)	.4	.1	25
Vermont		6.3	20.7	6.5	9.0	5.6	2.7	13.8	2.4	44
321	Wood product mfg	1.2	1.0	.5	(D)	1.2	(D)	.5	*.1	79
322	Paper mfg	.9	1.1	1.4	1.1	.9	.2	1.0	.3	92
327	Nonmetallic mineral product mfg	.6	.4	.6	(D)	*.3	(D)	*.5	*.1	90
334	Computer & electronic product mfg	.7	3.8	2.9	3.0	(Z)	1.4	1.8	1.1	16
336	Transportation equipment mfg	1.5	13.8	(Z)	3.3	2.8	—	8.5	.7	92
337	Furniture & related product mfg	.7	.1	.3	(D)	(Z)	(D)	.5	—	64
	Balance of state	.6	.6	.9	.5	.4	.1	1.0	(Z)	12
Virginia		159.1	130.2	100.3	84.4	104.7	58.2	96.1	46.1	7
311	Food mfg	4.2	10.5	5.5	4.6	(D)	3.0	4.7	(D)	19
312	Beverage & tobacco product mfg	9.9	19.2	5.4	5.8	14.2	3.7	9.8	.9	1
313	Textile mills	6.9	(D)	(D)	4.5	5.5	1.6	6.2	1.7	16
314	Textile product mills	1.8	.2	.3	.9	(D)	.3	.3	(D)	1
321	Wood product mfg	17.1	3.9	4.3	3.2	11.3	3.3	3.4	4.1	15
322	Paper mfg	18.2	38.3	24.6	9.0	12.6	26.7	18.9	13.8	7
323	Printing & related support activities	8.2	2.2	1.4	1.9	4.0	1.1	*3.9	1.0	25
325	Chemical mfg	31.1	27.6	16.0	24.1	20.6	5.3	17.8	6.8	25
326	Plastics & rubber products mfg	11.4	3.8	7.9	5.3	5.8	1.9	8.6	1.6	18
327	Nonmetallic mineral product mfg	16.8	(D)	(D)	(D)	7.1	(D)	2.3	(D)	17

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity			
			Treatment	Prevention	Recycling	Disposal
Virginia—Con.						
331	Primary metal mfg	24.2	15.2	(D)	(D)	(D)
332	Fabricated metal product mfg	10.5	5.8	.7	.6	3.4
334	Computer & electronic product mfg	3.8	(D)	1.2	(D)	(D)
335	Electrical equipment, appliance, & component mfg	1.3	(D)	(Z)	(Z)	(D)
336	Transportation equipment mfg	27.5	9.2	1.7	3.7	12.8
337	Furniture & related product mfg	7.7	(D)	5.0	(D)	1.9
	Balance of state	1.1	(D)	.1	(D)	(D)
Washington		346.1	213.4	38.3	21.0	73.5
311	Food mfg	25.5	10.9	1.8	1.0	11.7
312	Beverage & tobacco product mfg	1.2	.5	.1	(Z)	.5
321	Wood product mfg	18.6	11.7	3.1	1.6	2.3
322	Paper mfg	100.6	72.4	9.1	1.2	17.9
324	Petroleum & coal products mfg	97.5	70.8	9.1	9.0	8.5
325	Chemical mfg	10.4	3.8	1.2	1.9	3.5
326	Plastics & rubber products mfg	3.2	2.3	.4	.1	.4
327	Nonmetallic mineral product mfg	9.7	4.8	1.8	1.1	2.0
331	Primary metal mfg	25.8	10.9	5.4	2.0	7.5
332	Fabricated metal product mfg	7.0	3.1	.6	1.0	2.3
333	Machinery mfg	4.7	1.5	2.6	.4	.2
334	Computer & electronic product mfg	12.3	6.8	2.0	.6	2.9
336	Transportation equipment mfg	25.5	13.3	.5	.1	11.6
337	Furniture & related product mfg	2.8	.3	.5	.5	1.5
	Balance of state	1.5	.2	.2	.4	.6
West Virginia		269.1	153.9	36.1	9.5	69.7
321	Wood product mfg	9.8	6.8	.8	.4	1.8
322	Paper mfg	35.5	—	—	—	3.5
323	Printing & related support activities	7.7	6.4	.1	.2	1.0
324	Petroleum & coal products mfg	9.3	4.1	2.7	.5	1.9
325	Chemical mfg	123.7	80.5	16.3	.8	26.1
327	Nonmetallic mineral product mfg	29.7	13.4	2.7	4.5	9.1
331	Primary metal mfg	71.7	36.5	11.2	1.8	22.1
332	Fabricated metal product mfg	3.5	1.7	1.2	—	.5
335	Electrical equipment, appliance, & component mfg	4.5	1.7	.2	.7	1.9
336	Transportation equipment mfg	3.9	1.5	.6	.3	1.5
	Balance of state	1.9	1.1	.2	.2	.3
Wisconsin		522.1	301.7	56.7	36.2	127.4
311	Food mfg	75.1	31.1	7.1	10.0	26.9
312	Beverage & tobacco product mfg	8.6	2.9	.2	.2	5.3
313	Textile mills	2.2	1.1	.6	.4	.2
316	Leather & allied product mfg	2.3	1.8	.1	(Z)	.4
321	Wood product mfg	22.5	15.4	4.2	.7	2.2
322	Paper mfg	166.1	126.5	11.1	6.2	22.4
323	Printing & related support activities	22.4	14.8	3.8	1.0	2.8
325	Chemical mfg	35.2	14.7	8.3	1.3	10.9
326	Plastics & rubber products mfg	20.4	9.0	2.1	2.5	6.8
327	Nonmetallic mineral product mfg	8.9	4.9	1.8	.5	1.7
331	Primary metal mfg	68.6	38.8	6.1	3.0	20.7
332	Fabricated metal product mfg	28.8	14.8	1.7	3.2	9.2
333	Machinery mfg	19.0	9.0	1.6	1.7	6.7
334	Computer & electronic product mfg	2.8	1.1	.4	.3	1.0
335	Electrical equipment, appliance, & component mfg	8.2	3.7	1.2	.6	2.7
336	Transportation equipment mfg	24.5	10.1	5.1	3.7	5.6
337	Furniture & related product mfg	3.3	1.4	.3	.3	1.3
339	Miscellaneous mfg	1.9	.3	.4	.6	.6
	Balance of state	1.0	.3	.7	—	.1
Wyoming		79.6	65.5	4.8	3.0	6.3
311	Food mfg	2.4	1.5	.6	—	.3
324	Petroleum & coal products mfg	59.8	51.6	2.1	2.6	3.6
325	Chemical mfg	16.7	12.0	2.0	.4	2.3

Table 6. Pollution Abatement Operating Costs—State and Subsector by Activity, Media, and Cost Category: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement operating costs are less than \$1.0 million]

NAICS code	State/Subsector	Media			Cost category					Relative standard error PAOC
		Air	Water	Solid waste	Labor	Energy	Materials and supplies	Contract work	Depreciation	
Virginia—Con.										
331	Primary metal mfg	(D)	(D)	11.8	(D)	^a 6.3	(D)	^a 7.5	(D)	48
332	Fabricated metal product mfg	(D)	6.3	(D)	^a 3.4	(D)	(D)	^a 3.4	(D)	34
334	Computer & electronic product mfg	.5	2.2	1.1	1.2	1.6	.4	.5	.1	25
335	Electrical equipment, appliance, & component mfg	(D)	(D)	(D)	(D)	(D)	(D)	.4	(D)	3
336	Transportation equipment mfg	15.4	4.2	8.0	8.8	4.7	2.4	7.4	4.2	17
337	Furniture & related product mfg	5.9	(D)	(D)	3.2	2.2	1.0	.7	.6	12
	Balance of state	(D)	(D)	(D)	.5	(Z)	.1	.5	(Z)	34
	Washington	141.8	124.6	79.7	68.7	64.5	58.7	98.8	55.3	10
311	Food mfg	4.5	16.8	4.2	4.6	4.4	2.7	10.8	2.9	19
312	Beverage & tobacco product mfg	.1	.5	.5	(D)	(D)	(D)	.4	(D)	56
321	Wood product mfg	12.7	1.9	4.0	4.8	6.0	1.8	2.8	3.2	19
322	Paper mfg	22.4	52.7	25.5	16.4	10.9	21.9	35.4	15.9	1
324	Petroleum & coal products mfg	72.5	17.7	7.2	10.3	25.7	15.9	22.8	22.8	31
325	Chemical mfg	1.9	4.6	3.8	3.4	2.4	1.3	3.2	^a 1	54
326	Plastics & rubber products mfg	2.3	.5	.4	(D)	1.9	(D)	.6	(D)	50
327	Nonmetallic mineral product mfg	5.1	1.8	2.8	2.1	(D)	2.8	2.4	(D)	27
331	Primary metal mfg	8.4	8.5	8.9	7.9	5.0	3.2	5.3	4.4	29
332	Fabricated metal product mfg	1.1	3.1	2.7	2.1	1.4	1.1	1.6	.8	16
333	Machinery mfg	1.0	.7	3.0	.8	1.0	.6	.9	1.4	9
334	Computer & electronic product mfg	4.4	5.2	2.7	3.2	3.0	4.5	1.6	^a 1	41
336	Transportation equipment mfg	4.5	9.9	11.0	11.8	.2	2.3	9.2	2.0	4
337	Furniture & related product mfg	.4	.2	2.2	.7	.3	(D)	1.4	(D)	68
	Balance of state	.2	.5	.8	.5	(D)	.1	.5	(D)	30
	West Virginia	105.1	80.0	84.1	47.8	70.0	52.5	52.4	46.5	12
321	Wood product mfg	6.3	1.4	2.1	1.6	(D)	(D)	1.4	2.8	21
322	Paper mfg	.2	.5	2.8	(D)	—	(D)	(D)	—	1
323	Printing & related support activities	6.6	.6	.5	.3	6.2	(D)	1.1	(D)	1
324	Petroleum & coal products mfg	5.3	2.9	1.1	(D)	3.2	^a 1.4	(D)	1.3	1
325	Chemical mfg	26.4	62.4	34.9	25.7	16.5	35.4	15.0	31.0	17
327	Nonmetallic mineral product mfg	14.8	1.9	13.0	4.2	10.6	6.5	7.3	1.0	32
331	Primary metal mfg	40.4	7.1	24.2	7.7	27.3	6.7	21.6	8.5	29
332	Fabricated metal product mfg	1.8	1.2	.6	.3	1.7	.7	.4	.4	1
335	Electrical equipment, appliance, & component mfg	1.6	.2	2.7	1.5	.9	(D)	1.9	(D)	51
336	Transportation equipment mfg	1.2	1.0	1.7	1.3	(D)	(D)	1.0	(D)	4
	Balance of state	.7	.7	.6	.8	(D)	(D)	.4	(D)	18
	Wisconsin	178.5	199.1	144.4	101.7	114.3	67.4	173.5	65.2	7
311	Food mfg	6.2	45.0	23.9	13.2	8.0	9.2	36.3	8.5	13
312	Beverage & tobacco product mfg	.1	6.2	2.3	(D)	(D)	(D)	6.2	.5	36
313	Textile mills	1.0	.2	1.1	.4	(D)	(D)	(D)	(D)	21
316	Leather & allied product mfg	.1	1.7	.6	.5	(D)	(D)	1.1	(D)	9
321	Wood product mfg	8.9	.8	12.8	(D)	8.1	3.2	(D)	(D)	32
322	Paper mfg	43.6	92.1	30.4	31.0	26.8	31.0	52.0	25.2	19
323	Printing & related support activities	17.6	2.0	2.9	2.7	13.2	1.4	3.2	1.9	7
325	Chemical mfg	11.1	14.1	10.1	7.9	6.8	^a 2.5	10.7	7.3	27
326	Plastics & rubber products mfg	9.4	1.6	9.4	3.1	5.7	1.2	7.9	2.5	12
327	Nonmetallic mineral product mfg	5.5	1.5	1.9	1.9	2.1	1.4	1.9	1.6	23
331	Primary metal mfg	39.9	9.6	19.2	8.5	26.3	5.4	22.7	5.8	11
332	Fabricated metal product mfg	9.7	8.5	10.7	8.7	5.5	3.8	7.8	3.1	12
333	Machinery mfg	6.5	5.1	7.3	5.2	2.5	2.4	7.4	1.4	22
334	Computer & electronic product mfg	.1	2.1	.5	.8	.2	(D)	1.2	(D)	36
335	Electrical equipment, appliance, & component mfg	4.2	1.8	2.2	2.1	2.0	2.0	1.6	.5	48
336	Transportation equipment mfg	11.5	6.2	6.8	8.1	4.0	1.8	6.5	4.1	19
337	Furniture & related product mfg	1.6	.3	1.4	.7	.8	(D)	1.4	(D)	25
339	Miscellaneous mfg	.6	.5	.8	1.1	.1	(D)	.5	(D)	26
	Balance of state	.9	—	.1	.3	.6	(Z)	.1	.1	4
	Wyoming	56.1	15.0	8.5	12.8	14.6	12.4	17.6	22.2	55
311	Food mfg	.9	.4	1.1	.9	.3	.7	.4	(Z)	48
324	Petroleum & coal products mfg	40.6	12.8	6.3	8.6	9.8	10.0	15.9	15.5	73
325	Chemical mfg	14.2	1.5	.9	3.0	4.5	1.4	1.1	6.7	1

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
31-33	All industries	5 907.8	3 112.7	2 104.2	372.6	318.3	3 876.7	1 354.5	676.7	3
311	Food mfg	448.0	256.3	112.7	26.6	52.3	151.6	247.2	49.2	8
3111	Animal food mfg	14.2	6.2	7.2	(Z)	.7	9.5	3.3	1.4	21
31111	Animal food mfg	14.2	6.2	7.2	(Z)	.7	9.5	3.3	1.4	21
311111	Dog & cat food mfg	5.8	1.6	4.2	-	-	2.7	2.1	1.0	43
311119	Other animal food mfg	8.4	4.7	3.0	(Z)	.7	6.9	1.1	.4	19
3112	Grain & oilseed milling	89.4	61.3	22.7	.9	4.4	65.7	18.4	5.3	7
31121	Flour milling & malt mfg	7.0	3.6	(D)	.1	(D)	5.5	(D)	(D)	19
311211	Flour milling	4.3	2.9	1.0	(Z)	.3	4.0	.2	.1	30
311212	Rice milling	2.5	.7	(D)	-	(D)	1.5	.3	.7	7
31122	Starch & vegetable fats & oils mfg	80.1	56.2	(D)	.5	(D)	58.3	(D)	(D)	7
311221	Wet corn milling	58.4	43.5	(D)	.5	(D)	41.9	(D)	(D)	2
311222	Soybean processing	19.4	11.6	7.8	-	-	14.5	4.9	-	27
311225	Fats & oils refining & blending	1.4	.4	.9	-	(Z)	1.2	.2	-	29
31123	Breakfast cereal mfg	2.3	1.6	.4	.3	-	1.9	(D)	(D)	4
311230	Breakfast cereal mfg	2.3	1.6	.4	.3	-	1.9	(D)	(D)	4
3113	Sugar & confectionery product mfg	18.5	6.0	11.5	(Z)	1.0	5.0	7.5	6.0	6
31131	Sugar mfg	14.9	5.1	8.8	(Z)	1.0	3.8	5.2	6.0	1
311312	Cane sugar refining	9.2	(D)	(D)	(D)	(D)	-	.6	4.6	1
311313	Beet sugar mfg	5.4	(D)	(D)	(D)	(D)	3.8	4.3	1.3	1
31134	Nonchocolate confectionery mfg	2.0	.4	1.7	-	-	(Z)	2.0	-	53
311340	Nonchocolate confectionery mfg	2.0	.4	1.7	-	-	(Z)	2.0	-	53
3114	Fruit & vegetable preserving & specialty food mfg	75.7	48.4	22.8	2.1	2.5	18.1	46.7	10.9	14
31141	Frozen food mfg	36.9	28.5	7.5	.3	.6	5.1	24.5	7.3	22
311411	Frozen fruit, juice, & vegetable mfg	30.0	25.9	3.5	.2	.4	4.7	21.7	3.6	26
311412	Frozen specialty food mfg	6.9	2.6	4.0	.1	.2	.4	2.8	3.7	29
31142	Fruit & vegetable canning, pickling, & drying	38.9	19.9	15.3	1.8	1.9	13.0	22.2	3.7	17
311421	Fruit & vegetable canning	27.2	11.7	12.1	(D)	(D)	10.1	13.7	3.4	22
311422	Specialty canning	6.5	5.0	(D)	.1	(D)	(D)	5.2	(D)	1
311423	Dried & dehydrated food mfg	5.1	3.2	(D)	(D)	(D)	(D)	3.3	(D)	55
3115	Dairy product mfg	71.3	30.9	6.6	16.3	17.5	5.5	60.6	5.1	41
31151	Dairy product (except frozen) mfg	70.9	30.8	6.6	16.2	17.3	5.5	60.4	5.0	42
311511	Fluid milk mfg	23.2	7.5	4.0	.1	11.6	1.1	21.7	.3	51
311513	Cheese mfg	10.0	3.2	1.7	3.3	1.7	2.7	7.1	.2	32
311514	Dry, condensed, & evaporated dairy product mfg	37.2	19.9	.9	12.4	4.0	1.7	31.1	4.3	72
3116	Meat product mfg	109.9	63.2	20.6	5.9	20.2	17.0	78.9	13.9	10
31161	Animal slaughtering & processing	109.9	63.2	20.6	5.9	20.2	17.0	78.9	13.9	10
311611	Animal (except poultry) slaughtering	29.7	14.9	7.4	2.8	4.7	4.6	18.6	6.6	28
311612	Meat processed from carcasses	22.0	9.5	7.1	.6	4.9	3.6	15.8	2.6	15
311613	Rendering & meat byproduct processing	18.9	9.9	1.8	(Z)	7.2	5.7	12.6	.6	25
311615	Poultry processing	39.2	29.0	4.3	2.5	3.4	3.2	32.0	4.1	10
3117	Seafood product preparation & packaging	1.9	.6	.7	-	.5	-	1.4	.5	27
31171	Seafood product preparation & packaging	1.9	.6	.7	-	.5	-	1.4	.5	27
311712	Fresh & frozen seafood processing	1.9	.6	.7	-	.5	-	1.4	.5	27
3118	Bakeries & tortilla mfg	18.5	9.3	7.9	.2	1.2	9.9	7.3	1.3	17
31181	Bread & bakery product mfg	15.4	7.2	7.1	.2	.9	8.9	5.7	.8	19
311812	Commercial bakeries	11.7	4.3	6.6	.2	.6	8.6	2.6	.5	24
311813	Frozen cakes, pies, & other pastries mfg	3.5	2.9	.5	-	(Z)	.3	3.1	.1	7
31182	Cookie, cracker, & pasta mfg	2.6	1.9	.6	-	.2	.7	1.5	.4	48
3119	Other food mfg	48.7	30.3	12.8	1.2	4.3	20.8	23.2	4.7	19
31191	Snack food mfg	11.8	4.6	6.2	.7	.3	5.8	5.1	.9	6
311919	Other snack food mfg	11.1	4.4	5.9	.7	.1	5.4	4.9	.9	5
31192	Coffee & tea mfg	3.7	.8	2.4	.1	.4	3.2	-	.5	14
311920	Coffee & tea mfg	3.7	.8	2.4	.1	.4	3.2	-	.5	14
31193	Flavoring syrup & concentrate mfg	5.7	3.0	(D)	(D)	2.4	.1	(D)	(D)	37
311930	Flavoring syrup & concentrate mfg	5.7	3.0	(D)	(D)	2.4	.1	(D)	(D)	37
31194	Seasoning & dressing mfg	5.0	3.8	(D)	(D)	.4	.7	(D)	(D)	15
311941	Mayonnaise, dressing, & other prepared sauce mfg	3.3	(D)	(D)	-	.1	.5	2.8	-	22
311942	Spice & extract mfg	1.7	(D)	(D)	(D)	.3	.2	(D)	(D)	14
31199	All other food mfg	22.5	18.1	3.2	.3	.8	11.0	10.9	.6	40
311991	Perishable prepared food mfg	4.7	3.9	.3	.2	.4	2.3	2.0	.4	17
311999	All other miscellaneous food mfg	17.8	14.3	2.9	.1	.5	8.7	8.9	.2	50
312	Beverage & tobacco product mfg	77.6	39.6	20.5	15.0	2.5	33.4	41.2	3.1	15
3121	Beverage mfg	74.4	36.4	(D)	(D)	(D)	(D)	(D)	(D)	16
31211	Soft drink & ice mfg	22.5	12.6	6.4	2.8	.7	3.1	17.5	1.8	15
312111	Soft drink mfg	22.1	12.6	6.4	2.8	.3	3.1	17.5	1.5	16
31212	Breweries	25.6	5.3	7.2	11.9	1.3	(D)	(D)	(D)	29
312120	Breweries	25.6	5.3	7.2	11.9	1.3	(D)	(D)	(D)	29
31213	Wineries	18.6	16.6	(D)	(D)	(D)	11.2	7.3	.1	44
312130	Wineries	18.6	16.6	(D)	(D)	(D)	11.2	7.3	.1	44
31214	Distilleries	7.7	1.9	5.6	.2	-	(D)	(D)	(D)	24
312140	Distilleries	7.7	1.9	5.6	.2	-	(D)	(D)	(D)	24
3122	Tobacco mfg	3.2	3.1	(D)	(D)	(D)	(D)	(D)	(D)	1
31222	Tobacco product mfg	3.2	3.0	(D)	(D)	(D)	(D)	(D)	(D)	1
312221	Cigarette mfg	(D)	(D)	(D)	(D)	-	(D)	(D)	(D)	(X)

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
313	Textile mills	30.9	20.9	3.3	1.0	5.6	18.8	9.9	2.1	27
3131	Fiber, yarn, & thread mills	2.6	2.5	.2	—	(Z)	2.0	.1	.5	4
31311	Fiber, yarn, & thread mills	2.6	2.5	.2	—	(Z)	2.0	.1	.5	4
313111	Yarn spinning mills	2.5	(D)	(D)	—	(Z)	(D)	(D)	.5	4
3132	Fabric mills	20.4	13.5	1.0	.3	5.6	10.6	8.6	1.2	40
31321	Broadwoven fabric mills	4.7	.6	.1	—	4.0	.4	4.3	—	57
313210	Broadwoven fabric mills	4.7	.6	.1	—	4.0	.4	4.3	—	57
31323	Nonwoven fabric mills	11.7	10.8	.2	.1	.5	9.8	1.3	.6	64
313230	Nonwoven fabric mills	11.7	10.8	.2	.1	.5	9.8	1.3	.6	64
31324	Knit fabric mills	3.6	2.1	(D)	(D)	1.0	.4	2.9	.4	46
313241	Weft knit fabric mills	2.1	(D)	(D)	—	—	(Z)	2.0	.1	80
313249	Other knit fabric & lace mills	1.6	(D)	(D)	(D)	1.0	.3	.9	.3	15
3133	Textile & fabric finishing & fabric coating mills	7.9	5.0	2.2	.7	(Z)	6.2	1.3	.4	8
31331	Textile & fabric finishing mills	4.7	2.2	1.8	.7	(Z)	3.7	1.0	(Z)	7
313311	Broadwoven fabric finishing mills	4.3	2.0	1.7	.6	—	3.3	1.0	—	7
31332	Fabric coating mills	3.2	2.8	.4	(Z)	—	2.6	.2	.4	17
313320	Fabric coating mills	3.2	2.8	.4	(Z)	—	2.6	.2	.4	17
314	Textile product mills	5.3	1.7	1.6	.6	1.4	1.7	2.1	1.5	12
3141	Textile furnishings mills	3.4	.9	1.4	.3	.7	1.2	1.4	.8	11
3149	Other textile product mills	1.9	.7	.1	.3	.7	.5	.7	.7	28
31499	All other textile product mills	1.7	.7	.1	.3	.6	.5	.7	.5	30
316	Leather & allied product mfg	1.7	.5	.3	.5	.4	.3	.8	.7	9
3161	Leather & hide tanning & finishing	1.6	.5	.2	.5	.4	.2	.6	.6	10
31611	Leather & hide tanning & finishing	1.6	.5	.2	.5	.4	.2	.8	.6	10
316110	Leather & hide tanning & finishing	1.6	.5	.2	.5	.4	.2	.8	.6	10
321	Wood product mfg	142.2	83.0	25.0	23.8	10.3	104.2	5.3	32.7	18
3211	Sawmills & wood preservation	17.2	7.2	6.9	2.5	.5	12.6	1.8	2.8	12
32111	Sawmills & wood preservation	17.2	7.2	6.9	2.5	.5	12.6	1.8	2.8	12
321113	Sawmills	16.4	7.1	6.5	2.4	.3	12.5	1.5	2.5	12
3212	Veneer, plywood, & engineered wood product mfg	98.1	67.7	9.3	19.4	1.6	76.1	2.7	19.3	24
32121	Veneer, plywood, & engineered wood product mfg	98.1	67.7	9.3	19.4	1.6	76.1	2.7	19.3	24
321211	Hardwood veneer & plywood mfg	3.5	2.3	.6	.5	.1	2.4	.5	.6	17
321212	Softwood veneer & plywood mfg	5.8	3.4	1.0	1.0	.5	4.6	.4	.8	16
321213	Engineered wood member (except truss) mfg	1.9	1.8	.1	—	—	1.8	(Z)	(Z)	1
321219	Reconstituted wood product mfg	86.5	60.2	7.6	17.9	.8	67.3	1.8	17.4	27
3219	Other wood product mfg	27.0	8.1	8.8	1.9	8.2	15.6	.7	10.7	24
32191	Millwork	16.3	6.2	3.3	.8	6.0	7.5	.7	8.1	25
321911	Wood window & door mfg	11.1	4.0	1.7	.6	4.9	4.4	.2	6.5	35
321912	Cut stock, resawing lumber, & planing	1.7	.8	.6	(Z)	.2	1.1	.5	.1	1
321918	Other millwork (including flooring)	3.5	1.4	1.0	.2	.9	2.0	(Z)	1.5	27
32192	Wood container & pallet mfg	2.2	1.4	.2	.5	.1	1.6	(Z)	.6	10
321920	Wood container & pallet mfg	2.2	1.4	.2	.5	.1	1.6	(Z)	.6	10
32199	All other wood product mfg	8.5	.5	5.3	.6	2.0	6.5	(Z)	2.0	60
321992	Prefabricated wood building mfg	1.2	(Z)	(Z)	.4	.8	.1	(Z)	1.0	66
321999	All other miscellaneous wood product mfg	6.4	.5	5.3	.2	.4	6.4	—	.1	78
322	Paper mfg	573.3	294.6	238.3	20.6	19.9	379.9	146.0	47.5	4
3221	Pulp, paper, & paperboard mills	541.0	274.1	233.8	16.0	17.1	359.6	141.7	39.7	4
32211	Pulp mills	50.9	15.4	32.7	1.8	.9	35.2	14.6	1.1	1
322110	Pulp mills	50.9	15.4	32.7	1.8	.9	35.2	14.6	1.1	1
32212	Paper mills	309.3	135.7	157.5	7.4	8.7	182.4	99.1	27.8	7
322121	Paper (except newsprint) mills	289.5	134.3	139.5	7.4	8.3	181.7	80.3	27.4	8
322122	Newsprint mills	19.8	1.5	17.9	—	.4	.6	18.8	.4	1
32213	Paperboard mills	180.8	123.0	43.5	6.8	7.5	142.0	28.0	10.8	2
322130	Paperboard mills	180.8	123.0	43.5	6.8	7.5	142.0	28.0	10.8	2
3222	Converted paper product mfg	32.3	20.5	4.5	4.6	2.8	20.2	4.3	7.7	7
32221	Paperboard container mfg	6.8	3.6	.7	.7	1.8	1.4	2.7	2.7	26
322211	Corrugated & solid fiber box mfg	5.5	3.3	.4	.2	1.6	1.1	2.7	1.8	31
32222	Paper bag & coated & treated paper mfg	15.5	10.8	2.7	1.5	.4	13.4	.9	1.2	2
322221	Coated & laminated packaging paper & plastics film mfg	4.7	4.7	—	—	—	4.7	—	—	1
322222	Coated & laminated paper mfg	10.3	6.0	2.6	1.3	.4	8.5	.9	.9	3
32223	Stationery product mfg	1.1	.7	—	.2	.2	.9	.1	.2	33
32229	Other converted paper product mfg	8.8	5.3	1.1	2.1	.3	4.5	.7	3.7	13
322291	Sanitary paper product mfg	8.2	5.3	1.0	1.5	.3	4.4	.7	3.1	14
323	Printing & related support activities	67.7	43.5	9.4	11.2	3.6	47.1	4.6	15.9	19
3231	Printing & related support activities	67.7	43.5	9.4	11.2	3.6	47.1	4.6	15.9	19
32311	Printing	67.6	43.5	9.4	11.2	3.5	47.1	4.6	15.9	19
323110	Commercial lithographic printing	56.4	40.7	4.6	9.4	1.7	43.2	.5	12.7	22
323111	Commercial gravure printing	2.2	.6	(D)	1.1	(D)	1.9	.1	.2	12
323112	Commercial flexographic printing	1.5	(D)	(D)	(D)	1.0	.1	.1	1.3	51
323117	Book printing	1.2	1.1	—	(Z)	—	1.1	(D)	(D)	3
323119	Other commercial printing	4.4	.5	3.5	.3	(Z)	—	3.5	.9	67
324	Petroleum & coal products mfg	1 743.0	928.0	780.0	30.9	4.1	1 531.0	181.8	30.1	4
3241	Petroleum & coal products mfg	1 743.0	928.0	780.0	30.9	4.1	1 531.0	181.8	30.1	4
32411	Petroleum refineries	1 708.7	914.2	760.8	30.1	3.6	1 513.5	167.4	27.8	4
324110	Petroleum refineries	1 708.7	914.2	760.8	30.1	3.6	1 513.5	167.4	27.8	4
32412	Asphalt paving, roofing, & saturated materials mfg	13.5	6.1	6.7	.3	.4	9.1	3.6	.8	8
324122	Asphalt shingle & coating materials mfg	12.7	5.8	6.4	.1	.4	8.4	3.6	.7	8
32419	Other petroleum & coal products mfg	20.8	7.6	12.4	.6	.1	8.4	10.7	1.6	20
324191	Petroleum lubricating oil & grease mfg	9.8	2.3	7.0	.5	.1	1.8	6.4	1.6	27
324199	All other petroleum & coal products mfg	11.0	5.4	5.5	.1	—	6.7	4.3	—	30

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
325	Chemical mfg	1 271.6	579.9	549.6	53.4	88.7	727.0	351.4	193.3	5
3251	Basic chemical mfg	725.2	314.9	333.2	29.1	48.0	413.5	193.5	193.3	6
32511	Petrochemical mfg	98.8	16.2	79.3	.3	3.0	78.4	11.5	8.9	2
325110	Petrochemical mfg	98.8	16.2	79.3	.3	3.0	78.4	11.5	8.9	2
32512	Industrial gas mfg	10.2	5.9	2.8	.1	1.4	7.8	1.6	.9	4
325120	Industrial gas mfg	10.2	5.9	2.8	.1	1.4	7.8	1.6	.9	4
32513	Dye & pigment mfg	34.0	16.2	10.0	2.6	5.2	7.1	12.1	14.7	8
325131	Inorganic dye & pigment mfg	30.2	14.5	8.2	2.5	5.0	5.7	10.7	13.8	8
325132	Synthetic organic dye & pigment mfg	3.8	1.6	1.8	.1	.3	1.4	1.4	1.0	7
32518	Other basic inorganic chemical mfg	174.9	118.2	47.1	3.0	6.6	85.3	74.1	15.5	20
325181	Alkalies & chlorine mfg	24.3	11.4	12.9	(Z)	(Z)	16.7	6.3	1.4	1
325182	Carbon black mfg	20.3	12.4	7.6	—	.3	19.6	.5	.3	1
325188	All other basic inorganic chemical mfg	130.2	94.3	26.6	3.0	6.2	49.1	67.4	13.7	26
32519	Other basic organic chemical mfg	407.4	158.3	194.1	23.1	31.8	235.0	94.2	78.3	5
325191	Gum & wood chemical mfg	4.6	2.8	1.7	(Z)	1	3.4	(D)	(D)	6
325192	Cyclic crude & intermediate mfg	93.5	^a 24.7	^a 68.7	—	(Z)	30.6	(D)	(D)	1
325193	Ethyl alcohol mfg	42.5	13.0	29.4	—	.1	32.9	9.6	—	13
325199	All other basic organic chemical mfg	266.9	117.9	94.3	23.1	31.6	168.1	63.9	34.9	8
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	189.0	68.2	92.8	4.5	23.4	121.4	40.9	26.8	12
32521	Resin & synthetic rubber mfg	182.4	64.0	90.7	4.4	23.3	116.7	39.6	26.2	12
325211	Plastics material & resin mfg	154.6	61.4	69.5	4.4	19.3	95.6	38.1	21.0	14
325212	Synthetic rubber mfg	27.8	2.5	21.2	(Z)	4.0	21.1	1.4	5.2	7
32522	Artificial & synthetic fibers & filaments mfg	6.6	4.2	2.1	.1	.1	4.7	1.3	.6	23
325222	Noncellulosic organic fiber mfg	6.4	4.2	2.1	.1	.1	4.6	1.2	.6	24
3253	Pesticide, fertilizer, & other agricultural chemical mfg	130.8	78.7	39.0	^a 8.0	5.1	48.8	56.3	25.7	4
32531	Fertilizer mfg	91.2	53.0	33.8	.4	4.0	23.8	43.3	24.1	5
325311	Nitrogenous fertilizer mfg	7.4	2.6	3.7	.4	.7	3.6	2.9	.8	1
325312	Phosphatic fertilizer mfg	78.2	46.6	28.4	—	3.2	17.2	37.7	23.3	5
325314	Fertilizer (mixing only) mfg	5.7	3.8	1.8	—	.1	3.0	2.7	.1	2
32532	Pesticide & other agricultural chemical mfg	39.5	^a 25.7	^a 5.1	^a 7.6	^a 1.1	25.0	13.0	1.5	4
325320	Pesticide & other agricultural chemical mfg	39.5	^a 25.7	^a 5.1	^a 7.6	^a 1.1	25.0	13.0	1.5	4
3254	Pharmaceutical & medicine mfg	111.8	58.8	44.0	5.5	3.6	77.0	26.7	8.2	25
32541	Pharmaceutical & medicine mfg	111.8	58.8	44.0	5.5	3.6	77.0	26.7	8.2	25
325411	Medicinal & botanical mfg	25.4	18.6	(D)	3.2	(D)	15.8	6.3	3.3	12
325412	Pharmaceutical preparation mfg	79.4	35.3	39.1	2.3	2.7	61.0	14.2	4.2	34
325414	Biological product (except diagnostic) mfg	6.1	(D)	(D)	(Z)	(D)	(D)	6.0	(D)	1
3255	Paint, coating, & adhesive mfg	23.4	15.2	5.3	1.4	1.5	13.0	7.4	3.0	7
32551	Paint & coating mfg	15.5	9.0	3.9	1.2	1.4	8.9	4.0	2.5	7
325510	Paint & coating mfg	15.5	9.0	3.9	1.2	1.4	8.9	4.0	2.5	7
32552	Adhesive mfg	7.9	6.2	1.4	.2	.1	4.0	3.3	.5	13
325520	Adhesive mfg	7.9	6.2	1.4	.2	.1	4.0	3.3	.5	13
3256	Soap, cleaning compound, & toilet preparation mfg	39.2	21.0	14.7	1.7	1.8	18.3	17.5	3.4	34
32561	Soap & cleaning compound mfg	32.7	18.3	13.1	.5	.8	18.0	13.5	1.2	40
325611	Soap & other detergent mfg	^a 4.7	3.5	.8	.1	.4	.6	3.5	.7	7
325612	Polish & other sanitation good mfg	18.1	10.6	7.5	—	—	12.2	5.8	.1	72
325613	Surface active agent mfg	9.8	4.2	4.8	.4	.4	5.2	4.2	.4	3
32562	Toilet preparation mfg	6.5	2.7	1.6	1.2	1.0	.3	4.1	2.1	15
325620	Toilet preparation mfg	6.5	2.7	1.6	1.2	1.0	.3	4.1	2.1	15
3259	Other chemical product mfg	52.2	23.1	20.6	3.3	5.2	35.0	9.2	8.0	12
32591	Printing ink mfg	1.1	.1	(Z)	—	.9	(Z)	.1	1.0	66
325910	Printing ink mfg	1.1	.1	(Z)	—	.9	(Z)	.1	1.0	66
32592	Explosives mfg	2.0	1.0	.6	(Z)	.4	1.2	.2	.6	35
325920	Explosives mfg	2.0	1.0	.6	(Z)	.4	1.2	.2	.6	35
32599	All other chemical product & preparation mfg	48.9	21.9	19.9	3.2	3.9	33.6	8.9	6.4	13
325991	Custom compounding of purchased resin	14.8	2.6	8.5	.9	2.8	9.2	2.5	3.1	40
325992	Photographic film, paper, plate, & chemical mfg	10.1	4.6	4.9	.5	.1	7.1	2.3	.7	5
325998	All other miscellaneous chemical product & preparation mfg	24.1	14.6	6.6	1.8	1.1	17.4	4.0	2.7	6
326	Plastics & rubber products mfg	94.3	40.9	25.8	12.3	15.3	51.0	21.3	21.9	8
3261	Plastics product mfg	76.0	33.4	18.7	11.5	12.4	39.0	17.5	19.5	10
32611	Unsupported plastics film, sheet, & bag mfg	20.3	8.0	1.9	6.5	3.9	9.3	3.9	7.1	14
326111	Unsupported plastics bag mfg	3.5	.1	.4	.3	2.7	(Z)	2.4	1.0	61
326112	Unsupported plastics packaging film & sheet mfg	6.9	3.3	.3	2.9	.4	4.7	.2	2.1	17
326113	Unsupported plastics film & sheet (except packaging) mfg	9.9	4.6	1.2	3.3	.8	4.6	1.3	4.0	13
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	4.5	2.6	.6	.2	1.0	2.7	.6	1.1	14
326121	Unsupported plastics profile shape mfg	2.2	1.0	.3	.2	.7	1.1	.4	.8	24
326122	Plastics pipe & pipe fitting mfg	2.2	1.6	.3	.1	.3	1.7	.2	.3	14
32613	Laminated plastics plate, sheet, & shape mfg	5.0	3.6	.9	.1	.4	3.9	.4	.7	11
326130	Laminated plastics plate, sheet, & shape mfg	5.0	3.6	.9	.1	.4	3.9	.4	.7	11
32614	Polystyrene foam product mfg	3.3	2.5	.3	.1	.4	2.8	.1	.4	22
326140	Polystyrene foam product mfg	3.3	2.5	.3	.1	.4	2.8	.1	.4	22
32615	Urethane & other foam product (except polystyrene) mfg	2.7	(Z)	.5	(Z)	2.2	.4	.2	2.2	63
326150	Urethane & other foam product (except polystyrene) mfg	2.7	(Z)	.5	(Z)	2.2	.4	.2	2.2	63
32619	Other plastics product mfg	40.2	16.7	14.5	4.5	4.5	19.9	12.3	8.0	17
326191	Plastics plumbing fixture mfg	7.6	6.1	.3	.1	1.2	6.4	.1	1.1	13
326199	All other plastics product mfg	31.7	10.3	13.9	4.4	3.2	12.8	12.1	6.8	21
3262	Rubber product mfg	18.2	7.5	7.0	.8	2.9	12.0	3.8	2.4	11
32621	Tire mfg	6.3	2.3	3.8	.1	.2	3.5	2.4	.4	15
326211	Tire mfg (except retreading)	6.0	2.2	3.7	(Z)	(Z)	3.5	2.4	.2	15
32622	Rubber & plastics hoses & belting mfg	1.8	.1	1.2	.1	.4	.9	.4	.5	30
326220	Rubber & plastics hoses & belting mfg	1.8	.1	1.2	.1	.4	.9	.4	.5	30
32629	Other rubber product mfg	10.1	5.1	2.1	.7	2.3	7.7	.9	1.5	15
326291	Rubber product mfg for mechanical use	4.8	3.2	1.2	.1	.2	4.2	.2	.4	25
326299	All other rubber product mfg	5.3	1.9	.8	.5	2.1	3.5	.7	1.1	18

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Activity				Media			Relative standard error PACE	
		Total	Treatment	Prevention	Recycling	Disposal	Air	Water		Solid waste
327	Nonmetallic mineral product mfg	217.4	98.2	84.0	22.6	12.5	159.6	23.1	34.7	5
3271	Clay product & refractory mfg	29.4	14.2	14.2	.2	.8	25.5	2.7	1.2	18
32711	Pottery, ceramics, & plumbing fixture mfg	4.0	1.9	1.7	.1	.3	2.7	.7	.6	8
327112	Vitreous china, fine earthenware, & other pottery product mfg	1.2	1.1	(Z)	(Z)	(Z)	1.1	.1	(Z)	1
327113	Porcelain electrical supply mfg	2.2	.4	1.6	(Z)	.2	1.4	.7	.2	14
32712	Clay building material & refractories mfg	25.4	12.2	12.6	.1	.5	22.8	2.0	.6	21
327121	Brick & structural clay tile mfg	20.8	8.4	12.0	—	.4	18.7	1.6	.4	26
327125	Nonclay refractory mfg	2.9	2.4	.4	(Z)	(Z)	2.5	.3	.1	28
3272	Glass & glass product mfg	25.5	13.5	7.2	1.4	3.4	18.1	3.5	3.9	8
32721	Glass & glass product mfg	25.5	13.5	7.2	1.4	3.4	18.1	3.5	3.9	8
327211	Flat glass mfg	6.3	1.5	2.2	.1	2.5	3.5	.1	2.7	13
327212	Other pressed & blown glass & glassware mfg	9.8	7.8	1.0	.7	.4	6.7	2.6	.5	9
327213	Glass container mfg	6.7	2.2	4.1	.1	.3	5.8	.7	.2	9
327215	Glass product mfg made of purchased glass	2.7	2.0	—	.5	.3	2.1	.1	.6	50
3273	Cement & concrete product mfg	121.6	49.1	49.4	17.7	5.4	87.1	11.1	23.3	7
32731	Cement mfg	94.5	37.4	43.6	13.2	.4	77.3	3.7	13.5	7
327310	Cement mfg	94.5	37.4	43.6	13.2	.4	77.3	3.7	13.5	7
32732	Ready-mix concrete mfg	19.1	9.6	2.3	4.1	3.2	5.8	5.4	7.9	29
327320	Ready-mix concrete mfg	19.1	9.6	2.3	4.1	3.2	5.8	5.4	7.9	29
32733	Concrete pipe, brick, & block mfg	3.9	.8	2.1	.3	.6	1.6	1.2	1.1	20
327331	Concrete block & brick mfg	3.4	.5	2.0	.3	.5	1.4	.9	1.1	22
32739	Other concrete product mfg	4.0	1.3	1.4	.1	1.2	2.4	.8	.8	17
327390	Other concrete product mfg	4.0	1.3	1.4	.1	1.2	2.4	.8	.8	17
3274	Lime & gypsum product mfg	18.2	10.9	5.0	.8	1.5	14.0	1.2	3.0	17
32741	Lime mfg	9.7	7.7	.7	—	1.3	8.4	.3	1.0	29
327410	Lime mfg	9.7	7.7	.7	—	1.3	8.4	.3	1.0	29
32742	Gypsum product mfg	8.5	3.2	4.3	.8	.3	5.5	1.0	2.1	16
327420	Gypsum product mfg	8.5	3.2	4.3	.8	.3	5.5	1.0	2.1	16
3279	Other nonmetallic mineral product mfg	22.7	10.5	8.3	2.6	1.3	14.8	4.6	3.2	9
32791	Abrasive product mfg	4.0	2.5	1.4	.1	(Z)	2.5	.1	1.4	1
327910	Abrasive product mfg	4.0	2.5	1.4	.1	(Z)	2.5	.1	1.4	1
32799	All other nonmetallic mineral product mfg	18.7	8.0	6.9	2.5	1.3	12.3	4.5	1.9	11
327991	Cut stone & stone product mfg	1.2	.1	.8	.1	.1	1.1	1.1	(Z)	60
327992	Ground or treated mineral & earth mfg	8.1	3.7	1.3	2.2	1.0	5.5	2.4	.2	21
327993	Mineral wool mfg	8.6	4.0	4.3	.2	.2	5.9	1.0	1.6	10
331	Primary metal mfg	511.9	350.2	64.6	73.3	23.8	310.5	99.8	101.7	11
3311	Iron & steel mills & ferroalloy mfg	246.5	199.4	27.8	5.6	13.7	200.2	23.4	22.9	3
33111	Iron & steel mills & ferroalloy mfg	246.5	199.4	27.8	5.6	13.7	200.2	23.4	22.9	3
331111	Iron & steel mills	241.1	197.6	24.4	5.5	13.7	195.4	22.9	22.8	3
331112	Electrometallurgical ferroalloy product mfg	5.4	1.9	3.4	.1	—	4.8	.5	.1	1
3312	Steel product mfg from purchased steel	8.7	2.9	3.9	.3	1.6	1.9	4.1	2.8	17
33121	Iron & steel pipes & tubes mfg from purchased steel	3.5	.7	2.0	.2	.6	1.1	1.1	1.3	30
331210	Iron & steel pipes & tubes mfg from purchased steel	3.5	.7	2.0	.2	.6	1.1	1.1	1.3	30
33122	Rolling & drawing of purchased steel	5.2	2.2	1.8	.1	1.0	.7	3.0	1.5	20
331221	Cold-rolled steel shape mfg	2.4	.9	1.2	—	.4	.6	1.2	.6	16
331222	Steel wire drawing	2.8	1.4	.7	.1	.6	.1	1.8	.8	34
3313	Alumina & aluminum production & processing	35.6	21.8	9.5	3.2	1.1	23.2	9.3	3.1	7
33131	Alumina & aluminum production & processing	35.6	21.8	9.5	3.2	1.1	23.2	9.3	3.1	7
331311	Alumina refining	5.8	5.3	.6	—	—	2.4	3.4	—	1
331312	Primary aluminum production	6.4	3.1	3.2	(Z)	(Z)	6.0	.3	.1	1
331314	Secondary smelting & alloying of aluminum	3.9	1.8	1.8	—	.3	2.7	.3	.8	10
331315	Aluminum sheet, plate, & foil mfg	14.5	8.5	2.5	3.0	.5	10.4	2.4	1.6	16
331316	Aluminum extruded product mfg	4.8	2.8	1.4	.2	.4	1.3	2.9	.6	14
3314	Nonferrous metal (except aluminum) production & processing	132.1	66.8	4.6	59.5	1.1	15.4	54.8	61.9	42
33141	Nonferrous metal (except aluminum) smelting & refining	4.2	2.5	1.3	(Z)	.4	3.0	.7	.5	14
331411	Primary smelting & refining of copper	1.0	.4	.7	—	—	.6	.4	—	1
331419	Other nonferrous metal primary smelting & refining	3.1	2.1	.6	(Z)	.4	2.3	.3	.5	19
33142	Copper rolling, drawing, extruding, & alloying	4.9	2.8	.5	1.2	.4	3.1	1.2	.6	10
331421	Copper rolling, drawing, & extruding copper	3.3	1.5	.2	1.2	.4	1.7	1.0	.6	15
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	123.0	61.5	2.9	58.3	.4	9.3	53.0	60.7	45
331491	Other nonferrous metal rolling, drawing, & extruding	113.2	53.4	1.6	58.2	.1	.9	52.3	60.1	49
331492	Other nonferrous metal secondary smelting, refining, & alloying	9.8	8.1	1.3	.1	.3	8.4	.7	.7	4
3315	Foundries	89.0	59.3	18.8	4.6	6.3	69.8	8.2	11.0	7
33151	Ferrous metal foundries	73.1	51.4	15.7	1.3	4.7	62.9	4.9	5.3	8
331511	Iron foundries	65.3	47.0	13.6	1.1	3.6	56.9	4.4	3.9	9
331512	Steel investment foundries	2.8	1.5	1.1	.2	.1	2.2	.4	.3	14
331513	Steel foundries (except investment)	5.0	3.0	1.0	.1	1.0	3.8	.1	1.1	6
33152	Nonferrous metal foundries	15.9	7.9	3.1	3.4	1.6	7.0	3.3	5.7	11
331521	Aluminum die-casting foundries	2.9	1.0	.6	.4	.8	.4	1.8	.7	8
331522	Nonferrous (except aluminum) die-casting foundries	6.2	3.2	2.2	.6	.1	2.5	.8	2.9	5
331524	Aluminum foundries (except die-casting)	2.0	1.0	.1	.8	.1	1.1	.1	.8	1
331525	Copper foundries (except die-casting)	4.1	2.2	(Z)	1.5	.3	2.9	.2	1.0	41
332	Fabricated metal product mfg	168.2	63.3	55.5	23.8	25.6	88.1	39.4	40.7	12
3321	Forging & stamping	23.0	7.9	12.6	.7	1.7	11.0	3.6	8.4	34
33211	Forging & stamping	23.0	7.9	12.6	.7	1.7	11.0	3.6	8.4	34
332111	Iron & steel forging	6.0	1.4	4.1	(Z)	.5	5.3	.5	.2	59
332112	Nonferrous forging	2.4	1.2	1.0	.1	.1	1.6	.6	.2	8
332114	Custom roll forming	4.0	3.8	.1	—	.1	2.4	1.5	(Z)	1
332115	Crown & closure mfg	1.5	.9	(D)	(D)	.1	1.2	(D)	(D)	1
332116	Metal stamping	8.3	.4	6.7	.5	.8	.3	.4	7.7	84
3322	Cutlery & handtool mfg	3.7	1.7	.8	.3	.9	1.9	1.4	.4	26
33221	Cutlery & handtool mfg	3.7	1.7	.8	.3	.9	1.9	1.4	.4	26
332212	Hand & edge tool mfg	2.8	1.4	.3	.3	.8	1.3	1.3	.3	34
3323	Architectural & structural metals mfg	10.4	3.1	4.4	.8	2.0	6.3	1.5	2.5	20
33231	Plate work & fabricated structural product mfg	3.9	1.4	1.5	.4	.6	2.2	.8	.9	12
332312	Fabricated structural metal mfg	3.0	1.1	1.1	.1	.6	1.6	.8	.6	14
33232	Ornamental & architectural metal products mfg	6.3	1.7	2.9	.4	1.4	4.1	.6	1.6	32
332321	Metal window & door mfg	3.9	1.2	2.3	.1	.4	3.1	.3	.5	47
332322	Sheet metal work mfg	1.8	.4	.6	—	.8	.8	.1	.8	38

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
332	Fabricated metal product mfg—Con.									
3324	Boiler, tank, & shipping container mfg	13.6	4.4	8.0	.4	.8	9.5	3.1	1.0	21
33241	Power boiler & heat exchanger mfg	3.0	—	3.0	—	—	3.0	—	—	89
332410	Power boiler & heat exchanger mfg	3.0	—	3.0	—	—	3.0	—	—	89
33242	Metal tank (heavy gauge) mfg	1.9	.6	.7	(D)	(D)	.5	1.1	.3	41
332420	Metal tank (heavy gauge) mfg	1.9	.6	.7	(D)	(D)	.5	1.1	.3	41
33243	Metal can, box, & other metal container (light gauge) mfg	8.7	3.9	4.2	(D)	(D)	6.0	2.0	.6	6
332431	Metal can mfg	5.1	3.1	1.7	(D)	(D)	3.1	1.8	.2	9
332439	Other metal container mfg	3.6	.7	2.5	(Z)	.3	2.9	.2	.4	6
3325	Hardware mfg	6.0	5.5	.5	(Z)	(Z)	3.5	1.7	.9	38
33251	Hardware mfg	6.0	5.5	.5	(Z)	(Z)	3.5	1.7	.9	38
332510	Hardware mfg	6.0	5.5	.5	(Z)	(Z)	3.5	1.7	.9	38
3326	Spring & wire product mfg	1.4	1.0	.2	.2	.1	1.0	.3	.1	35
33261	Spring & wire product mfg	1.4	1.0	.2	.2	.1	1.0	.3	.1	35
3327	Machine shops, turned product, & screw, nut, & bolt mfg	41.7	11.9	12.4	10.5	6.9	19.4	7.5	14.8	37
33271	Machine shops	26.0	3.5	9.9	7.5	5.1	16.6	4.9	4.5	53
332710	Machine shops	26.0	3.5	9.9	7.5	5.1	16.6	4.9	4.5	53
33272	Turned product & screw, nut, & bolt mfg	15.7	8.3	2.6	2.9	1.9	2.7	2.6	10.3	43
332721	Precision turned product mfg	5.4	.7	1.6	2.3	.8	1.7	1.3	2.4	41
332722	Bolt, nut, screw, rivet, & washer mfg	10.3	7.6	1.0	.7	1.1	1.1	1.3	7.9	62
3328	Coating, engraving, heat treating, & allied activities	46.8	17.9	11.7	6.6	10.6	24.7	12.9	9.2	16
33281	Coating, engraving, heat treating, & allied activities	46.8	17.9	11.7	6.6	10.6	24.7	12.9	9.2	16
332811	Metal heat treating	3.5	2.2	.7	.3	.3	1.1	1.9	.5	25
332812	Metal coating/engraving (exc jewelry/silverware)/allied services	21.2	7.8	7.5	4.7	1.2	18.0	2.0	1.2	28
332813	Electroplating, plating, polishing, anodizing, & coloring	22.1	7.8	3.5	1.5	9.2	5.6	8.9	7.5	21
3329	Other fabricated metal product mfg	21.6	9.9	4.8	4.4	2.4	10.8	7.4	3.4	12
33291	Metal valve mfg	12.4	5.6	2.4	3.8	.6	6.9	3.9	1.7	19
332911	Industrial valve mfg	6.4	3.4	.9	1.9	.2	4.3	1.2	1.0	28
332912	Fluid power valve & hose fitting mfg	2.6	.8	.2	1.2	.4	.2	1.7	.7	42
332919	Other metal valve & pipe fitting mfg	3.3	1.3	1.3	.7	(Z)	2.4	1.0	—	34
33299	All other fabricated metal product mfg	9.2	4.4	2.4	.6	1.8	4.0	3.6	1.7	11
332991	Ball & roller bearing mfg	2.1	.1	1.0	.2	.7	1.0	.9	.1	41
332996	Fabricated pipe & pipe fitting mfg	1.3	.1	.6	.2	.3	1.4	.3	.6	33
332998	Enameled iron & metal sanitary ware mfg	1.6	1.5	(Z)	(Z)	.1	1.5	(Z)	.1	1
332999	All other miscellaneous fabricated metal product mfg	2.1	1.5	.3	.1	.2	.6	1.2	.3	16
333	Machinery mfg	47.4	22.3	13.0	4.1	8.0	20.2	15.5	11.6	9
3331	Agriculture, construction, & mining machinery mfg	9.7	6.1	1.4	.8	1.4	4.6	3.2	1.9	19
33311	Agricultural implement mfg	2.7	1.0	.8	.2	.7	1.2	.5	1.0	30
333111	Farm machinery & equipment mfg	1.7	.4	.6	.2	.5	.5	.4	.8	46
33312	Construction machinery mfg	5.0	3.8	.3	.3	.6	3.1	1.3	.6	30
333120	Construction machinery mfg	5.0	3.8	.3	.3	.6	3.1	1.3	.6	30
33313	Mining & oil & gas field machinery mfg	2.1	1.3	.3	.3	.2	.4	1.4	.3	35
333132	Oil & gas field machinery & equipment mfg	1.4	1.2	.1	(Z)	.1	.3	1.1	(Z)	46
3332	Industrial machinery mfg	7.5	3.6	1.5	.7	1.7	3.4	1.8	2.4	25
3333	Commercial & service industry machinery mfg	1.2	.7	.2	(Z)	.2	.6	.1	.5	7
33331	Commercial & service industry machinery mfg	1.2	.7	.2	(Z)	.2	.6	.1	.5	7
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	3.1	1.4	.7	.5	.5	.5	1.3	1.2	11
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	3.1	1.4	.7	.5	.5	.5	1.3	1.2	11
333415	AC & warm air heating & commercial/industrial refrigeration equip mfg	2.8	(D)	(D)	.5	(D)	.4	1.3	1.1	12
3335	Metalworking machinery mfg	6.8	1.3	2.7	.4	2.4	4.8	1.0	.9	42
3336	Engine, turbine, & power transmission equipment mfg	8.2	3.4	3.8	.6	.3	1.8	4.5	1.9	12
33361	Engine, turbine, & power transmission equipment mfg	8.2	3.4	3.8	.6	.3	1.8	4.5	1.9	12
333611	Turbine & turbine generator set unit mfg	1.2	1.1	(D)	(D)	—	.5	.4	.2	34
333618	Other engine equipment mfg	5.9	1.6	3.6	(D)	(D)	.6	3.7	1.6	15
3339	Other general-purpose machinery mfg	10.9	5.8	2.6	1.1	1.4	4.5	3.6	2.7	13
33391	Pump & compressor mfg	1.5	—	.7	.6	.1	.1	1.1	.3	46
33392	Material handling equipment mfg	1.3	1.1	.1	(Z)	.1	1.1	.1	.1	60
33399	All other general-purpose machinery mfg	8.1	4.7	1.8	.5	1.2	3.3	2.4	2.4	12
333995	Fluid power cylinder & actuator mfg	2.3	1.4	.4	(Z)	.5	.5	.5	1.2	37
333996	Fluid power pump & motor mfg	1.1	.1	.5	.2	.3	.1	.3	.5	27
333999	All other miscellaneous general-purpose machinery mfg	3.1	2.2	.7	.2	(Z)	1.9	.7	.6	5
334	Computer & electronic product mfg	155.9	89.6	19.2	35.2	11.9	58.1	72.0	25.8	17
3341	Computer & peripheral equipment mfg	6.1	5.1	.4	.6	(Z)	.8	4.7	.6	51
3342	Communications equipment mfg	11.4	2.2	1.1	4.1	4.0	.1	3.0	8.3	12
3344	Semiconductor & other electronic component mfg	130.3	79.9	16.1	28.4	5.8	54.4	61.5	14.4	20
33441	Semiconductor & other electronic component mfg	130.3	79.9	16.1	28.4	5.8	54.4	61.5	14.4	20
334412	Bare printed circuit board mfg	13.7	2.9	9.9	.3	.5	5.5	7.7	.4	50
334413	Semiconductor & related device mfg	107.6	74.4	3.7	25.0	4.6	47.2	48.7	11.7	24
334418	Printed circuit assembly (electronic assembly) mfg	5.8	1.4	1.4	3.0	(Z)	.2	4.2	1.4	50
334419	Other electronic component mfg	2.2	.8	1.1	—	.3	1.1	.6	.5	44
3345	Navigational, measuring, medical, & control instruments mfg	7.6	2.3	1.5	1.8	2.0	2.8	2.7	2.2	43
33451	Navigational, measuring, medical, & control instruments mfg	7.6	2.3	1.5	1.8	2.0	2.8	2.7	2.2	43
334510	Electromedical & electrotherapeutic apparatus mfg	3.7	.2	.1	1.7	1.6	.3	1.6	1.8	76
334511	Search, detection, navigation, & guidance instrument mfg	2.9	1.5	1.3	(Z)	.1	2.0	.6	.3	57

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
335	Electrical equipment, appliance, & component mfg	33.0	8.2	17.1	3.4	4.3	10.5	9.8	12.8	13
3351	Electric lighting equipment mfg	5.2	1.0	2.5	.2	1.5	2.5	1.0	1.7	13
33511	Electric lamp bulb & part mfg	1.5	.6	(D)	(D)	.5	.5	.3	.7	31
335110	Electric lamp bulb & part mfg	1.5	.6	(D)	(D)	.5	.5	.3	.7	31
33512	Lighting fixture mfg	3.7	.4	(D)	(D)	1.0	2.0	.8	1.0	13
335129	Other lighting equipment mfg	3.1	(D)	(D)	(D)	(D)	1.8	.4	.9	15
3352	Household appliance mfg	3.2	.5	2.2	.3	.1	1.7	.7	.8	1
33522	Major appliance mfg	3.1	.5	2.2	.3	.1	1.7	.7	.7	1
335222	Household refrigerator & home freezer mfg	1.0	(D)	(D)	(D)	—	(D)	.1	(D)	1
335228	Other major household appliance mfg	1.2	(D)	.6	(D)	(D)	(D)	.2	(D)	1
3353	Electrical equipment mfg	7.9	.9	5.3	.2	1.6	.7	1.4	5.8	51
3359	Other electrical equipment & component mfg	16.6	5.8	7.1	2.7	1.1	5.6	6.6	4.5	8
33591	Battery mfg	6.0	1.3	2.3	1.8	.6	1.7	1.5	2.8	7
335911	Storage battery mfg	5.2	1.3	1.5	1.8	.5	1.1	1.5	2.6	8
33593	Wiring device mfg	4.9	.2	3.9	.7	.1	.6	3.0	1.3	13
335931	Current-carrying wiring device mfg	4.0	(Z)	3.9	(Z)	.1	.5	2.2	1.3	1
33599	All other electrical equipment & component mfg	4.8	3.7	.7	.2	.2	3.3	1.2	.4	19
335991	Carbon & graphite product mfg	3.0	2.6	.3	(Z)	.1	2.8	(Z)	.1	15
335999	All other miscellaneous electrical equipment & component mfg	1.8	1.1	.4	.2	.1	.5	1.1	.2	42
336	Transportation equipment mfg	260.1	167.1	63.0	11.3	18.7	148.2	75.1	36.8	6
3361	Motor vehicle mfg	80.0	74.4	3.4	1.5	.7	60.8	14.3	4.9	10
33611	Automobile & light duty motor vehicle mfg	60.2	55.8	2.9	(D)	(D)	48.4	7.2	4.5	2
336111	Automobile mfg	49.8	47.1	2.1	.3	.3	(D)	(D)	3.6	1
336112	Light truck & utility vehicle mfg	10.3	8.7	.8	(D)	(D)	(D)	(D)	.8	10
33612	Heavy duty truck mfg	19.8	18.6	.5	(D)	(D)	12.4	7.0	.4	40
336120	Heavy duty truck mfg	19.8	18.6	.5	(D)	(D)	12.4	7.0	.4	40
3362	Motor vehicle body & trailer mfg	10.6	6.0	1.8	.9	^a 1.9	6.3	.5	3.8	21
33621	Motor vehicle body & trailer mfg	10.6	6.0	1.8	.9	^a 1.9	6.3	.5	3.8	21
336211	Motor vehicle body mfg	4.4	^a 1.0	(D)	(D)	^a 1.9	.6	.3	3.4	48
336213	Motor home mfg	5.4	4.9	(D)	(D)	—	4.9	(D)	(D)	6
3363	Motor vehicle parts mfg	102.3	57.6	34.5	5.8	4.5	47.9	44.6	9.9	7
33631	Motor vehicle gasoline engine & engine parts mfg	19.2	11.9	4.7	1.7	.9	6.4	9.7	3.0	17
336311	Carburetor, piston, piston ring, & valve mfg	1.4	.4	.6	.1	.2	.7	.4	.3	10
336312	Gasoline engine & engine parts mfg	17.8	11.4	4.1	1.6	.7	5.7	9.4	2.7	18
33632	Motor vehicle electrical & electronic equipment mfg	9.9	7.8	.2	1.2	.6	(D)	1.1	(D)	3
336321	Vehicular lighting equipment mfg	2.5	2.2	.1	(Z)	.2	(D)	—	(D)	1
336322	Other motor vehicle electrical & electronic equipment mfg	7.3	5.6	.1	1.2	.4	(D)	1.1	(D)	4
33633	Motor vehicle steering & suspension component (except spring) mfg	4.9	4.4	.2	(Z)	^a .3	.1	4.6	.2	71
336330	Motor vehicle steering & suspension component (except spring) mfg	4.9	4.4	.2	(Z)	^a .3	.1	4.6	.2	71
33634	Motor vehicle brake system mfg	12.8	6.9	4.6	1.0	.2	6.5	4.9	1.3	32
336340	Motor vehicle brake system mfg	12.8	6.9	4.6	1.0	.2	6.5	4.9	1.3	32
33635	Motor vehicle transmission & power train parts mfg	39.6	20.0	19.0	.4	.2	20.6	18.3	.7	4
336350	Motor vehicle transmission & power train parts mfg	39.6	20.0	19.0	.4	.2	20.6	18.3	.7	4
33637	Motor vehicle metal stamping	6.1	3.0	1.5	.2	1.4	(D)	3.7	(D)	32
336370	Motor vehicle metal stamping	6.1	3.0	1.5	.2	1.4	(D)	3.7	(D)	32
33639	Other motor vehicle parts mfg	9.4	3.5	3.8	1.2	.9	5.4	2.2	1.8	13
336391	Motor vehicle air-conditioning mfg	1.3	.9	.4	—	—	.9	.4	—	1
336399	All other motor vehicle parts mfg	8.1	2.6	3.4	1.2	.9	4.5	1.8	1.8	15
3364	Aerospace product & parts mfg	39.7	18.9	17.5	1.2	2.2	19.1	13.5	7.1	8
33641	Aerospace product & parts mfg	39.7	18.9	17.5	1.2	2.2	19.1	13.5	7.1	8
336411	Aircraft mfg	16.0	8.0	8.0	(Z)	—	9.4	5.7	1.0	3
336412	Aircraft engine & engine parts mfg	10.6	4.8	4.7	.8	.2	4.9	3.9	1.8	25
336413	Other aircraft part & auxiliary equipment mfg	6.6	2.4	2.4	.1	1.7	2.1	2.1	2.5	18
336414	Guided missile & space vehicle mfg	3.7	1.8	1.8	—	(Z)	1.8	.9	1.1	1
336415	Guided missile & space vehicle propulsion unit & parts mfg	2.2	1.1	.5	.3	.2	.4	.9	.8	1
3365	Railroad rolling stock mfg	4.2	3.1	.1	.6	.4	.1	1.0	3.0	16
33651	Railroad rolling stock mfg	4.2	3.1	.1	.6	.4	.1	1.0	3.0	16
336510	Railroad rolling stock mfg	4.2	3.1	.1	.6	.4	.1	1.0	3.0	16
3366	Ship & boat building	21.4	6.2	5.3	1.1	8.8	12.9	.8	7.8	35
33661	Ship & boat building	21.4	6.2	5.3	1.1	8.8	12.9	.8	7.8	35
336611	Ship building & repairing	9.8	5.4	.1	.1	4.2	6.1	.3	3.4	3
336612	Boat building	11.5	.8	5.2	1.0	4.6	6.8	.4	4.4	64
3369	Other transportation equipment mfg	1.9	1.1	.4	.1	.3	1.2	.4	.3	13
33699	Other transportation equipment mfg	1.9	1.1	.4	.1	.3	1.2	.4	.3	13
337	Furniture & related product mfg	30.8	8.9	15.6	1.2	5.1	19.6	1.5	9.7	30
3371	Household & institutional furniture & kitchen cabinet mfg	23.6	7.9	12.3	.8	2.5	17.1	.2	6.4	37
33711	Wood kitchen cabinet & counter top mfg	12.2	6.9	2.5	.6	2.2	9.1	(Z)	3.1	15
337110	Wood kitchen cabinet & counter top mfg	12.2	6.9	2.5	.6	2.2	9.1	(Z)	3.1	15
33712	Household & institutional furniture mfg	11.4	1.0	9.8	.2	.3	8.0	.1	3.3	76
337122	Nonupholstered wood household furniture mfg	9.7	.7	8.9	(Z)	.1	6.9	(Z)	2.8	89
3372	Office furniture (including fixtures) mfg	6.5	.9	2.6	.4	2.5	2.5	1.3	2.7	33
33721	Office furniture (including fixtures) mfg	6.5	.9	2.6	.4	2.5	2.5	1.3	2.7	33
337211	Wood office furniture mfg	1.9	.1	.9	.1	.8	.2	.7	1.0	51
337212	Custom architectural woodwork & millwork mfg	1.3	.4	.2	(Z)	.6	.6	—	.6	34
337214	Office furniture (except wood) mfg	3.2	.3	1.6	.3	1.1	1.7	.5	1.0	57

Table 7. Pollution Abatement Capital Expenditures—Industry by Activity and Media: 2005—Con.

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NAICS code	Industry	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
339	Miscellaneous mfg	27.7	16.0	5.7	1.7	4.3	16.1	6.7	4.9	8
3391	Medical equipment & supplies mfg	16.1	8.5	4.3	.6	2.6	11.3	1.6	3.2	6
33911	Medical equipment & supplies mfg	16.1	8.5	4.3	.6	2.6	11.3	1.6	3.2	6
339112	Surgical & medical instrument mfg	5.6	1.6	2.6	.5	1.0	2.6	1.1	1.9	15
339113	Surgical appliance & supplies mfg	8.5	6.5	1.4	.1	.5	7.6	.4	.5	3
339114	Dental equipment & supplies mfg	1.1	—	(D)	—	(D)	(D)	(D)	.8	1
3399	Other miscellaneous mfg	11.7	7.5	1.4	1.1	1.6	4.8	5.2	1.7	16
33999	All other miscellaneous mfg	8.7	6.3	.7	.8	1.0	3.8	4.2	.7	22
339991	Gasket, packing, & sealing device mfg	4.6	3.5	.4	(Z)	.6	3.1	.9	.6	41
339993	Fastener, button, needle, & pin mfg	2.4	2.1	.1	(Z)	.2	—	2.3	.1	1
339999	All other miscellaneous mfg	1.3	.3	.2	.7	(Z)	.3	.9	(Z)	14

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
	United States	5 907.8	3 112.7	2 104.2	372.6	318.3	3 876.7	1 354.5	676.7	3
	Alabama	138.2	86.1	31.5	9.6	11.1	76.4	35.3	26.5	8
311	Food mfg	4.5	3.2	.6	(D)	(D)	.5	3.4	.7	53
321	Wood product mfg	5.3	.2	.7	.8	3.6	1.3	.1	3.9	68
322	Paper mfg	34.7	31.2	(D)	(D)	(D)	24.8	8.4	1.4	1
323	Printing & related support activities	1.0	.9	(Z)	—	.1	.9	(Z)	.1	6
324	Petroleum & coal products mfg	9.9	4.9	5.0	(Z)	(Z)	4.0	5.9	(Z)	38
325	Chemical mfg	35.3	26.2	6.9	1.5	.8	15.4	10.4	9.5	6
326	Plastics & rubber products mfg	1.6	(D)	(D)	(Z)	1.1	.5	.1	1.0	61
327	Nonmetallic mineral product mfg	12.1	4.5	3.8	3.4	.5	7.9	.2	4.0	46
331	Primary metal mfg	21.7	11.4	9.6	(Z)	.7	17.0	3.7	1.0	27
332	Fabricated metal product mfg	2.3	.9	.8	(Z)	.6	1.7	.3	.2	18
336	Transportation equipment mfg	6.4	(D)	1.4	2.4	(D)	1.1	1.7	3.6	39
337	Furniture & related product mfg	1.7	.5	.1	.1	1.0	.4	.3	1.1	68
	Balance of state	1.7	1.1	(Z)	.6	(Z)	.8	.9	(Z)	13
	Alaska	3.9	(D)	(D)	—	—	(D)	(D)	—	75
324	Petroleum & coal products mfg	3.4	—	3.4	—	—	.3	3.1	—	86
	Arizona	30.2	21.0	5.0	(D)	(D)	22.3	4.2	3.6	41
312	Beverage & tobacco product mfg	3.8	(Z)	(D)	(D)	(Z)	1.4	2.4	(Z)	68
323	Printing & related support activities	12.1	12.1	—	—	(Z)	12.1	—	(Z)	98
325	Chemical mfg	2.3	.3	1.2	.1	.6	1.0	.4	.9	51
327	Nonmetallic mineral product mfg	4.3	4.3	(Z)	—	(Z)	3.9	.4	(Z)	4
331	Primary metal mfg	1.0	.9	(Z)	—	.1	.8	.1	.1	1
334	Computer & electronic product mfg	1.9	.9	(D)	—	(D)	.9	.1	.8	38
336	Transportation equipment mfg	2.7	1.2	1.5	—	—	1.3	.3	1.1	7
	Balance of state	2.0	1.2	(D)	(Z)	(D)	.7	.6	.7	16
	Arkansas	60.1	27.4	9.7	1.7	21.3	38.0	17.3	4.8	14
311	Food mfg	6.9	5.4	.5	.8	.2	2.9	3.2	.8	22
321	Wood product mfg	2.7	.7	1.7	.2	(Z)	2.0	.1	.6	22
322	Paper mfg	3.1	2.2	.7	.1	(Z)	2.5	.6	.1	16
323	Printing & related support activities	1.3	1.1	—	—	.2	1.1	—	.2	16
325	Chemical mfg	22.7	2.0	.2	(Z)	20.5	13.7	6.8	2.2	36
326	Plastics & rubber products mfg	3.2	1.8	1.1	.3	(Z)	1.8	1.1	.3	2
327	Nonmetallic mineral product mfg	1.2	.5	.6	—	.1	.8	(D)	(D)	37
331	Primary metal mfg	17.9	13.1	4.7	.2	—	12.9	(D)	(D)	2
	Balance of state	1.1	.6	.3	.1	.1	.4	.5	.3	20
	California	465.1	203.7	203.6	34.9	22.9	299.2	121.1	44.9	9
311	Food mfg	66.8	31.3	18.4	13.6	3.4	16.6	48.0	2.2	42
312	Beverage & tobacco product mfg	24.8	17.2	6.0	.6	.9	14.7	(D)	(D)	34
321	Wood product mfg	3.4	1.2	.9	.7	.6	1.7	(D)	(D)	47
322	Paper mfg	4.9	.9	3.5	(Z)	.4	2.0	.9	2.0	33
323	Printing & related support activities	1.7	.6	.5	(Z)	.5	1.1	(D)	(D)	31
324	Petroleum & coal products mfg	205.9	69.8	122.2	13.8	(Z)	176.7	27.8	1.4	5
325	Chemical mfg	31.9	14.0	13.7	2.0	2.3	10.6	18.5	2.9	5
326	Plastics & rubber products mfg	4.2	1.7	.9	.4	1.3	2.6	(D)	(D)	19
327	Nonmetallic mineral product mfg	16.5	7.2	7.8	.8	.8	12.1	2.3	2.1	9
331	Primary metal mfg	12.0	2.8	3.8	.4	5.1	6.1	.9	5.1	2
332	Fabricated metal product mfg	16.9	8.1	6.6	1.0	1.2	6.6	2.1	8.2	46
333	Machinery mfg	3.5	1.9	.6	.3	.7	1.5	1.0	.9	23
334	Computer & electronic product mfg	42.8	29.7	10.1	.7	2.3	27.9	7.6	7.3	47
335	Electrical equipment, appliance, & component mfg	5.0	.8	4.0	.1	.2	.8	.2	4.0	74
336	Transportation equipment mfg	17.6	14.6	1.0	.2	1.8	14.4	1.1	2.1	2
337	Furniture & related product mfg	3.7	.6	2.8	—	.3	2.5	(Z)	1.2	39
339	Miscellaneous mfg	2.7	.7	.7	.3	1.1	1.2	.4	1.1	29
	Colorado	62.5	46.7	7.9	5.8	2.1	36.0	24.3	2.2	13
311	Food mfg	5.5	4.1	.3	—	1.2	.2	4.3	1.0	48
312	Beverage & tobacco product mfg	16.9	6.3	5.5	(D)	(D)	.2	16.7	—	43
325	Chemical mfg	5.5	4.7	.8	—	—	3.1	1.9	.6	36
327	Nonmetallic mineral product mfg	2.5	.7	1.6	(D)	(D)	2.3	.1	.2	19
331	Primary metal mfg	29.5	29.4	.1	—	—	29.4	.1	—	1
	Balance of state	2.4	1.4	.5	.2	.2	.8	1.1	.5	18
	Connecticut	42.3	(D)	(D)	(D)	3.0	27.2	10.0	5.1	59
311	Food mfg	1.9	1.3	.5	—	(Z)	1.9	—	(Z)	25
325	Chemical mfg	30.7	13.7	(D)	(D)	1.2	22.0	5.0	3.7	80
331	Primary metal mfg	(D)	(D)	(D)	.6	.3	(D)	(D)	(D)	(X)
332	Fabricated metal product mfg	2.2	1.0	.2	.2	.8	.8	1.1	.3	26
334	Computer & electronic product mfg	3.0	.3	2.7	—	(Z)	(D)	(D)	(D)	33
336	Transportation equipment mfg	1.8	(Z)	1.3	.5	—	.5	.8	.4	26
	Balance of state	(D)	(D)	(D)	—	.6	.6	(D)	.1	(X)
	Delaware	13.4	6.8	5.3	(Z)	1.3	1.0	9.0	3.4	5
311	Food mfg	3.6	3.6	(Z)	—	—	.2	2.7	.7	3
325	Chemical mfg	8.0	2.7	5.0	(Z)	.3	6.0	1.7	.8	8
339	Miscellaneous mfg	1.3	.2	.2	—	.9	.2	.2	.9	21
	Florida	208.9	86.5	114.9	2.0	5.5	73.0	110.9	25.0	7
311	Food mfg	20.7	12.0	6.9	(D)	(D)	5.9	11.2	3.6	16
312	Beverage & tobacco product mfg	(D)	(D)	(D)	—	(D)	(D)	1.8	—	(X)
322	Paper mfg	104.0	19.0	82.5	1.0	1.6	45.3	56.9	1.8	1
325	Chemical mfg	73.4	50.1	22.5	—	.7	16.1	38.7	18.5	18
327	Nonmetallic mineral product mfg	2.0	(D)	(D)	(D)	(D)	1.4	.3	.3	15
331	Primary metal mfg	(D)	.8	(D)	—	—	(D)	.1	—	(X)
	Balance of state	5.2	2.0	1.4	.7	1.1	2.6	1.8	.8	18

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
	Georgia	151.2	67.8	61.5	13.7	8.1	92.7	45.1	13.4	6
311	Food mfg	8.3	3.8	2.0	.1	2.5	3.4	2.4	2.4	28
313	Textile mills	11.1	10.0	.5	.6	.1	10.1	.8	.2	68
314	Textile product mills	2.2	.2	1.5	.4	.1	1.2	.5	.5	18
321	Wood product mfg	7.2	3.4	2.1	1.7	(Z)	5.4	.1	1.6	22
322	Paper mfg	79.2	31.3	39.0	7.3	1.6	48.7	28.7	1.8	4
323	Printing & related support activities	2.7	2.7	—	(Z)	(Z)	2.6	(Z)	(Z)	1
325	Chemical mfg	14.9	5.9	7.4	.8	.8	5.9	6.3	2.7	9
326	Plastics & rubber products mfg	2.9	.3	.1	1.2	1.3	1.0	.3	1.6	34
327	Nonmetallic mineral product mfg	9.9	5.2	(D)	(D)	(D)	6.8	2.5	.6	11
331	Primary metal mfg	1.5	.9	.5	.1	—	.4	1.0	.1	16
332	Fabricated metal product mfg	3.7	2.4	(D)	(D)	.3	3.1	.3	.3	39
333	Machinery mfg	3.2	(Z)	3.0	.1	—	2.4	.6	.2	68
336	Transportation equipment mfg	2.7	.7	1.0	.3	.7	1.2	.3	1.2	59
	Balance of state	1.7	1.0	.4	(D)	(D)	.4	1.3	(Z)	16
	Hawaii	3.7	.1	.4	3.2	—	3.3	(D)	(D)	60
324	Petroleum & coal products mfg	3.2	—	—	3.2	—	3.2	—	—	69
	Idaho	48.4	37.5	8.3	1.1	1.6	29.3	13.6	5.6	12
311	Food mfg	17.0	12.4	(D)	(D)	—	(D)	12.2	(D)	31
321	Wood product mfg	2.7	^a 1.0	(D)	(D)	.3	2.2	(Z)	.4	9
325	Chemical mfg	24.4	21.9	2.5	(Z)	—	21.3	(D)	(D)	1
333	Machinery mfg	1.9	—	.1	.6	1.2	—	—	1.9	95
334	Computer & electronic product mfg	1.2	1.2	—	—	—	(D)	(D)	(D)	1
	Balance of state	1.2	.9	.1	.1	.1	1.0	(Z)	.2	11
	Illinois	260.2	146.5	90.3	11.7	11.8	140.3	93.7	26.2	17
311	Food mfg	46.2	34.4	9.5	1.1	1.3	35.2	10.8	.2	12
321	Wood product mfg	1.1	—	—	.3	.8	(D)	—	.6	69
323	Printing & related support activities	3.5	1.1	1.1	.5	.9	2.3	.2	1.0	21
324	Petroleum & coal products mfg	70.0	26.5	42.5	1.0	—	50.6	16.3	3.2	35
325	Chemical mfg	76.5	58.1	15.8	.6	2.0	16.7	52.8	7.0	45
326	Plastics & rubber products mfg	3.6	1.1	.9	.3	1.4	1.8	.6	1.3	16
327	Nonmetallic mineral product mfg	7.8	3.6	4.3	—	(Z)	7.0	.8	(Z)	35
331	Primary metal mfg	19.7	9.6	7.6	2.4	.2	15.5	2.9	1.3	6
332	Fabricated metal product mfg	10.3	5.2	3.2	1.1	.8	4.8	3.9	1.5	25
333	Machinery mfg	5.4	2.3	2.5	.4	.1	.9	2.8	1.6	15
334	Computer & electronic product mfg	8.3	.2	.7	3.9	3.5	(D)	(D)	7.4	2
336	Transportation equipment mfg	6.5	3.9	1.9	(Z)	.6	4.5	1.2	.8	66
	Balance of state	1.2	.4	.4	.1	.3	.6	.3	.3	16
	Indiana	170.6	73.7	28.6	62.2	6.2	85.4	17.4	67.9	33
311	Food mfg	5.4	4.3	(D)	(Z)	(D)	3.6	(D)	(D)	16
322	Paper mfg	4.9	(D)	—	—	—	4.7	.2	—	3
324	Petroleum & coal products mfg	10.6	5.7	4.4	.6	—	6.6	4.0	—	2
325	Chemical mfg	13.3	(D)	—	^a 4	.9	9.5	3.4	.5	7
326	Plastics & rubber products mfg	8.2	5.3	1.7	.9	.3	6.7	1.0	.5	21
327	Nonmetallic mineral product mfg	9.5	5.2	2.7	1.1	.5	6.8	.7	2.0	10
331	Primary metal mfg	105.6	(D)	5.3	58.8	(D)	39.3	4.1	62.2	53
332	Fabricated metal product mfg	2.7	1.2	.3	.2	1.0	.5	1.1	1.0	24
333	Machinery mfg	(D)	(D)	(Z)	(Z)	.1	(D)	(D)	.1	(X)
335	Electrical equipment, appliance, & component mfg	(D)	(D)	(D)	—	(D)	(D)	.7	(D)	(X)
336	Transportation equipment mfg	5.7	.8	4.8	.1	(Z)	5.0	.5	.2	3
	Balance of state	2.4	.8	1.1	(Z)	.5	1.7	(D)	(D)	2
	Iowa	68.0	32.9	28.1	2.2	4.7	45.3	14.7	7.9	8
311	Food mfg	30.8	21.0	5.7	(D)	(D)	15.8	10.9	4.2	16
325	Chemical mfg	9.4	5.3	(D)	(D)	(D)	6.4	2.2	.8	6
327	Nonmetallic mineral product mfg	16.0	.1	15.9	(Z)	—	15.9	—	.1	1
331	Primary metal mfg	1.2	.5	.8	—	(Z)	1.0	.2	(Z)	3
332	Fabricated metal product mfg	2.8	2.0	(D)	.5	(D)	2.1	.2	.5	39
333	Machinery mfg	3.2	2.8	(D)	(D)	(D)	2.8	.3	.2	43
337	Furniture & related product mfg	1.5	.1	.7	(Z)	.8	.1	.7	.8	62
	Balance of state	2.9	1.2	.8	(D)	(D)	1.3	.3	1.3	20
	Kansas	34.4	13.8	14.2	4.9	1.5	25.3	4.2	4.9	9
311	Food mfg	3.3	.6	.6	2.0	(Z)	2.8	.3	.2	8
324	Petroleum & coal products mfg	5.0	3.2	1.6	(Z)	.2	3.4	1.3	.3	42
325	Chemical mfg	11.3	3.8	6.5	.9	.1	9.1	1.5	.7	2
327	Nonmetallic mineral product mfg	6.0	4.2	1.7	—	.1	5.9	(Z)	.1	2
332	Fabricated metal product mfg	2.0	(Z)	2.0	.1	—	1.9	.1	.1	92
335	Electrical equipment, appliance, & component mfg	3.6	.5	.9	1.8	.4	.7	.7	2.3	1
337	Furniture & related product mfg	1.7	.9	.6	—	.2	.7	—	1.0	1
	Balance of state	1.5	.6	.3	.1	.5	.8	.4	.3	28
	Kentucky	98.8	44.5	33.6	13.4	7.2	63.2	22.2	13.5	17
311	Food mfg	17.4	15.1	(D)	(D)	.6	10.2	6.9	.3	53
312	Beverage & tobacco product mfg	4.2	.5	3.5	.2	—	2.4	1.4	.4	1
321	Wood product mfg	2.4	2.4	(Z)	(D)	(D)	2.4	(D)	(D)	18
323	Printing & related support activities	2.1	(D)	(D)	(D)	(D)	.2	—	1.9	1
324	Petroleum & coal products mfg	9.3	(D)	(D)	(D)	—	9.2	—	.2	2
325	Chemical mfg	9.9	4.9	4.4	.5	(Z)	5.0	3.9	1.0	13
326	Plastics & rubber products mfg	1.8	1.2	.6	(Z)	.1	1.6	(D)	(D)	37
327	Nonmetallic mineral product mfg	6.5	2.6	2.8	.2	.9	5.0	.6	1.0	14
331	Primary metal mfg	16.1	6.2	6.5	2.8	.6	10.4	1.5	4.3	2
332	Fabricated metal product mfg	22.2	2.5	8.0	7.3	4.4	14.1	4.4	3.7	61

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
Kentucky—Con.										
335	Electrical equipment, appliance, & component mfg	1.5	(D)	1.4	(D)	(D)	1.4	(D)	(D)	1
336	Transportation equipment mfg	1.8	1.3	(D)	.1	(D)	.7	1.0	.2	41
339	Miscellaneous mfg	1.8	1.5	(D)	(D)	.2	.1	1.6	.1	1
	Balance of state	1.7	(D)	.9	(D)	.3	.6	.7	.4	20
Louisiana										
		488.8	304.7	166.6	4.1	13.4	373.4	89.2	26.1	7
311	Food mfg	5.8	4.4	.9	—	.6	3.2	.6	2.1	55
321	Wood product mfg	2.2	1.1	1.1	(Z)	(Z)	2.2	(Z)	(Z)	45
322	Paper mfg	9.7	4.4	4.4	—	.8	7.5	.8	1.4	5
324	Petroleum & coal products mfg	370.1	256.2	111.6	.7	1.6	306.7	61.2	2.1	9
325	Chemical mfg	98.8	37.6	48.3	2.9	10.1	53.4	25.3	20.0	2
	Balance of state	2.1	1.0	.3	.5	.3	.4	1.3	.4	27
Maine										
		15.0	7.7	5.3	.2	1.9	6.2	5.6	3.2	6
321	Wood product mfg	2.3	2.1	.1	.1	.1	1.5	.8	.1	30
322	Paper mfg	10.6	4.4	4.7	—	1.5	3.5	4.2	2.8	5
	Balance of state	2.1	1.2	.5	.2	.3	1.2	.7	.3	17
Maryland										
		38.7	24.7	10.2	1.6	2.1	20.3	14.0	4.3	6
311	Food mfg	(D)	(D)	1.0	(D)	(D)	(D)	2.4	.3	(X)
324	Petroleum & coal products mfg	(D)	(D)	(D)	(D)	(D)	(D)	(Z)	.1	(X)
325	Chemical mfg	15.2	(D)	(D)	(D)	(D)	4.2	9.3	1.7	7
326	Plastics & rubber products mfg	(D)	.8	1.1	(D)	(Z)	(D)	(D)	(D)	(X)
327	Nonmetallic mineral product mfg	2.3	.3	1.7	.3	.1	2.0	(D)	(D)	35
331	Primary metal mfg	10.8	9.3	1.3	.1	.1	10.4	—	.4	1
332	Fabricated metal product mfg	1.0	.5	.1	.2	.3	(D)	.7	(D)	23
336	Transportation equipment mfg	1.6	.8	.4	.3	(Z)	(D)	.6	(D)	79
	Balance of state	1.5	.6	.6	.2	.2	.7	(D)	(D)	21
Massachusetts										
		20.5	13.0	4.7	.6	2.2	8.7	6.5	5.4	16
312	Beverage & tobacco product mfg	1.0	.9	.1	—	—	—	1.0	—	6
313	Textile mills	1.2	1.2	—	—	—	1.0	.2	—	39
322	Paper mfg	4.0	2.6	.4	(Z)	1.1	.4	2.5	1.1	68
325	Chemical mfg	5.2	4.4	.7	(Z)	.1	3.1	.8	1.3	9
332	Fabricated metal product mfg	2.4	1.5	.6	(Z)	.3	1.7	.3	.3	7
334	Computer & electronic product mfg	1.7	.1	1.4	.1	(Z)	(D)	(Z)	(D)	65
335	Electrical equipment, appliance, & component mfg	1.4	.6	.6	.2	.1	(D)	.3	(D)	81
	Balance of state	3.6	1.7	.9	.3	.6	1.7	1.3	.6	7
Michigan										
		192.7	128.6	48.3	6.9	8.8	125.7	41.4	25.6	5
311	Food mfg	5.7	2.5	2.4	.1	.7	1.5	3.4	.8	30
322	Paper mfg	2.2	1.6	.4	.2	—	.2	1.9	.1	43
325	Chemical mfg	57.0	39.6	13.8	1.1	2.5	42.2	7.6	7.3	2
326	Plastics & rubber products mfg	3.2	1.8	1.2	—	.3	1.9	.5	.9	23
327	Nonmetallic mineral product mfg	11.4	6.6	3.9	(Z)	.9	8.4	.3	2.7	26
331	Primary metal mfg	35.4	33.8	.3	.7	.6	34.2	1.0	.2	2
332	Fabricated metal product mfg	15.2	3.3	8.2	1.7	2.0	3.2	3.3	8.8	47
333	Machinery mfg	1.8	.9	.4	.3	.1	1.0	.7	.1	33
336	Transportation equipment mfg	58.0	37.4	16.7	2.5	1.4	32.1	21.7	4.1	5
	Balance of state	2.8	1.1	1.0	.3	.4	1.1	1.0	.6	10
Minnesota										
		91.3	55.2	27.2	3.7	5.3	63.8	18.3	9.2	5
311	Food mfg	14.3	9.2	1.7	1.7	1.7	3.0	9.5	1.8	10
321	Wood product mfg	15.0	13.9	1.0	—	—	(D)	—	(D)	11
322	Paper mfg	13.1	7.4	4.9	.7	.1	10.9	1.5	.6	12
323	Printing & related support activities	2.6	2.3	(Z)	(D)	(D)	(D)	(D)	(D)	72
324	Petroleum & coal products mfg	14.0	*6.9	*6.9	(D)	(D)	8.1	5.0	.9	1
325	Chemical mfg	20.8	10.0	10.7	(D)	(D)	19.9	(D)	(D)	2
332	Fabricated metal product mfg	1.5	.4	.3	.2	.6	(D)	.8	(D)	32
333	Machinery mfg	3.9	1.9	.1	.2	1.8	3.0	(D)	(D)	44
336	Transportation equipment mfg	2.0	1.5	.4	(Z)	.2	1.8	—	.2	49
337	Furniture & related product mfg	1.4	.7	.4	.1	.2	.9	.1	.3	30
	Balance of state	2.7	1.1	.9	.4	.3	1.3	.6	.9	13
Mississippi										
		46.4	27.4	7.2	1.6	10.2	19.0	11.7	15.7	4
311	Food mfg	7.4	4.9	1.6	.1	.9	1.4	4.8	1.1	3
321	Wood product mfg	3.4	2.3	.7	(Z)	.5	2.7	.3	.4	14
322	Paper mfg	1.7	.4	1.2	(Z)	(Z)	.4	1.2	.1	1
323	Printing & related support activities	1.3	1.3	—	(Z)	(Z)	1.3	—	(Z)	1
325	Chemical mfg	18.7	11.2	1.5	1.0	5.0	6.5	2.4	9.8	6
326	Plastics & rubber products mfg	1.4	1.1	.3	—	—	1.4	(Z)	—	17
332	Fabricated metal product mfg	1.7	1.5	.1	—	.1	.1	1.6	(Z)	5
336	Transportation equipment mfg	7.8	4.0	(Z)	.4	3.3	3.9	.2	3.7	2
	Balance of state	3.0	.7	1.8	.1	.4	1.3	1.1	.7	39
Missouri										
		40.1	21.0	13.3	3.5	2.3	22.6	9.4	8.1	10
311	Food mfg	5.8	2.0	3.4	(Z)	.4	.3	2.2	3.3	38
321	Wood product mfg	1.4	.4	.1	—	.9	.4	(Z)	1.0	71
325	Chemical mfg	9.4	5.7	2.9	.7	(Z)	6.4	2.6	.4	24
327	Nonmetallic mineral product mfg	11.5	6.7	4.1	.3	.3	9.2	1.4	.9	1
331	Primary metal mfg	2.8	.8	.3	1.5	.2	1.3	.5	1.0	48
332	Fabricated metal product mfg	3.7	2.2	1.4	—	.1	2.5	1.0	.2	35
337	Furniture & related product mfg	1.6	1.5	—	.1	—	1.5	—	.1	1
	Balance of state	4.0	1.6	1.1	.9	.4	1.1	1.7	1.2	8
Montana										
		22.1	11.3	10.7	(Z)	.1	21.4	.6	.1	35
322	Paper mfg	12.1	10.8	1.3	—	—	12.1	—	—	1
324	Petroleum & coal products mfg	9.7	(D)	9.3	—	(D)	9.2	.5	—	80

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
	Nebraska	31.2	8.7	13.7	.7	8.1	14.9	12.2	4.1	24
311	Food mfg	16.4	5.7	3.3	.3	7.0	3.0	10.9	2.4	33
325	Chemical mfg	8.1	.8	7.2	—	.1	7.6	.3	.2	64
327	Nonmetallic mineral product mfg	1.0	—	.4	—	.7	(Z)	.8	.8	18
331	Primary metal mfg	1.4	1.4	—	—	—	1.4	—	—	65
332	Fabricated metal product mfg	1.1	.7	.2	.1	.1	.5	.4	.2	1
339	Miscellaneous mfg	1.8	—	1.8	—	—	1.8	—	—	1
	Balance of state	1.5	.1	.8	.3	.2	.4	.6	.4	5
	Nevada	57.2	55.1	.9	.2	1.0	3.7	50.1	3.5	2
326	Plastics & rubber products mfg	2.8	2.6	(Z)	—	.1	2.4	.2	.1	13
327	Nonmetallic mineral product mfg	1.9	.5	.6	.2	.7	1.1	.4	.5	34
331	Primary metal mfg	52.1	51.9	.2	—	—	.1	49.3	2.7	1
	New Hampshire	1.5	(D)	(D)	.1	.6	.7	.2	.2	20
	Balance of state	1.5	(D)	(D)	.1	.6	.6	.7	.2	20
	New Jersey	153.9	79.0	57.2	6.9	10.8	121.5	17.8	14.6	11
311	Food mfg	5.4	3.8	(Z)	—	1.7	(D)	(D)	3.9	65
312	Beverage & tobacco product mfg	9.1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	22
322	Paper mfg	1.6	1.6	—	—	—	1.5	—	.1	1
323	Printing & related support activities	4.3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	67
324	Petroleum & coal products mfg	93.4	46.2	45.5	.3	1.5	90.5	1.2	1.7	16
325	Chemical mfg	19.4	12.5	5.3	(D)	(D)	10.9	6.8	1.7	9
326	Plastics & rubber products mfg	2.8	(D)	(D)	(D)	2.0	(D)	(D)	2.0	62
327	Nonmetallic mineral product mfg	2.0	(D)	.4	(D)	(D)	(D)	(D)	(D)	29
331	Primary metal mfg	9.9	9.0	(D)	—	(D)	9.5	.1	.3	7
332	Fabricated metal product mfg	5.1	(D)	.5	(D)	4.2	1.3	1.2	2.7	79
	New Mexico	11.6	6.4	2.0	.2	3.0	5.0	6.5	.2	24
311	Food mfg	3.4	1.2	1.7	.2	.2	—	3.3	.1	76
325	Chemical mfg	2.9	—	.2	—	2.7	—	2.9	—	1
334	Computer & electronic product mfg	4.1	4.1	—	—	(Z)	3.8	.3	(Z)	1
	Balance of state	1.3	1.1	.1	—	(Z)	1.2	(Z)	(Z)	72
	New York	133.8	77.0	35.2	8.0	13.6	64.4	53.3	16.0	17
311	Food mfg	22.7	5.5	5.6	.4	11.2	.9	17.5	4.3	52
312	Beverage & tobacco product mfg	2.9	2.9	—	—	—	(D)	(D)	(Z)	3
321	Wood product mfg	29.1	24.0	5.1	—	—	29.1	—	—	63
322	Paper mfg	6.0	*3.4	(D)	(D)	(D)	.7	1.6	3.7	9
323	Printing & related support activities	1.7	1.2	(Z)	.5	(Z)	1.2	(Z)	.6	1
325	Chemical mfg	24.1	9.8	11.8	2.3	.2	11.5	9.4	3.2	11
326	Plastics & rubber products mfg	2.4	1.3	.2	.4	.4	1.5	(D)	(D)	10
327	Nonmetallic mineral product mfg	3.9	2.2	1.3	.2	.1	(D)	(D)	(D)	7
331	Primary metal mfg	3.8	1.6	1.4	.7	—	2.5	.4	.8	24
332	Fabricated metal product mfg	6.7	2.8	2.4	.7	.7	3.5	2.5	.7	32
334	Computer & electronic product mfg	20.0	18.0	(D)	(D)	(D)	6.6	12.6	.8	4
336	Transportation equipment mfg	8.8	3.5	4.7	.6	—	2.4	5.7	.7	28
	Balance of state	1.8	.9	(D)	.7	(D)	(D)	.8	(D)	20
	North Carolina	169.6	76.3	57.1	28.5	7.7	105.1	48.2	16.3	14
311	Food mfg	22.0	12.6	7.6	.4	1.4	8.8	11.9	1.3	15
313	Textile mills	4.3	2.5	.6	(D)	(D)	2.5	1.0	.8	8
321	Wood product mfg	7.7	5.9	1.3	—	.4	6.9	(D)	(D)	37
322	Paper mfg	51.1	21.2	24.4	5.3	.3	44.1	2.4	4.6	19
324	Petroleum & coal products mfg	3.4	3.0	.4	—	—	3.0	.5	—	1
325	Chemical mfg	28.7	19.0	6.4	2.5	.8	18.7	8.4	1.6	28
326	Plastics & rubber products mfg	2.5	1.4	.8	(Z)	.3	1.5	.6	.4	16
327	Nonmetallic mineral product mfg	8.7	6.9	1.5	.2	.1	6.8	(D)	(D)	21
331	Primary metal mfg	1.8	.7	.6	.1	.4	.6	.7	.5	32
332	Fabricated metal product mfg	3.8	(D)	2.7	(D)	.4	2.2	.9	.7	53
333	Machinery mfg	(D)	(D)	(D)	(D)	.1	.3	(D)	(D)	(X)
334	Computer & electronic product mfg	20.6	(D)	(D)	18.9	(D)	.2	18.8	1.6	82
336	Transportation equipment mfg	1.5	.4	(D)	.3	—	.3	.2	1.0	5
337	Furniture & related product mfg	11.0	1.4	9.3	.1	.2	8.0	—	2.9	79
	Balance of state	(D)	.6	.7	(D)	(D)	1.2	(D)	(D)	(X)
	North Dakota	5.0	(D)	(D)	(D)	(D)	2.0	.7	2.4	34
311	Food mfg	(D)	(D)	.6	—	(D)	.5	(D)	(D)	(X)
324	Petroleum & coal products mfg	(D)	(D)	(D)	—	—	1.0	(D)	(D)	(X)
	Balance of state	(D)	(D)	(D)	(D)	(D)	.5	.1	(D)	(X)
	Ohio	260.4	182.8	50.3	6.8	20.6	158.7	71.8	29.9	4
311	Food mfg	22.5	15.3	6.3	.4	.5	5.2	15.5	1.8	18
322	Paper mfg	17.0	7.7	7.9	.9	.5	9.9	3.3	3.8	8
323	Printing & related support activities	2.2	1.9	(Z)	.2	.1	1.2	.3	.7	32
324	Petroleum & coal products mfg	11.7	8.7	2.7	.3	.1	8.4	2.6	.7	26
325	Chemical mfg	28.7	11.8	12.8	.4	3.6	14.1	11.6	3.0	24
326	Plastics & rubber products mfg	8.7	2.1	3.5	.3	2.8	4.2	3.4	1.1	25
327	Nonmetallic mineral product mfg	4.5	2.7	.6	.8	.4	2.9	1.2	.4	7
331	Primary metal mfg	68.4	59.7	2.6	.4	5.7	55.2	6.9	6.4	3
332	Fabricated metal product mfg	14.2	6.7	5.0	.9	1.5	9.7	2.9	1.7	26
333	Machinery mfg	1.7	.5	.2	.2	.7	.3	.8	.5	24
335	Electrical equipment, appliance, & component mfg	4.2	.5	1.2	.8	1.7	.7	1.5	2.0	33
336	Transportation equipment mfg	73.6	63.3	6.6	1.2	2.5	45.2	21.0	7.3	6
339	Miscellaneous mfg	1.7	.8	.6	(Z)	.3	.7	.7	.2	38
	Balance of state	1.3	1.0	.2	(Z)	.1	1.0	.1	.1	5
	Oklahoma	54.1	23.6	24.6	5.1	.8	39.6	8.3	6.3	25
322	Paper mfg	1.7	1.4	.3	—	—	.3	.5	.8	41
323	Printing & related support activities	1.4	1.1	(Z)	.2	—	1.1	—	.2	1
324	Petroleum & coal products mfg	14.4	10.6	3.7	—	—	12.5	1.4	.4	8
325	Chemical mfg	15.4	2.5	12.8	.1	—	14.3	1.1	.1	76
326	Plastics & rubber products mfg	2.5	(Z)	—	2.5	—	(Z)	—	2.5	1

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
Oklahoma—Con.										
327	Nonmetallic mineral product mfg	10.3	(D)	(D)	.9	(D)	8.9	1.3	.1	51
331	Primary metal mfg	1.8	.8	1.0	—	—	.8	.1	.9	47
332	Fabricated metal product mfg	2.2	(D)	(D)	1.3	(D)	.5	1.3	.3	71
333	Machinery mfg	2.9	1.3	1.1	.1	.4	.5	1.7	.8	24
	Balance of state	1.7	1.1	.5	—	(Z)	.8	.8	(Z)	7
	Oregon	67.4	46.8	11.6	2.7	6.3	44.8	18.7	4.0	8
311	Food mfg	(D)	.5	.4	(D)	—	.6	(D)	(D)	(X)
321	Wood product mfg	9.5	7.2	.9	1.0	.4	8.8	(D)	(D)	26
322	Paper mfg	28.1	17.4	7.0	.4	3.3	23.4	4.3	.3	51
325	Chemical mfg	3.3	1.3	(Z)	.1	1.9	1.3	(Z)	2.0	54
326	Plastics & rubber products mfg	(D)	1.3	(Z)	(D)	.1	1.3	(Z)	(D)	(X)
327	Nonmetallic mineral product mfg	1.4	.8	.5	—	.1	1.3	.1	—	1
331	Primary metal mfg	3.9	1.4	1.4	.9	.1	.8	2.8	.3	1
332	Fabricated metal product mfg	2.4	1.8	.3	.1	.2	1.7	.4	.3	40
334	Computer & electronic product mfg	13.9	13.0	.9	(Z)	.1	4.1	9.7	.1	26
	Balance of state	2.5	2.1	.2	.1	.1	1.6	.6	.3	20
	Pennsylvania	191.3	119.1	46.9	13.3	12.0	130.3	38.7	22.3	7
311	Food mfg	15.4	11.3	3.3	(D)	(D)	2.6	12.2	.6	27
312	Beverage & tobacco product mfg	1.6	(D)	(D)	(Z)	(D)	.3	1.1	.2	9
321	Wood product mfg	2.7	2.3	.1	.2	.1	2.2	.3	.2	12
322	Paper mfg	16.7	1.3	14.3	.9	.2	14.8	.4	1.5	3
323	Printing & related support activities	6.8	5.3	1.0	.5	.1	6.3	(Z)	.5	6
324	Petroleum & coal products mfg	55.0	50.2	4.7	.1	—	53.6	1.0	.4	15
325	Chemical mfg	16.4	4.6	9.8	1.9	.1	6.9	6.5	3.0	16
326	Plastics & rubber products mfg	3.2	1.6	.3	1.3	.1	1.8	1.4	(Z)	40
327	Nonmetallic mineral product mfg	14.4	8.2	1.7	2.4	2.0	7.5	1.9	5.0	37
331	Primary metal mfg	25.6	17.1	5.7	(Z)	2.7	17.6	6.2	1.9	9
332	Fabricated metal product mfg	16.0	5.6	2.5	4.8	3.1	9.3	2.6	4.1	23
333	Machinery mfg	1.8	(D)	.8	(D)	(D)	.8	.7	.3	31
334	Computer & electronic product mfg	2.4	2.4	—	—	—	(D)	(D)	—	70
335	Electrical equipment, appliance, & component mfg	1.3	(D)	(Z)	(D)	(D)	(D)	(D)	.4	33
336	Transportation equipment mfg	7.1	4.8	(D)	(D)	(D)	2.6	1.7	2.8	10
337	Furniture & related product mfg	3.2	1.4	.2	.4	1.2	2.5	(Z)	.8	53
	Balance of state	1.6	.8	(Z)	(Z)	.7	.6	.4	.6	21
	Rhode Island	7.7	1.6	5.2	.3	.7	1.2	4.6	2.0	7
335	Electrical equipment, appliance, & component mfg	3.8	—	3.8	—	—	.5	2.1	1.2	1
	Balance of state	3.9	1.6	1.4	.3	.7	.7	2.5	.8	13
	South Carolina	121.9	76.7	22.9	12.0	10.3	75.8	25.8	20.3	8
311	Food mfg	3.9	.6	2.3	.3	.7	(Z)	3.2	.7	46
313	Textile mills	4.7	2.6	1.6	(D)	(D)	3.0	1.3	.4	22
321	Wood product mfg	2.0	1.3	(D)	(D)	(D)	1.4	.3	.3	31
322	Paper mfg	43.3	36.7	5.6	.7	.3	32.4	10.6	.3	1
325	Chemical mfg	10.7	3.1	4.3	(D)	(D)	7.4	2.5	.7	24
326	Plastics & rubber products mfg	2.8	1.8	.6	(Z)	.4	1.7	.6	.5	7
327	Nonmetallic mineral product mfg	13.5	2.8	1.9	8.2	.7	5.1	1.3	7.1	16
331	Primary metal mfg	22.2	19.6	.8	1.8	—	16.1	(Z)	6.0	15
333	Machinery mfg	3.9	2.9	(D)	(D)	(D)	2.4	1.4	.1	8
336	Transportation equipment mfg	11.0	3.2	4.3	.4	3.1	4.7	3.1	3.2	67
339	Miscellaneous mfg	1.3	1.2	.1	—	—	.2	1.1	.1	7
	Balance of state	2.6	1.0	(D)	(D)	1.0	1.3	.4	1.0	21
	South Dakota	12.5	11.0	1.4	—	.1	(D)	(D)	(D)	2
325	Chemical mfg	5.7	5.6	.2	—	—	5.7	—	—	2
339	Miscellaneous mfg	5.5	4.9	.6	—	—	5.5	—	—	1
	Balance of state	1.3	.5	.7	—	.1	(D)	(D)	(D)	8
	Tennessee	69.2	31.3	24.5	6.1	7.3	36.6	21.1	11.5	7
311	Food mfg	6.4	2.8	2.4	.5	.6	2.1	4.2	.1	23
312	Beverage & tobacco product mfg	1.7	1.7	(D)	(D)	(D)	(D)	(D)	(D)	1
321	Wood product mfg	1.6	.2	1.1	(D)	(D)	1.2	(Z)	.4	37
322	Paper mfg	5.9	(D)	2.7	(D)	1.8	2.8	2.2	.9	2
324	Petroleum & coal products mfg	6.7	.8	5.9	—	—	4.9	1.0	.8	1
325	Chemical mfg	19.7	11.3	3.1	3.2	2.1	8.6	6.6	4.5	16
326	Plastics & rubber products mfg	4.6	2.0	1.6	.6	.4	3.1	.4	1.1	7
327	Nonmetallic mineral product mfg	5.5	2.9	1.8	.4	.4	3.3	1.6	.6	20
331	Primary metal mfg	2.8	1.8	.9	—	.2	1.7	.9	.2	9
332	Fabricated metal product mfg	2.8	.8	1.7	.1	.3	1.9	.6	.3	40
333	Machinery mfg	(D)	(D)	(D)	(D)	.5	(D)	(D)	(D)	(X)
335	Electrical equipment, appliance, & component mfg	1.6	1.0	(D)	(D)	—	(D)	(D)	(D)	27
336	Transportation equipment mfg	6.0	3.3	2.4	.1	.3	3.5	2.0	.4	32
339	Miscellaneous mfg	1.1	.3	(D)	(D)	.5	(D)	(D)	.5	4
	Balance of state	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	(X)
	Texas	1 168.5	421.6	669.7	44.8	32.4	937.2	138.4	92.9	5
311	Food mfg	10.8	3.0	6.5	.3	.9	6.4	3.6	.8	7
312	Beverage & tobacco product mfg	(D)	(D)	(D)	.3	(D)	(D)	.8	.3	(X)
313	Textile mills	4.1	(Z)	—	—	4.0	(Z)	4.0	—	66
321	Wood product mfg	4.6	3.8	.1	—	.7	3.5	.4	.7	16
322	Paper mfg	17.4	5.0	10.8	.9	.7	11.4	2.4	3.6	1
323	Printing & related support activities	1.6	.1	1.1	.2	.2	1.2	(Z)	.4	1
324	Petroleum & coal products mfg	627.1	245.6	374.3	6.8	.4	578.7	32.8	15.6	7
325	Chemical mfg	414.6	113.8	252.3	28.0	20.5	281.6	69.9	63.0	7
326	Plastics & rubber products mfg	3.1	(D)	(D)	(D)	.6	2.5	.1	.5	21
327	Nonmetallic mineral product mfg	13.2	6.7	5.3	.6	.5	11.0	1.3	.9	13

Table 8. Pollution Abatement Capital Expenditures—State and Subsector by Activity and Media: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total abatement capital expenditure are less than \$1.0 million]

NAICS code	State/Subsector	Total	Activity				Media			Relative standard error PACE
			Treatment	Prevention	Recycling	Disposal	Air	Water	Solid waste	
Texas—Con.										
331	Primary metal mfg	10.0	5.4	2.5	.9	1.2	2.7	5.9	1.4	9
332	Fabricated metal product mfg	7.9	2.8	4.0	.7	.4	6.8	.5	.6	36
334	Computer & electronic product mfg	24.6	(D)	(D)	(D)	(D)	11.8	10.0	2.8	1
336	Transportation equipment mfg	22.9	13.9	8.2	.4	.5	15.3	6.2	1.4	36
	Balance of state	(D)	1.0	(D)	(D)	.7	(D)	.4	.8	(X)
	Utah	59.1	a19.4	a18.2	19.1	2.3	36.1	3.9	19.1	50
321	Wood product mfg	16.5	—	—	16.3	.2	—	—	16.5	96
324	Petroleum & coal products mfg	a27.7	(D)	a13.6	(D)	a.1	27.4	.3	—	88
325	Chemical mfg	5.2	1.5	3.7	—	—	5.1	(Z)	—	73
327	Nonmetallic mineral product mfg	2.6	2.2	.4	—	(Z)	2.6	(Z)	(Z)	67
334	Computer & electronic product mfg	3.4	(D)	—	(D)	1.6	.2	1.6	1.5	84
	Balance of state	3.7	2.3	.7	.3	.5	.7	2.0	1.0	15
	Vermont	4.6	1.1	2.8	(Z)	.6	2.3	1.3	1.0	34
335	Electrical equipment, appliance, & component mfg	(D)	—	(D)	—	—	(D)	(D)	.1	(X)
336	Transportation equipment mfg	1.7	(D)	(D)	—	—	(D)	(D)	.8	92
	Balance of state	(D)	(D)	(D)	(Z)	.6	(D)	(D)	(D)	(X)
	Virginia	99.9	72.7	20.8	2.1	4.4	78.1	16.2	5.5	5
311	Food mfg	9.2	4.5	2.5	—	2.2	3.2	3.8	2.2	23
312	Beverage & tobacco product mfg	(D)	(D)	—	—	—	(D)	(Z)	—	(X)
321	Wood product mfg	8.7	4.5	3.9	.2	(Z)	7.7	.4	.5	4
322	Paper mfg	31.2	30.3	.4	—	.5	30.3	.4	.5	1
323	Printing & related support activities	1.8	.8	—	1.0	(Z)	1.8	(Z)	(Z)	1
325	Chemical mfg	21.0	15.5	5.4	.1	(Z)	15.1	5.8	(Z)	14
326	Plastics & rubber products mfg	7.3	4.7	2.3	(Z)	.2	4.8	2.0	.5	24
327	Nonmetallic mineral product mfg	3.7	.3	3.1	.1	.1	3.2	.2	.3	4
331	Primary metal mfg	8.0	5.6	2.1	(Z)	.4	5.4	2.1	.6	22
336	Transportation equipment mfg	2.2	(D)	.1	(D)	(D)	1.3	.7	.1	12
339	Miscellaneous mfg	2.6	2.6	(Z)	—	(Z)	(D)	(D)	(Z)	67
	Balance of state	(D)	1.0	1.0	(D)	(D)	(D)	(D)	.7	(X)
	Washington	201.7	163.6	28.3	5.3	4.5	165.2	29.7	6.8	18
311	Food mfg	10.6	4.9	4.1	.6	1.0	2.5	6.8	1.3	63
321	Wood product mfg	5.2	3.0	.7	1.1	.4	3.3	.7	1.3	16
322	Paper mfg	16.5	9.6	4.1	—	2.6	13.0	1.0	2.5	7
324	Petroleum & coal products mfg	152.0	140.0	9.5	a2.5	—	140.1	12.0	—	23
325	Chemical mfg	1.9	.5	1.4	—	—	1.2	.6	—	67
326	Plastics & rubber products mfg	6.2	.1	6.1	—	—	.1	6.1	—	97
327	Nonmetallic mineral product mfg	3.2	1.6	.8	.8	(Z)	1.5	.7	1.0	25
331	Primary metal mfg	2.0	1.7	(Z)	(Z)	.2	1.6	.1	.3	48
332	Fabricated metal product mfg	1.9	1.6	.3	(Z)	(Z)	1.6	.1	.2	1
336	Transportation equipment mfg	1.2	.3	1.0	—	—	.2	1.0	(Z)	2
	Balance of state	1.1	.4	.3	.1	.3	.3	.5	.3	22
	West Virginia	43.5	26.0	12.8	.7	4.0	27.0	11.6	4.9	13
321	Wood product mfg	1.3	.8	.4	—	—	(D)	(D)	(D)	35
324	Petroleum & coal products mfg	2.0	—	2.0	—	—	(D)	(D)	(D)	1
325	Chemical mfg	24.9	16.1	5.7	a.5	2.7	13.8	9.2	1.9	11
327	Nonmetallic mineral product mfg	4.6	1.5	1.9	(Z)	1.2	2.9	.2	1.6	34
331	Primary metal mfg	8.3	6.6	1.7	—	(Z)	7.4	(D)	(D)	57
	Balance of state	2.4	1.1	1.0	.2	.1	1.6	(D)	(D)	3
	Wisconsin	121.1	68.4	27.1	16.0	9.6	59.1	29.4	32.5	17
311	Food mfg	11.9	4.1	1.7	1.6	4.5	1.0	9.2	1.7	15
313	Textile mills	1.9	1.9	(Z)	—	—	—	1.9	(Z)	85
321	Wood product mfg	1.3	.5	.7	(D)	(D)	.9	.1	.2	42
322	Paper mfg	50.6	35.6	12.7	1.3	1.0	31.0	8.5	11.1	37
323	Printing & related support activities	13.7	8.1	(D)	5.5	(D)	8.2	—	5.5	1
325	Chemical mfg	11.5	2.8	8.5	—	.3	4.6	1.5	5.5	46
326	Plastics & rubber products mfg	5.8	2.5	.1	2.5	.7	2.5	.2	3.2	23
327	Nonmetallic mineral product mfg	1.2	.3	.6	.1	a.2	.8	.2	.3	17
331	Primary metal mfg	9.1	6.0	.7	.7	1.7	5.5	1.1	2.5	17
332	Fabricated metal product mfg	6.0	2.8	1.5	1.2	.5	2.6	2.1	1.3	30
333	Machinery mfg	2.3	1.7	(D)	(Z)	(D)	.8	.5	1.0	40
334	Computer & electronic product mfg	2.9	—	(Z)	2.9	—	—	2.9	—	98
336	Transportation equipment mfg	1.4	1.2	(D)	(D)	(D)	.6	.7	—	14
	Balance of state	1.4	.9	.3	(Z)	.2	.7	.4	.2	16
	Wyoming	45.8	36.1	9.0	(D)	(D)	35.7	2.2	7.9	59
324	Petroleum & coal products mfg	32.1	27.6	4.5	—	—	29.8	1.0	1.3	84
325	Chemical mfg	13.6	a8.5	4.5	(D)	(D)	5.9	1.2	6.4	1

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total site clean-up, permits and fees, and cost offsets are all less than \$1.0 million]

NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
31-33	All industries	1 030.3	165.1	865.2	453.6	2 187.9	7
311	Food mfg	16.1	1.0	15.1	50.9	52.6	9
3111	Animal food mfg	1.0	.1	1.0	1.0	1.2	59
31111	Animal food mfg	1.0	.1	1.0	1.0	1.2	59
311111	Dog & cat food mfg	.7	—	.7	.2	1.2	81
3112	Grain & oilseed milling	1.3	.2	1.2	5.3	8.8	7
31121	Flour milling & malt mfg	.1	(Z)	.1	.7	2.4	37
311213	Malt mfg	—	—	—	.1	2.0	—
31122	Starch & vegetable fats & oils mfg	1.2	.1	1.0	4.5	5.4	7
311221	Wet corn milling	.5	—	.5	2.7	2.8	1
311222	Soybean processing	.6	(Z)	.5	1.2	.8	7
311225	Fats & oils refining & blending	.1	.1	(Z)	.3	1.8	76
31123	Breakfast cereal mfg	.1	—	.1	.2	1.0	1
311230	Breakfast cereal mfg	.1	—	.1	.2	1.0	1
3113	Sugar & confectionery product mfg	3.9	(Z)	3.9	8.4	1.9	5
31131	Sugar mfg	(D)	(Z)	(D)	5.3	(D)	(X)
311311	Sugarcane mills	(D)	(Z)	(D)	1.1	(Z)	(X)
311312	Cane sugar refining	3.0	—	3.0	3.2	—	1
311313	Beet sugar mfg	.6	—	.6	1.0	(D)	29
31133	Confectionery mfg from purchased chocolate	(Z)	—	(Z)	3.0	.3	1
311330	Confectionery mfg from purchased chocolate	(Z)	—	(Z)	3.0	.3	1
3114	Fruit & vegetable preserving & specialty food mfg	(D)	.1	(D)	12.1	11.7	(X)
31141	Frozen food mfg	4.4	—	4.4	3.5	9.8	5
311411	Frozen fruit, juice, & vegetable mfg	.6	—	.6	2.8	8.3	33
311412	Frozen specialty food mfg	3.8	—	3.8	.7	1.5	1
31142	Fruit & vegetable canning, pickling, & drying	(D)	.1	(D)	8.7	1.9	(X)
311421	Fruit & vegetable canning	.1	.1	—	7.7	1.8	1
3115	Dairy product mfg	1.5	.1	1.4	10.5	3.8	49
31151	Dairy product (except frozen) mfg	1.3	.1	1.3	8.5	3.4	53
311511	Fluid milk mfg	.4	(Z)	.4	2.0	1.0	22
311513	Cheese mfg	.2	.1	.1	.4	1.4	28
311514	Dry, condensed, & evaporated dairy product mfg	.8	—	.8	6.1	.8	91
31152	Ice cream & frozen dessert mfg	.1	—	.1	1.9	.4	88
311520	Ice cream & frozen dessert mfg	.1	—	.1	1.9	.4	88
3116	Meat product mfg	2.5	.2	2.3	7.0	13.0	38
31161	Animal slaughtering & processing	2.5	.2	2.3	7.0	13.0	38
311611	Animal (except poultry) slaughtering	1.7	.1	1.6	1.0	5.3	52
311612	Meat processed from carcasses	(Z)	(Z)	(Z)	3.4	2.8	1
311613	Rendering & meat byproduct processing	.3	.1	.2	1.3	—	1
311615	Poultry processing	.5	(Z)	.5	1.3	5.0	62
3117	Seafood product preparation & packaging	(D)	.3	(D)	1.0	.3	(X)
31171	Seafood product preparation & packaging	(D)	.3	(D)	1.0	.3	(X)
3118	Bakeries & tortilla mfg	.6	.1	.5	2.8	3.0	26
31181	Bread & bakery product mfg	.3	—	.3	1.9	1.3	25
311812	Commercial bakeries	.2	—	.2	1.7	1.2	1
31182	Cookie, cracker, & pasta mfg	.1	—	.1	.4	1.8	44
3119	Other food mfg	.5	(Z)	.5	2.8	8.9	22
31191	Snack food mfg	.2	(Z)	.2	.7	2.2	36
311919	Other snack food mfg	.2	(Z)	.2	.6	2.1	36
31193	Flavoring syrup & concentrate mfg	.2	—	.2	.2	2.4	44
311930	Flavoring syrup & concentrate mfg	.2	—	.2	.2	2.4	44
31194	Seasoning & dressing mfg	.1	—	.1	.9	2.1	1
311942	Spice & extract mfg	—	—	—	.8	1.7	—
31199	All other food mfg	(Z)	—	(Z)	.7	1.6	1
311991	Perishable prepared food mfg	(Z)	—	(Z)	.3	1.4	1
312	Beverage & tobacco product mfg	2.3	.3	1.9	8.5	37.1	6
3121	Beverage mfg	(D)	(D)	1.9	6.7	35.3	(X)
31211	Soft drink & ice mfg	1.3	.1	1.1	3.7	9.5	2
312111	Soft drink mfg	1.3	.1	1.1	3.6	9.1	2
31212	Breweries	(D)	(D)	.6	1.4	25.6	(X)
312120	Breweries	(D)	(D)	.6	1.4	25.6	(X)
3122	Tobacco mfg	(D)	(D)	.1	1.8	1.8	(X)
31222	Tobacco product mfg	(D)	(D)	.1	1.8	1.8	(X)
312221	Cigarette mfg	(D)	(D)	(D)	1.7	.9	(X)
313	Textile mills	1.1	(Z)	1.1	3.4	25.1	15
3131	Fiber, yarn, & thread mills	(Z)	—	(Z)	.3	8.9	32
31311	Fiber, yarn, & thread mills	(Z)	—	(Z)	.3	8.9	32
313111	Yarn spinning mills	(Z)	—	(Z)	.1	1.2	32
313112	Yarn texturing, throwing, & twisting mills	—	—	—	.1	7.4	—
3132	Fabric mills	.8	(Z)	.8	1.8	1.0	22
3133	Textile & fabric finishing & fabric coating mills	.3	—	.3	1.3	15.1	4
31331	Textile & fabric finishing mills	.1	—	.1	1.0	13.1	8
313311	Broadwoven fabric finishing mills	(Z)	—	(Z)	.8	12.6	38
31332	Fabric coating mills	.2	—	.2	.3	2.0	1
313320	Fabric coating mills	.2	—	.2	.3	2.0	1
314	Textile product mills	1.1	—	1.1	1.8	3.3	61
3141	Textile furnishings mills	.3	—	.3	1.6	2.0	10
3149	Other textile product mills	.8	—	.8	.1	1.3	86
31499	All other textile product mills	.8	—	.8	.1	1.3	90
314999	All other miscellaneous textile product mills	.7	—	.7	(Z)	1.3	92

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total site clean-up, permits and fees, and cost offsets are all less than \$1.0 million]

NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
321	Wood product mfg	11.4	2.9	8.5	11.1	21.8	25
3211	Sawmills & wood preservation	5.3	.5	4.8	4.1	1.4	35
32111	Sawmills & wood preservation	5.3	.5	4.8	4.1	1.4	35
321113	Sawmills	2.7	.1	2.6	3.6	1.3	60
321114	Wood preservation	2.6	.5	2.2	.5	.1	33
3212	Veneer, plywood, & engineered wood product mfg	1.8	(Z)	1.8	4.6	9.2	17
32121	Veneer, plywood, & engineered wood product mfg	1.8	(Z)	1.8	4.6	9.2	17
321211	Hardwood veneer & plywood mfg	(Z)	(Z)	(Z)	.2	2.4	3
321212	Softwood veneer & plywood mfg	.1	—	.1	1.6	1.0	16
321219	Reconstituted wood product mfg	1.5	(Z)	1.5	2.6	5.6	17
3219	Other wood product mfg	4.3	2.4	1.9	2.3	11.1	49
32191	Millwork	4.1	2.2	1.8	2.0	8.7	52
321911	Wood window & door mfg	2.2	1.7	.5	1.1	4.5	86
321912	Cut stock, resawing lumber, & planing	1.7	.4	1.3	.2	3.7	52
32199	All other wood product mfg	.2	.1	.1	.3	1.5	36
322	Paper mfg	28.0	3.7	24.2	45.4	163.9	28
3221	Pulp, paper, & paperboard mills	16.8	3.1	13.7	40.3	73.4	9
32211	Pulp mills	.7	—	.7	3.2	1.0	1
322110	Pulp mills	.7	—	.7	3.2	1.0	1
32212	Paper mills	8.3	2.9	5.4	23.6	68.0	17
322121	Paper (except newsprint) mills	8.2	2.9	5.3	22.4	67.3	17
322122	Newsprint mills	.1	—	.1	1.3	.7	1
32213	Paperboard mills	7.8	.1	7.7	13.5	4.3	4
322130	Paperboard mills	7.8	.1	7.7	13.5	4.3	4
3222	Converted paper product mfg	11.1	.7	10.5	5.1	90.5	68
32221	Paperboard container mfg	8.4	.6	7.8	1.5	41.2	89
322211	Corrugated & solid fiber box mfg	8.3	.6	7.7	1.0	27.2	91
322212	Folding paperboard box mfg	.1	—	.1	.5	9.6	35
322215	Nonfolding sanitary food container mfg	—	—	—	(Z)	3.9	—
32222	Paper bag & coated & treated paper mfg	.8	.1	.8	2.7	34.5	4
322221	Coated & laminated packaging paper & plastics film mfg	(Z)	—	(Z)	.2	2.0	1
322222	Coated & laminated paper mfg	.2	(Z)	.2	2.2	28.9	5
322225	Laminated aluminum foil mfg for flexible packaging uses	.5	(Z)	.4	.2	2.8	6
32223	Stationery product mfg	—	—	—	.2	9.5	—
322232	Envelope mfg	—	—	—	.1	9.5	—
32229	Other converted paper product mfg	1.9	(Z)	1.9	.8	5.2	8
322291	Sanitary paper product mfg	.1	—	.1	.5	4.0	1
322299	All other converted paper product mfg	1.9	(Z)	1.8	.3	1.2	8
323	Printing & related support activities	10.8	5.9	5.0	3.8	102.1	60
3231	Printing & related support activities	10.8	5.9	5.0	3.8	102.1	60
32311	Printing	10.8	5.9	5.0	3.8	101.5	60
323110	Commercial lithographic printing	1.2	1.1	.1	2.0	52.2	2
323111	Commercial gravure printing	(D)	(D)	.2	.8	36.9	(X)
323112	Commercial flexographic printing	—	—	—	.2	1.1	—
323116	Manifold business form printing	—	—	—	(Z)	1.6	—
323117	Book printing	9.0	4.4	4.6	.2	9.0	72
324	Petroleum & coal products mfg	147.8	27.2	120.6	77.3	235.6	6
3241	Petroleum & coal products mfg	147.8	27.2	120.6	77.3	235.6	6
32411	Petroleum refineries	117.8	20.0	97.8	72.0	227.9	8
324110	Petroleum refineries	117.8	20.0	97.8	72.0	227.9	8
32412	Asphalt paving, roofing, & saturated materials mfg	21.7	.9	20.8	1.1	5.5	2
324122	Asphalt shingle & coating materials mfg	21.6	.9	20.8	.8	4.9	2
32419	Other petroleum & coal products mfg	8.2	6.3	2.0	4.2	2.2	5
324191	Petroleum lubricating oil & grease mfg	8.1	6.3	1.8	.4	2.2	5
324199	All other petroleum & coal products mfg	.2	—	.2	3.8	—	6
325	Chemical mfg	286.5	45.9	240.6	104.3	440.4	23
3251	Basic chemical mfg	164.6	18.4	146.2	53.4	157.8	38
32511	Petrochemical mfg	3.3	.3	3.0	4.9	10.4	15
325110	Petrochemical mfg	3.3	.3	3.0	4.9	10.4	15
32512	Industrial gas mfg	.6	.5	.1	2.2	10.6	48
325120	Industrial gas mfg	.6	.5	.1	2.2	10.6	48
32513	Dye & pigment mfg	4.2	.2	4.0	2.6	8.8	38
325131	Inorganic dye & pigment mfg	.7	.1	.5	1.3	7.2	35
325132	Synthetic organic dye & pigment mfg	3.5	(Z)	3.5	1.3	1.6	44
32518	Other basic inorganic chemical mfg	115.0	7.1	107.9	17.9	16.4	55
325181	Alkalies & chlorine mfg	(D)	(D)	2.5	1.6	3.9	(X)
325182	Carbon black mfg	1.8	—	1.8	2.3	—	1
325188	All other basic inorganic chemical mfg	(D)	(D)	103.6	13.9	12.5	(X)
32519	Other basic organic chemical mfg	41.5	10.3	31.2	25.8	111.7	10
325192	Cyclic crude & intermediate mfg	1.5	.3	1.2	.6	3.5	1
325193	Ethyl alcohol mfg	.4	—	.4	1.3	9.0	41
325199	All other basic organic chemical mfg	39.2	10.1	29.1	23.7	99.2	10
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	57.1	15.3	41.8	20.1	126.2	14
32521	Resin & synthetic rubber mfg	54.9	15.0	39.8	16.9	122.3	14
325211	Plastics material & resin mfg	31.9	1.0	30.9	14.4	109.8	4
325212	Synthetic rubber mfg	22.9	14.0	8.9	2.5	12.6	33
32522	Artificial & synthetic fibers & filaments mfg	2.2	.2	2.0	3.2	3.9	50
325222	Noncellulosic organic fiber mfg	2.2	.2	2.0	2.9	3.9	50
3253	Pesticide, fertilizer, & other agricultural chemical mfg	25.2	6.1	19.1	6.9	43.2	13
32531	Fertilizer mfg	14.1	1.7	12.5	5.6	.9	3
325311	Nitrogenous fertilizer mfg	4.3	1.6	2.7	1.8	.9	1
325312	Phosphatic fertilizer mfg	9.6	(Z)	9.6	3.5	(Z)	3
32532	Pesticide & other agricultural chemical mfg	11.0	4.4	6.6	1.3	42.4	29
325320	Pesticide & other agricultural chemical mfg	11.0	4.4	6.6	1.3	42.4	29
3254	Pharmaceutical & medicine mfg	18.4	3.9	14.5	6.7	59.8	8
32541	Pharmaceutical & medicine mfg	18.4	3.9	14.5	6.7	59.8	8
325411	Medicinal & botanical mfg	(D)	2.9	(D)	.6	24.7	(X)
325412	Pharmaceutical preparation mfg	8.8	1.0	7.8	5.6	32.2	14
325414	Biological product (except diagnostic) mfg	(D)	—	(D)	.3	2.4	(X)

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total site clean-up, permits and fees, and cost offsets are all less than \$1.0 million]

NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
325	Chemical mfg—Con.						
3255	Paint, coating, & adhesive mfg	5.9	.2	5.6	4.3	9.4	54
32551	Paint & coating mfg	5.3	(Z)	5.3	1.9	6.5	60
325510	Paint & coating mfg	5.3	(Z)	5.3	1.9	6.5	60
32552	Adhesive mfg .....	.5	.2	.4	2.5	2.9	22
325520	Adhesive mfg .....	.5	.2	.4	2.5	2.9	22
3256	Soap, cleaning compound, & toilet preparation mfg	3.8	—	3.8	3.8	9.2	36
32561	Soap & cleaning compound mfg	2.6	—	2.6	3.3	6.8	50
325611	Soap & other detergent mfg	(Z)	—	(Z)	2.1	.8	1
325612	Polish & other sanitation good mfg .....	.3	—	.3	.4	4.6	1
325613	Surface active agent mfg	2.3	—	2.3	.7	1.4	56
32562	Toilet preparation mfg	1.2	—	1.2	.5	2.5	37
325620	Toilet preparation mfg	1.2	—	1.2	.5	2.5	37
3259	Other chemical product mfg	11.7	2.1	9.6	9.0	34.7	15
32592	Explosives mfg	4.5	—	4.5	.5	2.6	3
325920	Explosives mfg	4.5	—	4.5	.5	2.6	3
32599	All other chemical product & preparation mfg	7.2	2.1	5.1	8.3	31.9	24
325991	Custom compounding of purchased resin	2.0	.4	1.6	1.0	1.6	72
325992	Photographic film, paper, plate, & chemical mfg	3.0	1.5	1.5	2.2	27.2	24
325998	All other miscellaneous chemical product & preparation mfg	2.2	.3	1.9	5.1	3.1	27
326	Plastics & rubber products mfg	16.7	5.8	10.9	10.9	87.1	8
3261	Plastics product mfg	13.2	5.3	7.9	8.7	77.9	9
32611	Unsupported plastics film, sheet, & bag mfg	4.4	1.6	2.8	2.0	45.5	15
326111	Unsupported plastics bag mfg .....	.9	—	.9	.2	7.7	76
326112	Unsupported plastics packaging film & sheet mfg .....	.1	—	.1	.6	12.7	6
326113	Unsupported plastics film & sheet (except packaging) mfg	3.5	1.6	1.9	1.2	25.1	2
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	(D)	1.4	(D)	.8	1.3	(X)
326121	Unsupported plastics profile shape mfg	(D)	1.4	(D)	.7	1.3	(X)
32613	Laminated plastics plate, sheet, & shape mfg .....	.2	(Z)	.2	.9	3.4	42
326130	Laminated plastics plate, sheet, & shape mfg .....	.2	(Z)	.2	.9	3.4	42
32616	Plastics bottle mfg	—	—	—	(Z)	1.1	—
326160	Plastics bottle mfg	—	—	—	(Z)	1.1	—
32619	Other plastics product mfg	7.0	2.3	4.7	3.6	25.6	14
326192	Resilient floor covering mfg	2.7	1.6	1.1	.3	.1	1
326199	All other plastics product mfg	3.4	.7	2.7	2.4	25.5	22
3262	Rubber product mfg	3.5	.5	3.0	2.2	9.2	9
32621	Tire mfg	1.0	(Z)	1.0	.8	3.4	22
326211	Tire mfg (except retreading)	1.0	(Z)	1.0	.8	3.0	22
32629	Other rubber product mfg	2.3	.5	1.8	1.0	5.2	7
326291	Rubber product mfg for mechanical use	1.3	(Z)	1.3	.7	4.1	2
326299	All other rubber product mfg .....	.9	.5	.4	.3	1.1	15
327	Nonmetallic mineral product mfg	33.0	6.3	26.7	35.8	42.6	14
3271	Clay product & refractory mfg	2.3	1.2	1.1	2.3	20.6	32
32711	Pottery, ceramics, & plumbing fixture mfg .....	.5	.3	.2	.4	20.3	7
327112	Vitreous china, fine earthenware, & other pottery product mfg .....	.4	.2	.2	.2	20.2	1
32712	Clay building material & refractories mfg	1.8	.9	.8	1.9	.2	42
327121	Brick & structural clay tile mfg	1.2	.6	.6	1.4	(Z)	62
3272	Glass & glass product mfg	3.0	—	3.0	8.7	6.6	3
32721	Glass & glass product mfg	3.0	—	3.0	8.7	6.6	3
327211	Flat glass mfg .....	.2	—	.2	2.1	1.7	9
327212	Other pressed & blown glass & glassware mfg	2.7	—	2.7	3.9	.9	3
327213	Glass container mfg .....	.1	—	.1	2.5	1.7	55
327215	Glass product mfg made of purchased glass	(Z)	—	(Z)	.3	2.3	90
3273	Cement & concrete product mfg	17.4	4.6	12.8	18.3	10.1	19
32731	Cement mfg	10.5	2.8	7.7	16.2	3.3	3
327310	Cement mfg	10.5	2.8	7.7	16.2	3.3	3
32732	Ready-mix concrete mfg	5.8	1.5	4.3	1.4	6.1	56
327320	Ready-mix concrete mfg	5.8	1.5	4.3	1.4	6.1	56
3274	Lime & gypsum product mfg	7.8	.3	7.5	4.2	2.1	39
32741	Lime mfg	1.9	.2	1.7	3.3	1.5	14
327410	Lime mfg	1.9	.2	1.7	3.3	1.5	14
32742	Gypsum product mfg	5.9	.1	5.8	.8	.6	51
327420	Gypsum product mfg	5.9	.1	5.8	.8	.6	51
3279	Other nonmetallic mineral product mfg	2.5	.2	2.3	2.3	3.2	30
32791	Abrasive product mfg .....	.1	(Z)	.1	.2	1.4	12
327910	Abrasive product mfg .....	.1	(Z)	.1	.2	1.4	12
32799	All other nonmetallic mineral product mfg	2.5	.2	2.2	2.1	1.9	31
327993	Mineral wool mfg .....	.5	.2	.3	1.0	1.6	41
331	Primary metal mfg	215.5	17.0	198.5	27.1	136.1	7
3311	Iron & steel mills & ferroalloy mfg	74.9	8.4	66.6	10.8	36.8	18
33111	Iron & steel mills & ferroalloy mfg	74.9	8.4	66.6	10.8	36.8	18
331111	Iron & steel mills	70.0	3.4	66.6	10.4	35.0	19
331112	Electrometallurgical ferroalloy product mfg	5.0	5.0	—	.4	1.7	1
3312	Steel product mfg from purchased steel	5.3	1.6	3.7	1.7	10.7	52
33121	Iron & steel pipes & tubes mfg from purchased steel	4.1	1.3	2.8	.7	(Z)	67
331210	Iron & steel pipes & tubes mfg from purchased steel	4.1	1.3	2.8	.7	(Z)	67
33122	Rolling & drawing of purchased steel	1.2	.3	.9	1.1	10.7	18
331221	Cold-rolled steel shape mfg .....	.8	.3	.5	.7	9.5	1
331222	Steel wire drawing .....	.5	.1	.4	.4	1.2	45
3313	Alumina & aluminum production & processing	36.8	6.4	30.4	5.6	57.2	7
33131	Alumina & aluminum production & processing	36.8	6.4	30.4	5.6	57.2	7
331312	Primary aluminum production	32.3	5.8	26.5	2.6	47.8	1
331314	Secondary smelting & alloying of aluminum	2.7	—	2.7	.7	7.4	82
331315	Aluminum sheet, plate, & foil mfg	1.4	.6	.9	1.2	.7	2
331316	Aluminum extruded product mfg .....	.3	—	.3	.7	1.4	19

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005—Con.

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NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
331	Primary metal mfg—Con.						
3314	Nonferrous metal (except aluminum) production & processing	5.9	.2	5.7	4.3	15.8	18
33141	Nonferrous metal (except aluminum) smelting & refining	1.0	.2	.8	1.3	1.4	12
331419	Other nonferrous metal primary smelting & refining .....	.8	—	.8	1.1	1.4	16
33142	Copper rolling, drawing, extruding, & alloying	3.3	—	3.3	.8	11.3	32
331421	Copper rolling, drawing, & extruding	2.8	—	2.8	.6	2.0	38
331422	Copper wire (except mechanical) drawing .....	.1	—	.1	.1	8.8	65
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	1.6	—	1.6	2.3	3.1	12
331491	Other nonferrous metal rolling, drawing, & extruding .....	.9	—	.9	.7	2.5	15
331492	Other nonferrous metal secondary smelting, refining, & alloying .....	.7	—	.7	1.5	.6	19
3315	Foundries	92.5	.4	92.1	4.6	15.6	1
33151	Ferrous metal foundries	3.8	.3	3.4	3.7	4.0	3
331511	Iron foundries	2.5	.2	2.3	2.6	3.4	1
331513	Steel foundries (except investment)	1.0	.1	.9	.4	.1	1
33152	Nonferrous metal foundries	88.8	.1	88.7	.9	11.6	1
331521	Aluminum die-casting foundries	87.2	.1	87.2	.2	6.5	1
331522	Nonferrous (except aluminum) die-casting foundries	1.2	—	1.2	.3	4.5	1
332	Fabricated metal product mfg	53.2	22.9	30.2	16.2	324.6	10
3321	Forging & stamping	3.9	.1	3.9	1.1	24.6	9
33211	Forging & stamping	3.9	.1	3.9	1.1	24.6	9
332111	Iron & steel forging .....	.8	(Z)	.8	.2	8.0	39
332112	Nonferrous forging .....	.5	—	.5	.3	7.3	1
332114	Custom roll forming	2.2	—	2.2	.1	(D)	1
332116	Metal stamping .....	.2	(Z)	.2	.4	7.2	49
332117	Powder metallurgy part mfg .....	.2	(Z)	.2	.1	1.6	2
3322	Cutlery & handtool mfg	5.0	(Z)	5.0	.6	4.3	64
33221	Cutlery & handtool mfg	5.0	(Z)	5.0	.6	4.3	64
332211	Cutlery & flatware (except precious) mfg	1.3	—	1.3	.1	2.2	1
332212	Hand & edge tool mfg	3.7	(Z)	3.7	.4	1.3	88
3323	Architectural & structural metals mfg	1.3	.3	1.1	1.5	4.6	27
33232	Ornamental & architectural metal products mfg .....	.6	—	.6	.7	4.0	56
332321	Metal window & door mfg .....	.4	—	.4	.2	2.4	76
332323	Ornamental & architectural metal work mfg .....	.2	—	.2	.1	1.3	81
3324	Boiler, tank, & shipping container mfg	3.2	1.2	1.9	1.5	2.6	39
33241	Power boiler & heat exchanger mfg	1.8	1.2	.6	.1	(D)	65
332410	Power boiler & heat exchanger mfg	1.8	1.2	.6	.1	(D)	65
33243	Metal can, box, & other metal container (light gauge) mfg	1.0	(Z)	1.0	1.1	(D)	25
3325	Hardware mfg	2.8	(Z)	2.7	.6	3.8	37
33251	Hardware mfg	2.8	(Z)	2.7	.6	3.8	37
332510	Hardware mfg	2.8	(Z)	2.7	.6	3.8	37
3327	Machine shops, turned product, & screw, nut, & bolt mfg	6.7	.1	6.7	1.3	254.0	29
33271	Machine shops	6.0	(Z)	5.9	.4	250.0	31
332710	Machine shops	6.0	(Z)	5.9	.4	250.0	31
33272	Turned product & screw, nut, & bolt mfg .....	.8	(Z)	.7	.9	4.0	62
332721	Precision turned product mfg .....	.6	(Z)	.6	.2	1.4	81
332722	Bolt, nut, screw, rivet, & washer mfg .....	.2	(Z)	.2	.8	2.6	50
3328	Coating, engraving, heat treating, & allied activities	3.5	.4	3.1	6.8	8.4	25
33281	Coating, engraving, heat treating, & allied activities	3.5	.4	3.1	6.8	8.4	25
332812	Metal coating/engraving (exc jewelry/silverware)/allied services	(Z)	—	(Z)	1.9	3.4	79
332813	Electroplating, plating, polishing, anodizing, & coloring	3.4	.4	3.1	4.4	4.5	26
3329	Other fabricated metal product mfg	26.5	20.8	5.7	2.5	21.7	10
33291	Metal valve mfg .....	.3	(Z)	.2	1.4	18.4	34
332911	Industrial valve mfg	(D)	(Z)	(D)	.3	1.8	(X)
332912	Fluid power valve & hose fitting mfg .....	.1	—	.1	.9	16.5	48
33299	All other fabricated metal product mfg	26.2	20.8	5.5	1.1	3.3	10
332992	Small arms ammunition mfg	21.9	19.0	2.9	.1	.2	1
332993	Ammunition (except small arms) mfg .....	.3	(Z)	.3	—	1.8	9
332999	All other miscellaneous fabricated metal product mfg	3.0	1.3	1.7	.4	.5	84
333	Machinery mfg	25.9	3.9	22.0	5.3	61.4	16
3331	Agriculture, construction, & mining machinery mfg	2.2	1.2	1.0	.7	11.4	41
33311	Agricultural implement mfg	(D)	.1	(D)	.4	5.0	(X)
333111	Farm machinery & equipment mfg	(Z)	—	(Z)	.3	4.4	53
33312	Construction machinery mfg	(D)	—	(D)	.3	2.0	(X)
333120	Construction machinery mfg	(D)	—	(D)	.3	2.0	(X)
33313	Mining & oil & gas field machinery mfg	1.7	1.1	.6	.1	4.4	51
333132	Oil & gas field machinery & equipment mfg	1.7	1.1	.6	.1	4.3	51
3333	Commercial & service industry machinery mfg	(D)	(D)	.2	.5	2.5	(X)
33331	Commercial & service industry machinery mfg	(D)	(D)	.2	.5	2.5	(X)
333314	Optical instrument & lens mfg	(D)	(D)	—	.2	2.0	(X)
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	2.4	1.0	1.3	.8	24.7	17
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	2.4	1.0	1.3	.8	24.7	17
333414	Heating equipment (except warm air furnaces) mfg .....	.2	—	.2	.2	2.3	73
333415	AC & warm air heating & commercial/industrial refig equip mfg	2.0	.9	1.1	.6	21.7	18
3335	Metalworking machinery mfg	6.6	—	6.6	.3	.7	48
3336	Engine, turbine, & power transmission equipment mfg	(D)	(D)	3.3	1.3	12.4	(X)
33361	Engine, turbine, & power transmission equipment mfg	(D)	(D)	3.3	1.3	12.4	(X)
333611	Turbine & turbine generator set unit mfg	(D)	(D)	1.6	.8	(D)	(X)
333613	Mechanical power transmission equipment mfg	1.2	(Z)	1.1	.1	.3	63
333618	Other engine equipment mfg .....	.4	—	.4	.3	11.9	46
3339	Other general-purpose machinery mfg	10.2	1.2	9.1	1.3	9.3	22
33391	Pump & compressor mfg	5.0	1.1	3.9	.2	2.7	44
33392	Material handling equipment mfg .....	.8	(Z)	.8	.5	1.8	1
33399	All other general-purpose machinery mfg	4.5	.1	4.4	.6	4.9	1
333992	Welding & soldering equipment mfg	—	—	—	(D)	(D)	—
333999	All other miscellaneous general-purpose machinery mfg	3.2	—	3.2	.3	1.9	1

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005—Con.

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NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
334	Computer & electronic product mfg	31.8	2.5	29.3	22.6	101.9	6
3341	Computer & peripheral equipment mfg	2.7	—	2.7	.7	6.8	16
3342	Communications equipment mfg	6.1	(Z)	6.1	2.3	1.8	7
3344	Semiconductor & other electronic component mfg	17.8	2.5	15.3	18.1	22.0	8
33441	Semiconductor & other electronic component mfg	17.8	2.5	15.3	18.1	22.0	8
334412	Bare printed circuit board mfg	—	—	—	9.3	—	—
334413	Semiconductor & related device mfg	—	—	—	7.1	14.0	4
334417	Electronic connector mfg	14.0	.6	13.4	—	(Z)	95
334418	Printed circuit assembly (electronic assembly) mfg	1.3	1.3	—	.2	2.8	(X)
3345	Navigation, measuring, medical, & control instruments mfg	(D)	(D)	1.4	—	—	—
33451	Navigation, measuring, medical, & control instruments mfg	5.2	(Z)	5.2	1.4	58.8	14
334510	Navigation, measuring, medical, & control instruments mfg	5.2	(Z)	5.2	1.4	58.8	14
334511	Electromedical & electrotherapeutic apparatus mfg	—	—	—	.1	4.8	—
334511	Search, detection, navigation, & guidance instrument mfg	1.9	—	1.9	.5	51.5	38
334515	Electricity measuring & testing instrument mfg	2.0	(Z)	2.0	.1	.2	1
3346	Mfg & reproducing magnetic & optical media	(Z)	—	(Z)	.2	12.4	1
33461	Mfg & reproducing magnetic & optical media	(Z)	—	(Z)	.2	12.4	1
334612	Prerecorded CD (except software), tape, & record reproducing	—	—	—	(Z)	7.2	—
334613	Magnetic & optical recording media mfg	(Z)	—	(Z)	.2	4.6	1
335	Electrical equipment, appliance, & component mfg	21.9	8.5	13.4	3.4	53.1	30
3351	Electric lighting equipment mfg	7.8	6.4	1.4	.7	2.8	78
33511	Electric lamp bulb & part mfg	7.0	6.4	.6	.2	.7	87
335110	Electric lamp bulb & part mfg	7.0	6.4	.6	.2	.7	87
33512	Lighting fixture mfg	.8	(Z)	.8	.5	2.1	41
335122	Commercial/industrial/institutional electric lighting fixture mfg	(D)	(D)	.3	.2	1.2	(X)
3352	Household appliance mfg	3.0	—	3.0	.6	6.2	1
33521	Small electrical appliance mfg	2.7	—	2.7	(Z)	.4	1
335211	Electric housewares & household fan mfg	2.6	—	2.6	(Z)	.3	1
33522	Major appliance mfg	.3	—	.3	.6	5.8	1
335222	Household refrigerator & home freezer mfg	(D)	—	(D)	.1	2.5	(X)
335224	Household laundry equipment mfg	(D)	—	(D)	.1	2.3	(X)
3353	Electrical equipment mfg	3.9	1.8	2.2	.8	4.9	51
3359	Other electrical equipment & component mfg	7.1	.3	6.8	1.3	39.2	19
33591	Battery mfg	5.5	—	5.5	.3	3.9	24
335911	Storage battery mfg	4.0	—	4.0	.2	2.5	32
335912	Primary battery mfg	1.4	—	1.4	.1	1.4	1
33592	Communication & energy wire & cable mfg	.4	—	.4	.1	33.6	51
33599	All other electrical equipment & component mfg	1.1	.3	.8	.6	1.6	31
336	Transportation equipment mfg	120.2	9.8	110.4	17.3	255.5	7
3361	Motor vehicle mfg	11.7	.2	11.6	4.0	77.9	30
33611	Automobile & light duty motor vehicle mfg	11.6	.2	11.5	3.6	73.5	30
336111	Automobile mfg	3.4	—	3.4	2.2	72.4	1
336112	Light truck & utility vehicle mfg	8.2	.2	8.1	1.4	1.1	42
33612	Heavy duty truck mfg	.1	—	.1	.4	4.3	8
336120	Heavy duty truck mfg	.1	—	.1	.4	4.3	8
3362	Motor vehicle body & trailer mfg	(D)	(D)	(D)	.8	3.5	(X)
33621	Motor vehicle body & trailer mfg	(D)	(D)	(D)	.8	3.5	(X)
336211	Motor vehicle body mfg	(Z)	—	(Z)	.2	2.4	75
3363	Motor vehicle parts mfg	25.0	.5	24.5	3.4	147.6	25
33631	Motor vehicle gasoline engine & engine parts mfg	(D)	(D)	1.6	.7	30.6	(X)
336311	Carburetor, piston, piston ring, & valve mfg	.1	—	.1	.2	2.4	1
336312	Gasoline engine & engine parts mfg	(D)	(D)	1.5	.5	28.2	(X)
33632	Motor vehicle electrical & electronic equipment mfg	(D)	(D)	1.0	.8	5.0	(X)
336321	Vehicular lighting equipment mfg	(Z)	(Z)	—	(Z)	1.3	1
336322	Other motor vehicle electrical & electronic equipment mfg	(D)	(D)	1.0	.7	3.8	(X)
33633	Motor vehicle steering & suspension component (except spring) mfg	(Z)	—	(Z)	.3	9.3	57
336330	Motor vehicle steering & suspension component (except spring) mfg	(Z)	—	(Z)	.3	9.3	57
33634	Motor vehicle brake system mfg	.3	—	.3	.2	7.3	21
336340	Motor vehicle brake system mfg	.3	—	.3	.2	7.3	21
33635	Motor vehicle transmission & power train parts mfg	3.1	.2	2.8	.3	6.1	21
336350	Motor vehicle transmission & power train parts mfg	3.1	.2	2.8	.3	6.1	21
33636	Motor vehicle seating & interior trim mfg	5.0	—	5.0	(Z)	2.4	97
336360	Motor vehicle seating & interior trim mfg	5.0	—	5.0	(Z)	2.4	97
33637	Motor vehicle metal stamping	13.1	(Z)	13.1	.2	59.1	27
336370	Motor vehicle metal stamping	13.1	(Z)	13.1	.2	59.1	27
33639	Other motor vehicle parts mfg	.6	(Z)	.6	.9	27.8	16
336399	All other motor vehicle parts mfg	.6	(Z)	.6	.8	27.5	16
3364	Aerospace product & parts mfg	75.0	5.9	69.1	5.5	7.2	3
33641	Aerospace product & parts mfg	75.0	5.9	69.1	5.5	7.2	3
336411	Aircraft mfg	4.3	.1	4.2	.5	.7	3
336412	Aircraft engine & engine parts mfg	3.9	.3	3.6	2.6	3.1	24
336413	Other aircraft part & auxiliary equipment mfg	8.3	.8	5.5	1.4	2.7	27
336414	Guided missile & space vehicle mfg	6.3	4.5	3.8	.3	(Z)	1
336415	Guided missile & space vehicle propulsion unit & parts mfg	51.1	.2	51.0	.7	.7	1
336419	Other guided missile & space vehicle parts & auxiliary equip mfg	1.1	.1	1.0	.1	.1	1
3365	Railroad rolling stock mfg	3.3	1.9	1.5	.7	7.3	53
33651	Railroad rolling stock mfg	3.3	1.9	1.5	.7	7.3	53
336510	Railroad rolling stock mfg	3.3	1.9	1.5	.7	7.3	53
3366	Ship & boat building	3.1	1.1	2.0	2.6	6.2	5
33661	Ship & boat building	3.1	1.1	2.0	2.6	6.2	5
336611	Ship building & repairing	3.0	1.1	1.9	.8	5.9	1
336612	Boat building	.2	.1	.1	1.8	.3	75
3369	Other transportation equipment mfg	(D)	(D)	(D)	.3	5.8	(X)
33699	Other transportation equipment mfg	(D)	(D)	(D)	.3	5.8	(X)
336991	Motorcycle, bicycle, & parts mfg	(D)	(D)	(D)	.2	(D)	(X)
336999	All other transportation equipment mfg	(D)	—	(D)	.1	(D)	(X)

Table 9. Other Costs and Expenditures and Cost Offsets by Industry: 2005—Con.

[Million dollars. Totals may not agree with detail because of independent rounding. See introductory text for the meaning of abbreviations and symbols. No industries are shown where total site clean-up, permits and fees, and cost offsets are all less than \$1.0 million]

NAICS code	Industry	Site clean-up			Permits and fees	Cost offsets	Relative standard error SCU
		Total	Capital expenditures	Operating costs			
337	Furniture & related product mfg	2.4	.5	1.9	3.7	21.6	28
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	.5	.1	.3	2.7	8.0	25
33711	Wood kitchen cabinet & counter top mfg	—	—	—	1.1	2.0	—
337110	Wood kitchen cabinet & counter top mfg	—	—	—	1.1	2.0	—
33712	Household & institutional furniture mfg . . . . .	.5	.1	.3	1.5	6.0	25
337121	Upholstered household furniture mfg	(D)	—	(D)	.2	1.5	(X)
337122	Nonupholstered wood household furniture mfg . . . . .	.1	.1	—	1.1	4.2	86
3372	Office furniture (including fixtures) mfg	1.2	.4	.8	1.0	13.1	33
33721	Office furniture (including fixtures) mfg	1.2	.4	.8	1.0	13.1	33
337214	Office furniture (except wood) mfg . . . . .	.4	—	.4	.2	11.5	57
339	Miscellaneous mfg	4.2	1.0	3.2	4.1	21.2	16
3391	Medical equipment & supplies mfg	2.6	.2	2.4	1.3	9.1	25
33911	Medical equipment & supplies mfg	2.6	.2	2.4	1.3	9.1	25
339111	Laboratory apparatus & furniture mfg	—	—	—	(Z)	(D)	—
339112	Surgical & medical instrument mfg	1.3	.2	1.1	.9	1.0	7
339113	Surgical appliance & supplies mfg . . . . .	.1	(Z)	(Z)	.2	6.2	1
339115	Ophthalmic goods mfg	1.2	—	1.2	.1	(D)	53
3399	Other miscellaneous mfg	1.6	.7	.8	2.8	12.1	11
33992	Sporting & athletic goods mfg . . . . .	.3	—	.3	.3	2.3	1
339920	Sporting & athletic goods mfg . . . . .	.3	—	.3	.3	2.3	1
33994	Office supplies (except paper) mfg	(Z)	—	(Z)	.1	1.2	1
33995	Sign mfg	—	—	—	.4	1.7	—
339950	Sign mfg	—	—	—	.4	1.7	—
33999	All other miscellaneous mfg	1.2	.7	.4	1.7	6.8	15
339991	Gasket, packing, & sealing device mfg . . . . .	.3	—	.3	.3	3.0	54
339995	Burial casket mfg	(D)	—	(D)	.1	(D)	(X)
339999	All other miscellaneous mfg	(Z)	—	(Z)	1.2	.2	1

Appendix A.

MA-200 Report Form and Instructions

The MA-200 form and instructions are shown on the following pages.

**HOW TO
REPORT
DOLLAR
FIGURES**



Dollar figures should be **rounded to thousands** of dollars.

If a figure is **\$1,025,628.79**: **Report** →

If a value is "0" (or less than \$500.00). **Report** →

Mark "X" if less than \$500.00

\$Mil.	Thou.	Dol.
1	026	

Item 1 FACILITY INFORMATION – Continued

C. Report the following information for this facility in 2005.

1. Capital expenditures, including all outlays during the year for buildings and other structures, machinery, and equipment that are chargeable to the fixed asset account and for which depreciation or amortization reserves are maintained 133
2. Total value of products shipped, including interplant transfers, exports, and other receipts. 132

Mark "X" if less than \$500.00

\$Mil.	Thou.	Dol.

Mark "X" if Zero

Number

3. Total employment, including full- and part-time and leased employees. 131

--

D. Mark "X" the box that best describes this facility's pollution abatement expenditures for 2005. *Include pollution abatement capital expenditures and operating costs for treatment, disposal, recycling and pollution prevention.*

- 120 These expenditures were \$0 in 2005. *(There were NO pollution abatement expenditures for 2005.)*
- 121 These expenditures were included in rent, taxes, or lease agreements.
- 122 These expenditures were between \$1 and \$999.
- 123 These expenditures were more than \$999.

Go to **Item 8** on page 7.

Go to **Item 2** on page 3.

Item 2 POLLUTION ABATEMENT ACTIVITIES

A. In column (1), report the number of air pollution treatment control devices that were operating at the beginning of 2005. In column (2), report the number of newly installed devices during 2005. (See page 7 in the guidelines for instructions.)

Control Device	Mark "X" if Zero	(1)	Mark "X" if Zero	(2)
		Total Number of Devices Operating Facility-Wide (Beginning of 2005)		Number of Devices Newly Installed (During 2005)
1. Electrostatic precipitators (ESP)	201 <input type="checkbox"/>		214 <input type="checkbox"/>	
2. Baghouses	202 <input type="checkbox"/>		215 <input type="checkbox"/>	
3. Fabric filters	226 <input type="checkbox"/>		227 <input type="checkbox"/>	
4. Venturi scrubbers	203 <input type="checkbox"/>		216 <input type="checkbox"/>	
5. Non-Venturi wet scrubbers	228 <input type="checkbox"/>		229 <input type="checkbox"/>	
6. Acid-gas scrubbers	204 <input type="checkbox"/>		217 <input type="checkbox"/>	
7. Carbon adsorbers	205 <input type="checkbox"/>		218 <input type="checkbox"/>	
8. Incinerator/thermal oxidizers/ catalytic oxidizers	206 <input type="checkbox"/>		219 <input type="checkbox"/>	
9. Low-NOx burners	239 <input type="checkbox"/>		240 <input type="checkbox"/>	
10. Flares	207 <input type="checkbox"/>		220 <input type="checkbox"/>	
11. Process incinerators/boilers	253 <input type="checkbox"/>		284 <input type="checkbox"/>	
12. Refrigerated condensers	208 <input type="checkbox"/>		221 <input type="checkbox"/>	
13. Biofilter/bioreactor	209 <input type="checkbox"/>		222 <input type="checkbox"/>	
14. Selective non-catalytic reduction (SNCR)	210 <input type="checkbox"/>		223 <input type="checkbox"/>	
15. Selective catalytic reduction (SCR)	211 <input type="checkbox"/>		224 <input type="checkbox"/>	
16. Continuous Emissions Monitoring Systems (CEMS)	286 <input type="checkbox"/>		288 <input type="checkbox"/>	
17. Other	212 <input type="checkbox"/>		225 <input type="checkbox"/>	

Describe -
213

B. Mark "X" the water pollution abatement techniques that were used at this facility in 2005. (See page 7 in the guidelines for instructions.)

- 230 Physical (containing, screening, filtration, UV disinfection, underground injection, etc.)
- 231 Biological (activated sludge, aeration lagoon, biological filter, etc.)
- 232 Chemical (oxidation, reduction, neutralization, etc.)
- 233 Thermal (incineration, pyrolysis, etc.)

Gallons per year

- 1. What quantity of wastewater was treated **on-site**? 234
- 2. What quantity of wastewater was treated **off-site**? 235

C. Mark "X" the solid waste pollution abatement techniques that were used at this facility in 2005. (See page 7 in the guidelines for instructions.)

- 270 Physical (containment, dewatering, landfilling, underground injection, etc.)
- 271 Biological (composing, landfarming, phytoremediation, etc.)
- 272 Thermal (incineration, pyrolysis, etc.)

- 1. What quantity of solid waste was treated **on-site**? 273
- 2. What quantity of solid waste was disposed of **on-site**? 274
- 3. What quantity of solid waste was disposed of **off-site**? 278

Indicate units. (Mark "X" only one box.)

- 275 Short tons
- 276 Other - Describe
- 277

Item 3 POLLUTION ABATEMENT CAPITAL EXPENDITURES

Report the value of **TOTAL POLLUTION ABATEMENT CAPITAL EXPENDITURES** in **Item 3 B** below even if you are unable to provide separate values for each component of pollution abatement capital expenditures in **Item 3 A**.

- Report only the incremental capital expenditures for pollution abatement activities. (See page 5 in the guidelines for a discussion of "incremental" costs and page 8 for an example.)
- Include only the incremental cost of facility/process upgrades/modifications for which the primary purpose is pollution abatement. (See page 5 in the guidelines for a discussion of "primary purpose.")
- Include all installation and start-up costs for pollution abatement expenditures. Include labor only when contracted specifically for installation.
- Include capital expenditures related to monitoring and testing.
- Do NOT include pollution abatement capital expenditures from a previous year.
- Do NOT include depreciation. (Depreciation expenses should be reported in **Item 4 A5**.)
- Do NOT include capital expenditures related to site cleanup. (Site cleanup costs should be reported in **Item 5 B**.)
- Do NOT include capital expenditures related to product redesign or reformulation intended to reduce the pollution generated by consumers or users of products manufactured at this facility. (Product redesign and/or reformulation costs should be reported in **Item 5 C**.)

A. Report the value of pollution abatement capital expenditures by the following four activity categories for this facility in 2005. (See page 3 in the guidelines for definitions and pages 8 and 13–14 for examples.)

	Mark "X" if less than \$500.00	\$Mil.	Thou.	Dol.
1. Treatment/capture	301 <input type="checkbox"/>			
2. Recycling	302 <input type="checkbox"/>			
3. Disposal	303 <input type="checkbox"/>			
4. Pollution prevention	304 <input type="checkbox"/>			

a. Indicate which components are included in the POLLUTION PREVENTION value you reported in **Item 3 A4** above. (Mark "X" all that apply.) (See page 3 in the guidelines for definitions.)

- 305 Raw materials substitution or modifications
- 306 Leak and spill prevention
- 307 Process/equipment modification/redesign
- 308 Other

B. Add **Item 3 A1–4** to calculate **TOTAL POLLUTION ABATEMENT CAPITAL EXPENDITURES** in 2005. Report the value of **TOTAL POLLUTION ABATEMENT CAPITAL EXPENDITURES** even if you are unable to provide separate values for **Item 3 A1–4**.

	Mark "X" if less than \$500.00	\$Mil.	Thou.	Dol.
TOTAL POLLUTION ABATEMENT CAPITAL EXPENDITURES	310 <input type="checkbox"/>			

C. What percentage of **TOTAL POLLUTION ABATEMENT CAPITAL EXPENDITURES** in **Item 3 B** was spent for each of the three types of media for this facility in 2005? (See page 3 in the guidelines for definitions and page 9 for instructions.)

	Mark "X" if Zero	Percent	
1. Air emissions	321 <input type="checkbox"/>		%
2. Water discharges	322 <input type="checkbox"/>		%
3. Solid waste	323 <input type="checkbox"/>		%
4. Total		100	%

D. Report the gross book value (*acquisition costs*) of pollution abatement capital assets at your facility as of December 31, 2005 (*adjusted for assets sold, retired, scrapped, and destroyed; not adjusted for depreciation charges*). (See page 9 in the guidelines for a definition.)

	Mark "X" if less than \$500.00	\$Mil.	Thou.	Dol.
GROSS BOOK VALUE OF POLLUTION ABATEMENT CAPITAL ASSETS	707 <input type="checkbox"/>			

Item 4 POLLUTION ABATEMENT OPERATING COSTS

Report the value of **TOTAL POLLUTION ABATEMENT OPERATING COSTS** in **Item 4 B** below even if you are unable to provide separate values for each component of pollution abatement operating costs in **Item 4 A**.

- Report only the incremental operating costs for pollution abatement activities. (See page 5 in the guidelines for a discussion of "incremental" costs and page 9 for an example.)
- Include operating costs related to monitoring, testing, and on-site administration costs associated with environmental protection.
- Do NOT include operating costs related to site cleanup. (Site cleanup costs should be reported in **Item 5 B**.)
- Do NOT include operating costs related to product redesign or reformulation intended to reduce the pollution generated by consumers or users from products manufactured at this facility. (Product redesign and/or reformulation costs should be reported in **Item 5 C**.)
- Cost offsets, such as revenue from recycling, should NOT be deducted from costs reported in this item. (Cost offsets should be reported in **Item 6 A**.)

A. Report the value of pollution abatement operating costs by the following five cost categories for this facility in 2005. (See pages 9–12 in the guidelines for definitions and examples.)

	Mark "X" if less than \$500.00	\$Mil.	Thou.	Dol.
1. Salaries, wages, and benefits (for all time spent by professional, administrative, operating, and maintenance employees on pollution abatement activities)	401 <input type="checkbox"/>			
2. Energy costs (electricity, fuels, and other energy costs).	402 <input type="checkbox"/>			
3. Materials and supplies (treatment chemicals, catalysts, replacement parts, etc.).	403 <input type="checkbox"/>			
4. Contract work, leasing, and other purchased services (including payments to government for industrial sewage services and solid waste disposal, and recycling)	404 <input type="checkbox"/>			
5. Depreciation.	428 <input type="checkbox"/>			

B. Add **Item 4 A1–5** to calculate **TOTAL POLLUTION ABATEMENT OPERATING COSTS** in 2005. Report the value of **TOTAL POLLUTION ABATEMENT OPERATING COSTS** even if you are unable to provide separate values for **Item 4 A1–5**.

	Mark "X" if less than \$500.00	\$Mil.	Thou.	Dol.
TOTAL POLLUTION ABATEMENT OPERATING COSTS	410 <input type="checkbox"/>			

C. What percentage of **TOTAL POLLUTION ABATEMENT OPERATING COSTS** in **Item 4 B** was spent for each of the following four pollution abatement activity categories for this facility in 2005? (See page 3 in the guidelines for definitions and pages 13–14 for examples.)

	Mark "X" if Zero	Percent	
1. Treatment/capture	421 <input type="checkbox"/>		%
2. Recycling.	422 <input type="checkbox"/>		%
3. Disposal	423 <input type="checkbox"/>		%
4. Pollution prevention	424 <input type="checkbox"/>		%
5. Total		100	%

a. Indicate which components are included in the **POLLUTION PREVENTION** value you reported in **Item 4 C4** above. (Mark "X" all that apply.) (See page 3 in the guidelines for definitions.)

- 425 Raw materials substitution or modifications
- 426 Leak and spill prevention
- 427 Process/equipment modification/redesign
- 428 Other

D. What percentage of **TOTAL POLLUTION ABATEMENT OPERATING COSTS** in **Item 4 B** was spent for each of the three types of media for this facility in 2005? (See page 3 in the guidelines for definitions and page 12 for instructions.)

	Mark "X" if Zero	Percent	
1. Air emissions	405 <input type="checkbox"/>		%
2. Water discharges	406 <input type="checkbox"/>		%
3. Solid waste	407 <input type="checkbox"/>		%
4. Total		100	%

Item 5 COSTS NOT INCLUDED IN PREVIOUS ITEMS

A. What were the total payments to government entities for PERMITS AND FEES related to pollution abatement for this facility in 2005? (See page 12 in the guidelines for instructions and page 14 for an example.)

Mark "X" if less than \$500.00

\$Mil.	Thou.	DoI.

501

B. What were the capital expenditures and operating costs for SITE CLEANUP for this facility in 2005? (See page 12 in the guidelines for instructions and page 14 for an example.)

Mark "X" if less than \$500.00

\$Mil.	Thou.	DoI.

1. Capital expenditures 503

2. Operating costs 505

C. What were the capital expenditures and operating costs related to PRODUCT REDESIGN or reformulation intended to reduce the pollution generated by consumers or users of products manufactured at this facility (downstream pollutants) in 2005? (See page 12 in the guidelines for instructions and page 14 for examples.)

Mark "X" if less than \$500.00

\$Mil.	Thou.	DoI.

1. Capital expenditures 507

2. Operating costs 509

Item 6 COST OFFSETS

Report the value of cost offsets for your facility in 2005. (See page 12 in the guidelines for instructions and page 14 for examples.)

- Include only cost offsets from activities whose primary purpose is pollution abatement.
- Include only cost offsets associated with the activities for the costs reported in **Item 4**.
- Do NOT include cost reductions from energy-efficiency improvements or revenue from recycling activities that are profitable in the absence of environmental concerns.

A. What was the total value of cost offsets for this facility in 2005?

Mark "X" if less than \$500.00

\$Mil.	Thou.	DoI.

COST OFFSETS 601

B. Which types of cost offsets were included in **Item 6 A** above? (Mark "X" all that apply.)

603 Revenue from recycling

604 Energy cost savings

605 Reduced material costs

606 Other – Describe:

607

Item 7 BURDEN

Estimate the number of hours spent filling out this form. Include the time you and all other staff spent reviewing the instructions, preparing the estimates and completing the survey form.

Hours

801

Item 8 CERTIFICATION

A. Provide the following information on the person to contact regarding this survey.

Name of person to contact regarding this report <i>(Please print)</i>	Telephone		
	Area code	Number	Ext.
E-mail address	Fax number		

B. Provide the name, title and signature of the person who verifies that the information reported in this survey is to the best of their knowledge accurate. The authorizing official may be a plant manager, vice president, or environmental health and safety official.

Name of authorized manager <i>(Please print)</i>	Title
Signature of authorized manager	Date

Feel free to add any comments about the survey in the space provided below. Thank you for your participation.

Comments:

2005 Pollution Abatement Costs and Expenditures (PACE) Survey Guidelines

	Page
Frequently Asked Questions	2
Survey Definitions	3
Facility	3
Pollution	3
Air Emissions	3
Water Discharges	3
Solid Waste	3
Pollution Abatement Activities	3
Treatment/Capture	3
Recycling	3
Disposal	3
Pollution Prevention	3
General instructions	5
Item By Item Instructions	7
Item 1: Facility Information	7
Item 2: Pollution Abatement Activities	7
Item 2A: Types of Air Pollution Abatement	7
Item 2B: Types of Water Pollution Abatement	7
Item 2C: Types of Solid Waste Pollution Abatement	7
Item 3: Pollution Abatement Capital Expenditures	7
Item 3A: Activity Categories (Treatment/Capture, Recycling, Disposal, Pollution Prevention).	8
Item 3B: Total Pollution Abatement Capital Expenditures	9
Item 3C: By Pollution Medium (Air, Water, and Solid Waste)	9
Item 3D: Gross Book Value of Pollution Abatement Capital Assets	9
Item 4: Pollution Abatement Operating Costs	9
Item 4A: Cost Categories	9
Salaries, Wages, and Benefits.	9
Energy Costs	10
Materials and Supplies	11
Contract Work, Leasing, and Other Purchased Services	11
Depreciation	12
Item 4B: Total Pollution Abatement Operating Costs	12
Item 4C: By Activity Categories (Treatment/Capture, Recycling, Disposal, Pollution Prevention).	12
Item 4D: By Pollution Medium (Air, Water, and Solid Waste)	12
Item 5: Costs Not Included in Previous Items	12
Item 5A: Permits and Fees	12
Item 5B: Site Cleanup.	12
Item 5C: Product Redesign	12
Item 6: Cost Offsets	12
Item 7: Burden	12
Item 8: Certification	12
Additional Examples	13

U S C E N S U S B U R E A U

FREQUENTLY ASKED QUESTIONS

What is the purpose of this survey?

This survey collects information on the pollution abatement costs and expenditures related to environmental protection at your specific facility in 2005. Pollution abatement includes treatment/capture, recycling, disposal, and pollution prevention. Pollution abatement costs and expenditures include new capital equipment, annual operating costs, and certain other expenses. The PACE survey only includes expenditures whose primary purpose is environmental protection.

How are these data used?

The Environmental Protection Agency (EPA) uses these data to calculate the costs of regulatory programs. Trade associations, manufacturers, marketing and research companies, universities, financial and environmental institutions, other federal agencies, state and local governments, and environmental reporters also use PACE data.

Is your response to this survey mandatory?

Yes. Responding to the PACE survey is required by law (Title 13, United States Code, Sections 131, 182, 193, 224, and 225). You may visit our website at www.access.gpo.gov/uscode/title13/title13.html.

Are my data kept confidential?

Yes. Section 9 of Title 13, United States Code, guarantees that your data are kept confidential. It may be seen only by persons sworn to uphold the confidentiality of Census Bureau information, and may be used only for statistical purposes. The law also provides that copies of your report retained in your files are immune from legal process. You may visit our website at www.census.gov/privacy/files/data_protection/004032.html.

What establishments fill out this form?

Manufacturing establishments. If you think that your facility is not a manufacturing facility, please call 301-763-1907.

Complete the survey only for the designated facility located at the address printed on the front of the survey form. If your company operates more than one facility, report only for the facility to which this survey was addressed. Do not combine responses with other facilities owned by your company even if operations jointly use the same pollution abatement equipment or staff. Include only corporate expenditures that are billed directly to your facility.

What is the reporting period for this survey?

Report data for the 2005 calendar year. If you cannot report 2005 calendar year data, report data for your 2005 fiscal year.

Where do I return the completed form?

Return your completed form in the enclosed prepaid envelope to:

U.S. Census Bureau
1201 East 10th Street
Jeffersonville, IN 47132-0001

If you need additional time to complete this form or if you need a duplicate form, please contact the U.S. Census Bureau at 1-800-528-3049.

What is the response burden for this survey?

The public reporting burden for this collection of information is estimated to average 8 hours per response. Send comments regarding the response burden estimate and any suggestions for minimizing respondent burden, to:

Paperwork Project 0607-0176
U.S. Census Bureau
4700 Silver Hill Road, Stop 1500
Washington, DC 20233-1500

Include the OMB control number in any correspondence. Do NOT send the completed form to this address. You may email comments to paperwork@census.gov; use "Paperwork Project 0607-0176" as the subject.

SURVEY DEFINITIONS

For this survey, please use the following definitions:

Facility is a single physical location where business is conducted or where services or industrial operations are performed. Facilities are often referred to as establishments or plants. A company may have one or more facilities. For this survey, report only for the designated facility located at the address printed on the front of the survey form. Do NOT include data for other facilities owned by the same company when responding to the survey questions.

Pollution is a substance in the environment that, because of its chemical composition or quantity, prevents the functioning of natural processes and produces undesirable environmental and/or human health effects. For this survey, report only for the pollutants generated by your facility's production process.

For this survey, pollution is divided into three types of media: air emissions, water discharges, and solid waste.

Air emissions are any substances released into the air that could, in high enough concentrations, pose a threat to the environment and/or human health.

Water discharges are any substances or pathogens released into water that could, in high enough concentrations, pose a threat to the environment and/or human health.

Solid waste includes any waste materials from the production process, including solid, semi-solid, contained liquids, and contained gaseous materials. It includes wastes produced as a result of air and water pollution abatement.

Pollution abatement activities are for the purpose of treating, capturing, reducing, eliminating, or disposing of pollution, as defined above. These activities may be in response to federal, state, or local regulations or voluntary initiatives. In addition to the cost of purchasing, installing, and operating pollution abatement equipment, all related **support activities**, including but not limited to monitoring and testing and environmentally-related administrative activities, are to be included in total pollution abatement capital expenditures and operating costs.

For this survey, pollution abatement is divided into four activities: treatment/capture, recycling, disposal, and pollution prevention.

Treatment/capture activities are any method, technique, or process designed to remove pollutants, **after** their generation in the production process, from air emissions, water discharges, or solid waste. In general, pollution treatment/capture activities include the use of retrofit technologies, such as baghouses, thermal oxidizers, and oil/water separators. Treatment/capture activities also include those activities designed to change the physical, chemical, or biological character or composition of any pollutant prior to disposal or release into the environment.

Recycling activities are the postproduction on-site or off-site processing of waste for an alternative use. Recycling activities include the recovery of liquid, solid, or gaseous wastes and their reuse in the same or another production process. Recycling activities also include the partial reclamation of materials (e.g., metal recovery or the burning of flammable wastes for energy recovery). For this survey, recycling only includes activities whose primary purpose are pollution abatement and NOT activities motivated by profit.

Disposal activities involve the final placement, destruction, or disposition of waste after pollution treatment/capture and/or recycling has occurred. Disposal, in an environmentally-sound manner, can include landfill disposal or the use of injection wells. To the extent possible, do not report disposal expenditures associated with waste generated outside the production process, such as office and cafeteria trash, and sanitary sewage. If you are unable to exclude these costs, report all disposal costs.

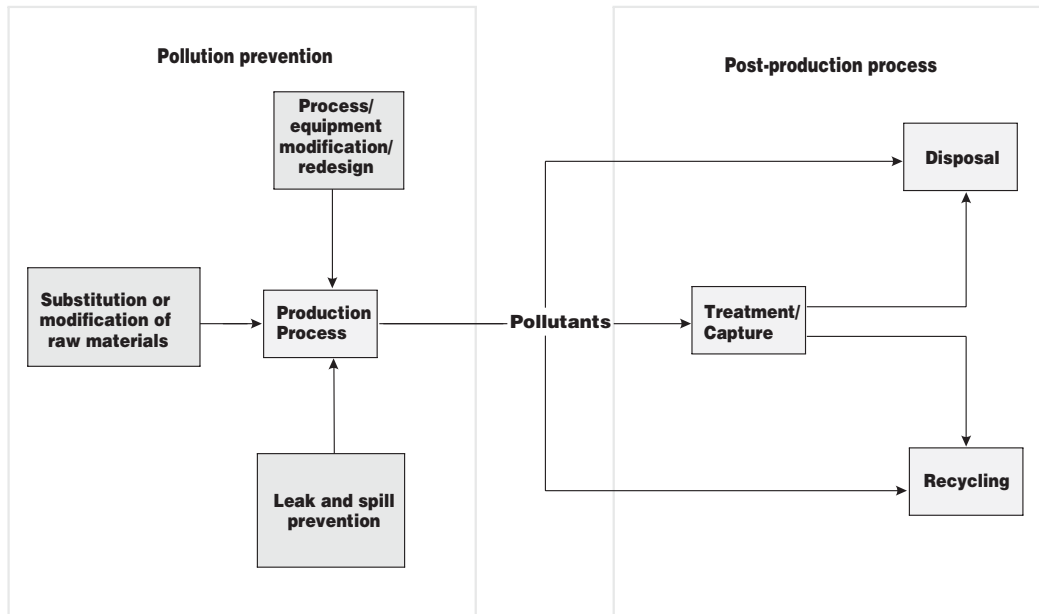
Pollution prevention activities are any method, technique, or process that reduces the amount of pollution generated during the production process. Pollution prevention activities can include various equipment and technology modifications; process and procedure modifications; reformulations and redesigns of products (to reduce pollution generated by the manufacturing process); substitutions toward less-polluting raw materials and fuels; and improvements in housekeeping, maintenance, training, and inventory control that result in fewer air emissions, water discharges, or solid waste. The cost of activities involving the redirection of "used" material inputs back into the production process (such as closed-cycle systems) should also be included in pollution prevention if the primary purpose of this activity is pollution abatement rather than to increase profit.

For this survey, pollution prevention activities are grouped into three primary categories:

- **Raw materials substitution or modifications** are activities that alter inputs or allow the use of alternative inputs in order to reduce or modify pollutants during the manufacturing process.
- **Leak and spill prevention** are improvements in housekeeping, maintenance, training, and inventory control that result in fewer accidental releases of polluting raw materials, products, or by-products.
- **Process/equipment modification/redesign** includes equipment and technology modifications, process and procedure modifications, reformulations and product redesigns, and in-process recycling to reduce pollution from the manufacturing process.

As shown in Figure 1, a general distinction between pollution prevention and the other pollution abatement activities is that pollution prevention reduces or eliminates pollutants generated **during** the production process, while treatment/capture, recycling, and disposal are post-production activities used to manage pollutants **after** their generation by the production process.

Figure 1. Overview of Pollution Abatement Activities



GENERAL INSTRUCTIONS

Complete this form only for your facility. If your company operates more than one facility, report only for the facility to which this survey was addressed. Do not combine responses with other facilities owned by your company even if operations jointly use the same pollution abatement equipment or staff. Include only corporate expenditures that are billed directly to your facility.

Report the value of total pollution abatement costs (Items 3B and 4B) even if you are unable to report the values of each separate cost component.

Report actual costs whenever possible. If an actual cost is not available, estimate the cost. Possible sources for your estimate can include accounting records or engineering estimates.

Example: If estimated operating costs were provided by a pollution control device vendor as part of an investment proposal, these estimated operating costs could be used to help determine that portion of your facility's operating costs attributable to pollution abatement.

Example: If electricity usage for pollution abatement air handling units is not metered separately, use information on the number of motors and total horsepower to estimate that portion of your facility's energy costs attributable to pollution abatement.

Report only incremental capital expenditures and incremental operating costs associated with pollution abatement activities. Incremental costs of pollution abatement are the additional costs associated with the *environmental portion* of an investment or of annual operating and maintenance costs. For example, pollution abatement equipment may be integrated into larger investment projects, pollution abatement technologies may be integrated into production equipment, or pollution abatement operating costs may be combined with other costs in a larger cost center. Estimate and report only the portion of capital expenditures and operating costs related to pollution abatement, as illustrated in the examples on pages 8-10 and pages 13-14.

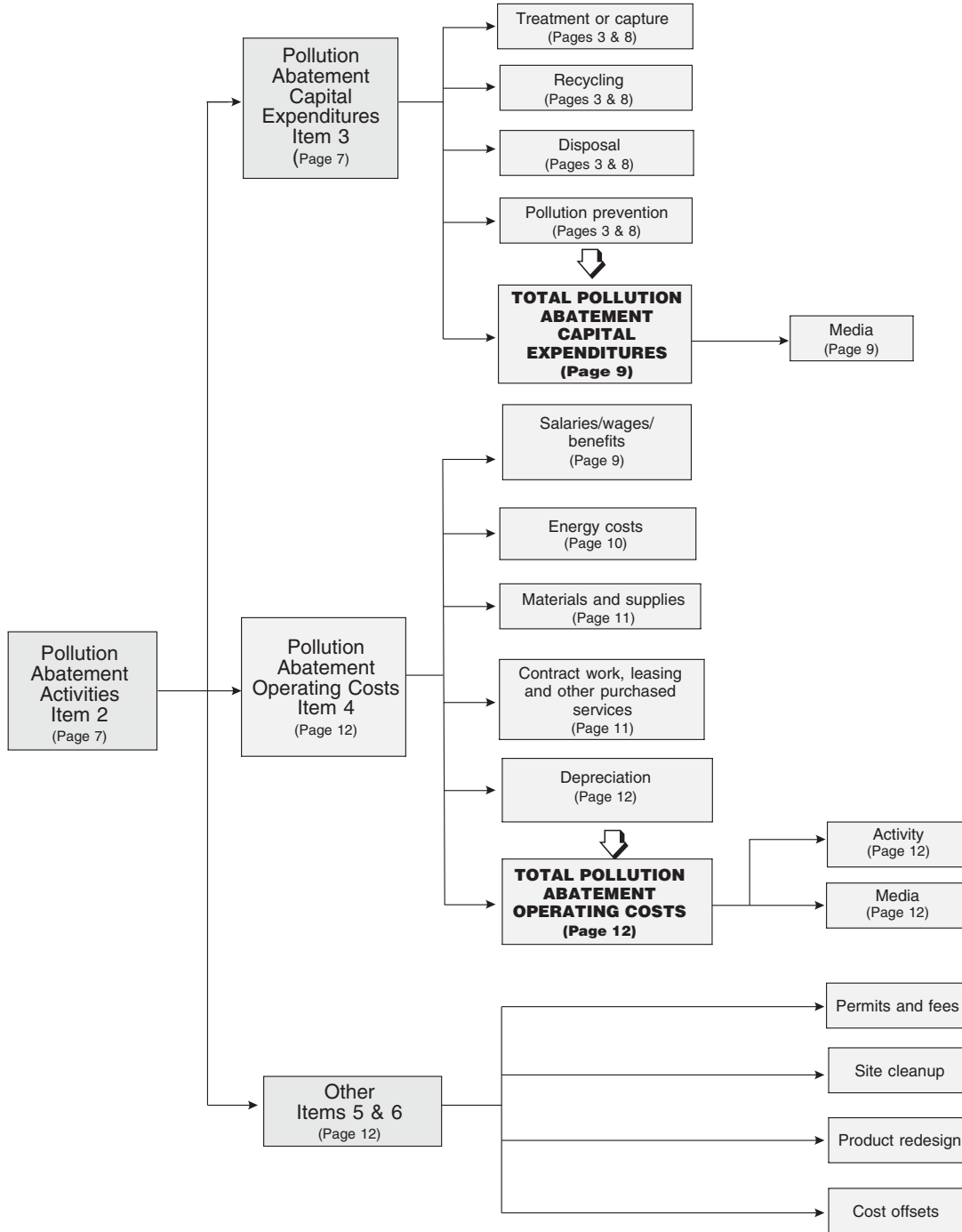
For this survey, include only those expenditures with the primary purpose of pollution abatement. Although certain expenditures may have multiple benefits, only consider those expenditures for which pollution abatement is the primary purpose. Investments or activities that increase profits or efficiency in the absence of environmental considerations should not be included, even if pollution abatement occurs as a side benefit. For example, some pollution prevention practices, particularly process modifications, may have been undertaken primarily as a cost-cutting activity. However, if any portion of an investment or activity can be specifically identified as pollution abatement, then those costs *should* be reported in this survey.

The following are general examples of costs and expenditures to be excluded from this survey:

- activities that are motivated by profit and whose primary purpose is not pollution abatement;
- costs that did not occur in 2005;
- corporate expenditures for pollution abatement that are NOT directly billed to your facility;
- activities related to health, safety, aesthetics, and employee comfort (OSHA); and
- habitat protection.

Round all cost estimates to the nearest thousands of dollars. If expenditures were less than \$500.00 for a specific item, then mark the appropriate box.

Figure 2. Overview of the Survey Structure



Note: Page numbers provide links to definitions and examples.

ITEM BY ITEM INSTRUCTIONS

The PACE survey has eight items. Item 1 asks about your facility. Item 2 asks about your facility's pollution abatement activities. Items 3–6 ask about your facility's pollution abatement costs including capital expenditures, operating costs, costs not included in previous items, and cost offsets. Item 7 asks about the amount of time spent completing this form. Item 8 is the survey certification. Figure 2 provides an overview of the survey's main items.

Item 1: Facility Information

See the survey form.

Item 2: Pollution Abatement Activities

Item 2A asks about your facility's air pollution control devices in operation in 2005. This item has two columns: (1) one column for the total number of control devices in operation at the beginning of 2005, and (2) one column for the total number of control devices newly installed in 2005. If your facility uses air pollution control devices that are not listed, then write in those devices under "other" and report the number of devices.

Example: A facility operates five continuous emissions monitoring systems (CEMS) to measure sulfur dioxide. Four monitors were installed in 1990 and one was installed in 2005. On line 16 (Continuous Emission Monitoring Systems), the facility should report '4' in column (1) and '1' in column (2).

For this item, **Process incinerators/boilers** (line 11) are devices that treat air emissions using a boiler or other combustion device. These devices are primarily installed to provide heat or steam but can also be used as an air pollution control device.

Example: A facility routes air emissions generated during the manufacturing process to (1) a coal-fired boiler, that primarily is used to produce heat and steam for the manufacturing process, and (2) a rotary kiln that is used to produce lime. Both the boiler and kiln began operation prior to 2005. On line 11 (Process incinerators/boilers), the facility should report '2' in column (1) and mark the zero box in column (2).

Item 2B asks you to report a value for the quantity of wastewater treated on-site and off-site during 2005.

Example: A facility generates 10 million gallons of wastewater per day, for a total of 3.65 billion gallons per year. Sixty percent of the wastewater is treated by the facility and is discharged into a nearby river, while the other forty percent is sent to a municipal wastewater treatment plant. The facility should report 2.19 billion gallons per year for "treated on-site" and 1.46 billion gallons per year for "treated off-site".

Item 2C asks you to report a value for the quantity of solid waste treated on-site, disposed of on-site, and disposed of off-site during 2005.

Example: A facility generates 100,000 tons of solid waste per year: 90,000 tons of wastewater treatment sludge and 10,000 tons of boiler ash. Approximately 50,000 tons of the wastewater treatment sludge is burned in an on-site boiler as fuel. The remaining 40,000 tons is disposed of in an on-site landfill. A contractor is paid to remove the boiler ash and recycles some of it for metals. The facility should report 50,000 tons per year for "treated on-site", 40,000 tons per year for "disposed of on-site", and 10,000 tons per year for "disposed of off-site", even though some of the ash is being recycled.

For this survey, *beneficial reuse* is the reuse of solid material generated by the manufacturing and/or pollution abatement process that would otherwise be considered a solid waste. Co- or by-products *sold* for beneficial reuse should not be included in this item.

Example: A facility generates 60,000 tons per year of wastewater treatment sludge that contains some usable raw material. Approximately 3,000 tons of the sludge is recycled and sold for profit; 27,000 tons is disposed of in an on-site landfill; and 30,000 tons is sent to another facility that uses the sludge as a raw material to manufacture a new product. The facility also produces 2 tons per year of hazardous waste that is sent off-site for disposal. The facility should report 27,000 tons per year as "disposed of on-site" (landfilled) and 2 tons per year as being "disposed of off-site". (Neither the 3,000 tons nor the 30,000 tons should be reported in these items because they are disposed of at no cost to the facility.)

Item 3: Pollution Abatement Capital Expenditures

Pollution abatement capital expenditures include any installation or retrofit of structures or equipment that occurred during 2005 with the primary purpose of treating, capturing, recycling, disposing, and preventing pollutants. These expenditures are often referred to as "one-time costs" and include total expenditures for equipment installation and startup.

For this item, report only those pollution abatement capital expenditures made during 2005, not the final equipment value or the total project budget. Report only the incremental costs associated with pollution abatement. (See page 5 for the definition of incremental costs.) If pollution abatement capital expenditures are not budgeted or tracked separately for some projects, *estimate* the portion of total capital expenditures associated with pollution abatement.

Example (incremental pollution abatement capital expenditures): A facility operates a rotary material dryer that is equipped with a multiclone and an electrostatic precipitator (ESP) at the dryer exhaust. The multiclone, ESP, and an emissions stack were installed at the same time as part of a dryer system upgrade in 2005. The total capital expenditures for the multiclone/ESP system (including the emissions stack) is \$8 million as follows:

- \$1.8 million for the multiclone
- \$5.2 million for the ESP
- \$1.0 million for the emissions stack

The ESP and stack were installed to comply with state and federal air emissions standards. The ESP reduces particulate emissions that remain in the air stream exiting the multiclone. The primary purpose of the multiclone is to separate the dried material from the air; thus, the multiclone is considered an integral part of the dryer process and is necessary in the absence of environmental regulations. Therefore, the facility should only report the total cost of the ESP and the stack. Since this upgrade is a treatment/capture activity, \$6.2 million should be included in Item 3A1. It should also be included in total pollution abatement capital expenditures (Item 3B) and pollution abatement capital expenditures for air emissions (Item 3C1).

Item 3A: Activity Categories (Treatment/Capture, Recycling, Disposal, Pollution Prevention)

The following table provides examples of pollution abatement capital expenditures by activity category. (See page 3 for definitions of these activity categories.) Capital expenditures associated with **testing and monitoring** should be distributed across some or all of the activity categories, as appropriate. Capital expenditures to be excluded are also listed below. Note: Do NOT include capital expenditures related to site cleanup or product redesign/reformulation (these expenditures are to be reported in Item 5). Note also that these lists are intended as examples and are not necessarily exhaustive.

Activity Category	Examples of Pollution Abatement Capital Expenditures	Capital Expenditures to be Excluded
Treatment and capture	Purchase, installation, and startup costs of "end of pipe" pollution abatement equipment, such as baghouses, scrubbers, absorbers, and flares Oil/water separating systems Dewatering systems, compactors, and balers	Manufacture of pollution treatment equipment for sale Equipment installed for the purpose of increasing profits or efficiency Interest for financing pollution abatement capital expenditures Improvements for health, safety, aesthetics, or employee comfort (OSHA) Equipment related to site cleanup [report in Item 5B1] Facilities or equipment for research and development
Recycling	Water filter systems to recover waste to be reused for its material value Air handling and injection systems for the capture and use of waste gas with energy value	Capital equipment if your primary product is recycling; that is, you are a recycling plant Recycling equipment when the primary motivation is profit
Disposal	Purchase of material handling equipment Construction of on-site landfills Construction of waste storage facilities or retention ponds	Equipment purchased by an on-site contractor (who manages all solid waste handling at the facility) that is not billed directly to the facility
Pollution prevention	Installation of low NO _x burners Equipment modifications to burn lowsulfur coal Closed-cycle water systems Cost of leak prevention and monitoring equipment Storage and delivery systems for environmentally-friendly inputs The pollution abatement portion of production process enhancements, such as increased energy efficiency or lean manufacturing, intended for environmental protection	Purchase of new equipment that is more energy efficient and thus, theoretically would reduce offsite pollution at the local utility as a result of lower electricity production Equipment and structures related to product redesign or reformulation intended to reduce the pollution generated by the consumers or users of the facility's products (downstream pollutants), such as reformulated gasoline [report in Item 5C1]

Item 3B: Total Pollution Abatement Capital Expenditures

See the survey form.

Item 3C: By Pollution Medium (Air, Water, and Solid Waste)

In **Item 3C**, divide your total pollution abatement capital expenditures into three media types: air emissions, water discharges, and solid waste. (See page 3 for definitions of these pollution media.) For capital expenditures that affect multiple media categories, assign the costs across individual media categories to the best of your ability.

Example: During 2005, a facility purchases and installs an electrostatic precipitator (ESP) at a cost of \$6.5 million, replaces a continuous emissions monitor (CEMS) for sulfur dioxide (SO₂) at a cost of \$125,000, replaces two aerators in its wastewater aeration lagoon at a cost of \$30,000 each, and purchases a new excavator for dredging out an on-site ash pond at a cost of \$220,000. These costs should be categorized as follows:

Equipment	Capital Expenditures	Pollution Abatement Medium
ESP	\$6,500,000	} 96% of costs for air emissions
SO ₂ CEMS	\$125,000	
Aerators	\$60,000	1% of costs for water discharges
Excavator	\$220,000	3% of costs for solid waste
TOTAL	\$6,905,000	100%

Item 3D: Gross Book Value of Pollution Abatement Capital Assets

Item 3D asks you to report your facility's gross book value of pollution abatement capital assets as of December 31, 2005. This is the sum of the purchase prices of all pollution abatement equipment installed as of December 31, 2005. For this item, adjust for assets sold, retired, scrapped, and destroyed; however, do not adjust for depreciation charges.

Item 4: Pollution Abatement Operating Costs

Pollution abatement operating costs include all annual costs (such as salaries and benefits, costs of materials and energy, contract work, and the operation, maintenance, and depreciation of capital assets) that occurred during 2005 with the primary purpose of treating, capturing, recycling, disposing, and preventing pollutants.

For this item, report only the incremental costs associated with pollution abatement. (See page 5 for definition of incremental costs.) If pollution abatement operating costs are not budgeted or tracked separately for some categories, *estimate* the portion of total costs associated with pollution abatement.

Example (incremental pollution abatement operating costs): A facility's manufacturing process requires \$100,000 per year in labor costs and \$10,000 in solvents (materials). However, because of environmental regulations (or other environmental concerns), labor costs increase to \$125,000 per year and material costs increase to \$15,000 because of a switch from oil-based to water-based solvents. As a result, the facility should report the following incremental pollution abatement operating costs:

- \$25,000 – Salaries, wages, and benefits (Item 4A1)
- \$5,000 – Materials and supplies (Item 4A3)
- \$30,000 – Total pollution abatement operating costs (Item 4B).

Do NOT include, in any of these categories, costs associated with site cleanup or product redesign/reformulation. Also, do NOT include the cost of permits and fees. These costs are to be reported in Item 5 of the survey.

Item 4A: Cost Categories (Labor, Energy, Materials, Contract Work, Depreciation)

In **Item 4A**, total pollution abatement operating costs are divided into five cost categories: salaries, wages, and benefits; energy costs; materials and supplies; contract work, leasing, and other purchased services; and depreciation.

Salaries, wages, and benefits include staff time associated with pollution abatement activities. Report the salaries and wages you use for calculating the withholding tax, plus benefits. Salaries, wages, and benefits to be included and excluded in Item 4A1 are listed below. Note that these lists are intended as examples and are not necessarily exhaustive.

<i>Include salaries, wages, and benefits for</i>	<i>Exclude salaries, wages, and benefits for</i>
<ul style="list-style-type: none"> • The share of time environmental managers and engineers spend on pollution abatement activities • The share of time production and maintenance staff spend on pollution abatement activities, including the operation and maintenance of pollution abatement equipment • Staff time spent performing on-site disposal and recycling • Staff time spent on leak detection programs • Staff time for permit preparation and meetings with environmental regulators • Staff time for environmental auditing and plant certification (such as ISO 14000) • Staff time spent on completing environmental reporting requirements • Staff time spent conducting environmental studies for development or expansion 	<ul style="list-style-type: none"> • Environmental staff at corporate headquarters. If billed directly to your facility, report those costs in Item 4A4 (contract work). • Research and development activities

Example (salaries, wages, and benefits): During 2005, a facility employs 3 full-time staff and 1 wastewater treatment operator in its environmental department. (The facility's solid waste management activities, including an on-site landfill, are managed by a contractor.) The facility also employs 1 lab technician who is responsible for performing sampling and testing of wastewater and sludge, which requires about 2 hours of labor each day. The facility also operates 5 air pollution control devices, each of which requires about 10 hours of labor each week to operate and maintain (by production staff). The annual salary for each of the 3 full-time staff and 1 wastewater treatment operator is \$80,000. The lab technician's wage is \$30 per hour, and the production workers' wages average about \$20 per hour. All salaries are multiplied by 35 percent to account for benefits. Therefore, the total salaries, wages, and benefits for pollution abatement are estimated to be:

Environmental department staff: $4 \times (\$80,000/\text{year}) \times 1.35 = \$432,000$ per year

Lab technician wages: $(2 \text{ hours/day}) \times (365 \text{ days/year}) \times (\$30/\text{hour}) \times 1.35 = \$29,565$ per year

Operator wages: $(10 \text{ hours/week}) \times (5 \text{ devices}) \times (52 \text{ weeks/year}) \times (\$20/\text{hour}) \times 1.35 = \$70,200$ per year

TOTAL: \$532,000 per year (rounded to nearest thousand)

Energy costs include electricity, fuels (oil, natural gas, coal), and other energy costs. This includes both fuel and power for operating pollution abatement equipment as well as the incremental costs associated with the purchase of environmentally-friendly fuels. (See page 5 for definition of incremental costs.) If pollution abatement energy costs are not metered or tracked separately from facility-wide energy costs, *estimate* the portion of total energy costs associated with pollution abatement. Energy costs to be included and excluded in Item 4A2 are provided below. Note that these lists are intended as examples and are not necessarily exhaustive.

<i>Include energy costs for</i>	<i>Exclude energy costs for</i>
<ul style="list-style-type: none"> • Electricity for operating pollution abatement equipment, such as baghouses, scrubbers, ESPs, wastewater treatment pumps and aerators, etc. • Fuel costs for thermal oxidizers installed for air pollution control • Electricity generated on-site that is used by pollution abatement equipment • Difference in costs (incremental costs) resulting from the use of a more environmentally-friendly fuel (such as low-sulfur coal) 	<ul style="list-style-type: none"> • Fuel costs for boilers that operate primarily to provide steam/heat/electricity for the production process, but are also used to incinerate air emissions • Electricity costs associated with production equipment

Example (incremental fuel costs): A facility purchases 1,000 tons of coal per year. To lower its emissions it purchases low-sulfur coal at \$30 per ton instead of higher sulfur coal available at \$20 per ton. The pollution abatement energy costs associated with the purchase of the low-sulfur coal are:

$(1,000 \text{ tons/year}) \times (\$10 \text{ incremental cost/ton}) = \mathbf{\$10,000}$ per year

Example (estimating energy costs): A facility does not track pollution abatement electricity costs separately from total facility-wide electricity costs. Therefore, the facility must estimate electricity costs for pollution abatement. Based on information found in equipment manuals, the facility knows that the total horsepower (hp) requirement for the wastewater

treatment system pump is 760 hp. The on-site wastewater treatment facility also includes 25 aerators, each rated at 75 hp, for a total of 1,875 hp. The air pollution control devices and associated fans and pumps have a total horsepower requirement of 1,475 hp. The facility operates 365 days per year, 24 hours per day, and pays an average industrial electricity rate of \$38.77 per megawatt-hour (MWh). (Note: 1 MW = 1,341 hp.) The facility also operates a thermal oxidizer that uses 100 million cubic feet (ft³) of natural gas per year at a cost of \$6.41 per 1,000 ft³. Therefore, the total energy costs for pollution abatement are estimated as follows:

Total electricity usage for pollution abatement = 760 + 1,875 + 1,475 = 4,110 hp

Total electricity usage in MWh per year = (4,110 hp) x (365 days/year) x (24 hours/day) x (1 MW / 1,341 hp) = 26,848 MWh per year (rounded)

Total electricity cost for pollution abatement = (26,848 MWh/year) x (\$38.77/MWh) = \$1,041,000 per year (rounded)

Total fuel (natural gas) cost for pollution abatement = (100,000,000 ft³) x (\$6.41/1,000 ft³) = \$641,000 per year

Total energy costs for pollution abatement = \$1,041,000 + \$641,000 = **\$1,682,000**

Note: If you do not have horsepower information with which to derive pollution abatement electricity costs, *estimate* the portion of your facility's total electricity costs associated with pollution abatement. If your electricity is generated on-site, *estimate* the portion of this self-generated electricity used by pollution abatement equipment and value this electricity at the appropriate or average market price of electricity in your region.

Materials and supplies include the delivered cost of materials, parts, and components used as operating supplies for pollution abatement or in the repair and maintenance of pollution abatement capital assets. In addition, this includes the incremental costs associated with the purchase of environmentally-friendly materials and supplies. (See page 5 for definition of incremental costs.) Materials and supplies to be included and excluded in Item 4A3 are provided below. Note that these lists are intended as examples and are not necessarily exhaustive.

<p><i>Include material and supply costs for</i></p> <ul style="list-style-type: none"> • Parts for pollution abatement equipment maintenance and repair • Wastewater treatment chemicals • Caustic used in wet scrubbers • Laboratory chemicals and supplies used for sampling and testing for environmental compliance • Difference in costs (incremental costs) resulting from the use of a more environmentally-friendly raw material (such as a switch from oil-based to water-based solvents) 	<p><i>Exclude material and supply costs for</i></p> <ul style="list-style-type: none"> • Laboratory chemicals used for testing products in various stages of the manufacturing process • Use of a new raw material that reduces pollution but is <i>less</i> expensive than the raw material it replaces
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Contract work, leasing, and other purchased services include payments made to private and public service providers for both on-site and off-site pollution abatement activities, as well as leasing costs for capital equipment associated with pollution abatement. Also include pollution abatement expenditures by your corporate headquarters on behalf of your facility, but only *if* those expenditures are billed directly to your facility. Costs to be included and excluded in Item 4A4 are provided below. Note that these lists are intended as examples and are not necessarily exhaustive.

<p><i>Include contract and purchased service costs for</i></p> <ul style="list-style-type: none"> • Collection and disposal of waste created by the production process, by a private contractor • Sewage and solid/contained waste collection and disposal paid to federal, state, or local governments • Management of an on-site (industrial) landfill, by a private contractor • Pollution abatement activities performed by your corporate headquarters that WERE billed directly to your facility • All costs that would be included in Item 4A1 if the activity were done by your own staff • Air emissions and water discharge testing services • Off-site laboratory analysis of water samples • Leasing of capital equipment used for pollution abatement purposes 	<p><i>Exclude contract and purchased service costs for</i></p> <ul style="list-style-type: none"> • Collection and disposal of office and cafeteria waste (If you cannot separate from costs for industrial waste, report the entire amount) • Sanitary sewage (If you cannot separate from costs for industrial wastewater, report the entire amount) • Research and development services • Pollution abatement activities performed by your corporate headquarters that WERE NOT billed directly to your facility • Environmental permits, fees, fines, penalties, taxes, and contributions • Legal fees
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Depreciation is related to capital expenditures (in Item 3) but is reported in this section of the survey. In Item 4A5, report year-end accumulated depreciation and amortization charges for depreciable assets used in pollution abatement activity. Include charges against depreciable pollution abatement equipment acquired during the year as well as any charges against pollution abatement equipment sold or retired during the year. Depreciation and amortization charged during the year is attributed to the wear and tear on equipment and structures as well as obsolescence due to changing technology. At the end of the expected life of an asset, the entire cost of the asset will have been depreciated.

Item 4B: Total Pollution Abatement Operating Costs

See the survey form.

Item 4C: By Activity Categories (Treatment/Capture, Recycling, Disposal, Pollution Prevention)

In **Item 4C**, divide your total pollution abatement operating costs into the four major activity categories: treatment/capture, recycling, disposal, and pollution prevention. (See page 3 for definitions of these activity categories as well as the examples in Item 3A on page 8.) Operating costs associated with **testing and monitoring** should be distributed across some or all of the activity categories, as appropriate. Do NOT include the costs of permits and fees or the operating costs associated with site cleanup and product redesign/reformulation (these costs are to be reported in Item 5).

Item 4D: By Pollution Medium (Air, Water, and Solid Waste)

In **Item 4D**, divide your total pollution abatement operating costs into three media types: air emissions, water discharges, and solid waste. (See page 3 for definitions of these pollution media.) For operating costs that affect multiple media categories, assign the costs across individual media categories to the best of your ability.

Item 5: Costs Not Included in Previous Items

In **Item 5A, permits and fees** include payments to local, state, and federal government agencies for permits and fees associated with pollution from your production process (e.g., Title V permit fees; emission fees). For this item, do NOT include the cost of tradable permits or emission credits. Also, do NOT include fines, penalties, or contributions. Do NOT include the labor costs or contract work associated with permit preparation; these costs should be reported in Item 4. (See example on page 14.)

In **Item 5B, site cleanup** includes expenditures and costs related to the remediation of contamination due to leaks, spills, waste disposal, or other releases from current or past production activities. Also include the costs of site assessment, sampling, and analyses associated with the site cleanup. The pollution must be on the site of the designated facility located at the address printed on the front of the survey form. (See example on page 14.)

In **Item 5C, product redesign** includes expenditures and costs of product reformulation intended to reduce the pollution generated by consumers or users of this facility's products. This is also referred to as downstream pollutants. Examples of product redesign include reformulated gasoline and the reformulation of paint from oil-based to latex. In both cases, emission reductions occur at the point where the product is used, not at the facility where it is produced. Costs associated with the redesign and reformulation of products to reduce pollution *at the manufacturing facility* should NOT be included here; these costs should be reported under pollution prevention in Items 3 and 4 above. (See examples on page 14.)

Item 6: Cost Offsets

Cost offsets are related to operating costs (in Item 4) but are reported in this section of the survey. Cost offsets are operating expenses recovered as a result of pollution abatement activities. Cost offsets are usually the value of recovered/recycled materials or recovered energy. Cost reductions from such waste minimization/recycling and energy recovery should be reported here, but only if these activities were motivated by pollution abatement and NOT by production efficiency or profit. That is, revenues from recycling and cost savings from reduced material or fuel purchases should NOT be included if these activities are profitable in the absence of environmental concerns. (See examples on page 14.)

Item 7: Burden

See the survey form.

Item 8: Certification

See the survey form.

ADDITIONAL EXAMPLES

This section provides additional examples of pollution abatement activities and projects and indicates how they relate to the items and definitions in this survey.

Treatment/Capture

- A facility installs an electrostatic precipitator (ESP) to reduce particulate matter (PM) emissions from one of its production units. The facility also installs a continuous opacity monitoring system (COMS) at the outlet of the ESP to monitor opacity (as a surrogate for PM emissions). The total capital expenditure on the ESP (including installation, fans, and ductwork, for example) and the COMS should be included in the **pollution abatement capital expenditures** for treatment/capture. The costs associated with operating the ESP and the COMS (e.g., electricity costs to run the ESP and COMS and labor involved in collecting and reporting COMS data) should be included in the **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for treatment/capture.
- A facility installs a new flotation clarifier as part of its on-site wastewater treatment unit. All capital expenditures associated with the purchase, installation, and start-up of the new clarifier should be included in the **pollution abatement capital expenditures** for treatment/capture. All costs associated with operating the new clarifier (e.g., cost of electricity to run the compressor, cost of flocculating chemicals) plus the costs for operating the other wastewater treatment equipment should be included in the **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for treatment/capture.
- A facility hires an environmental consulting company to conduct an emission source test to measure air pollutant emissions from the facility's control device. The contractor costs associated with conducting this source test should be included in **pollution abatement operating costs (contract work)**. The labor costs for facility personnel to supervise and assist in conducting this source test should be included in **pollution abatement operating costs (salaries, wages, and benefits)**.

Recycling

- A facility installs and operates equipment used to recycle its waste streams in order to comply with environmental regulations or for other environmental reasons. Costs associated with installing this equipment (e.g., purchased equipment, required engineering, site preparation, installation, and other associated costs) should be included in **pollution abatement capital expenditures** for recycling. All costs associated with operating and maintaining the equipment should be included in **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for recycling.

Disposal

- A facility constructs a new on-site landfill for the disposal of its solid waste. All costs associated with constructing the landfill (including the equipment and machinery necessary for managing the landfill) should be included in **pollution abatement capital expenditures** for disposal.
- A facility generates solid waste from several sources, including sludge from an on-site wastewater treatment operation and scrap metal generated during the manufacturing process. All of the solid waste is sent to an on-site landfill that is operated by a contractor. The payments to the contractor should be included in **pollution abatement operating costs (contract work)** for disposal.
- A facility hires an outside contractor to periodically pick up spent process catalyst for disposal. Contract fees for this disposal should be included in **pollution abatement operating costs (contract work)** for disposal.
- A facility pays its local government to accept its industrial wastewater at a public water treatment facility. These payments should be included in **pollution abatement operating costs (contract work)** for disposal.

Pollution Prevention

- A facility switches to a new, more expensive raw material that either contains fewer pollutants or releases fewer pollutants when used in the production process. To accommodate the use of this new raw material, the facility must make some slight modifications to its production process and manufacturing equipment. The costs associated with the equipment modifications should be included in **pollution abatement capital expenditures** for pollution prevention. The incremental cost (i.e., the cost difference) associated with using the new raw material versus the conventional/standard raw material should be included in **pollution abatement operating cost (materials and supplies)** for pollution prevention.
- A facility implements a new leak detection and repair (LDAR) program to reduce equipment leaks. The cost of the equipment associated with the LDAR program (e.g., pump seals, monitoring equipment, such as handheld organic vapor detectors) should be included in **pollution abatement capital expenditures** for pollution prevention. The costs associated with running the LDAR program (e.g., staff to monitor for leaks and prepare periodic reports) should be included in **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for pollution prevention.

- A facility installs a new technology with the primary purpose of reducing the amount of air pollutants released per ton of product manufactured. The new technology requires more electricity and more staff time than the conventional technology. The costs associated with purchasing and installing the new technology should be included in **pollution abatement capital expenditures** for pollution prevention. Only the *additional* energy and labor costs (i.e., the incremental costs) of operating this new technology relative to the conventional technology should be included in **pollution abatement operating costs (labor, energy)** for pollution prevention.

Costs Not Included in Previous Items

Permits and Fees

- A facility undertakes a major expansion that triggers new environmental requirements. The fees associated with obtaining or updating its environmental permits from the state or federal government should be reported in **permits and fees**. The staff time spent on this permitting process should be reported in **pollution abatement operating costs (salaries, wages, and benefits)**, while any fees paid to consultants on this activity should be included in **pollution abatement operating costs (contract work, leasing, and other purchase services)**.

Site Cleanup

- A facility treats its contaminated soil via soil vapor extraction. For this purpose, it purchases a vacuum system and carbon treatment unit. The cost of this equipment should be included in **site cleanup capital expenditures**. The costs of operating this equipment, and the labor and materials necessary to conduct any testing and monitoring activities should be included in **site cleanup operating costs**.
- A facility hires a contractor to remove contaminated soil. The payments made to the contractor should be included in **site cleanup operating costs**.

Product Redesign

- A petroleum refinery changes its production process to allow it to produce low-sulfur diesel and gasoline fuels, which decrease the pollution emitted by motor vehicles. This change to the production process has no effect on the amount of pollution generated by the facility and therefore it is not considered a pollution abatement activity for the purposes of this survey. Instead, the facility's costs associated with this change should be reported in **product redesign capital expenditures** and **product redesign operating costs**.
- A manufacturer of surface coatings reformulates its coating products to reduce the amount of hazardous air pollutants (HAPs) they contain in order to help its customers comply with certain federal environmental regulations. While these new low-HAP coatings will reduce the air emissions in its customers' surface-coating operations, this product reformulation has no effect on the air emissions from its own facility and therefore is not considered a pollution abatement activity for the purposes of this survey. Instead, the facility's costs associated with this product reformulation should be reported in **product redesign capital expenditures** and **product redesign operating costs**.

Cost Offsets

- As an alternative to disposing used oil, a manufacturing plant has its used machinery oil picked up by a hazardous waste collection and treatment service. This service provider charges a fee. This fee should be reported in **pollution abatement operating costs (contract work)** for disposal (Item 4A4). The service provider returns the oil fully cleaned. Thus, the plant avoids having to buy new machinery oil. The value of the returned oil should be reported in **cost offsets**.
- A manufacturer purchases a cardboard baler to recycle cardboard containers associated with the manufacturing process. The capital expenditure should be reported in **pollution abatement capital expenditures** for recycling (Item 3A2). The costs associated with operating and maintaining the baler should be reported in **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for recycling (Item 4). The manufacturer sells the cardboard to a recycler. The activity is not a potentially profit-making venture; it is conducted for pollution abatement. The revenues received from the recycler should be reported in **cost offsets**.
- A manufacturer installs a closed-cycle water recovery system in the production process to prevent the dumping of chemicals into the water system. Because the closed-cycle recovery system recaptures and reuses the chemicals in the production process, it reduces the expenses for these chemicals. The pollution abatement portion of the capital expenditure related to the closed-cycle recovery system should be reported in **pollution abatement capital expenditures** for pollution prevention (Item 3A4). The costs associated with operating and maintaining the system should be reported in **pollution abatement operating costs (labor, energy, materials, contract work, depreciation)** for pollution prevention (Item 4). The value of the recovered chemicals should be reported in **cost offsets**.

Contract work, leasing, and other purchased services includes payments made to private and public services providers for pollution abatement activities. This includes services provided both on-site and off-site, as well as leasing costs for capital equipment associated with pollution abatement activities.

<p><i>Include contract and purchased service costs for</i></p> <ul style="list-style-type: none"> • 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 • Contract management of on-site (industrial) landfill • Leasing of capital equipment such as excavators • Air emissions, water discharge testing services • Off-site laboratory analysis of water samples 	<p><i>Exclude contract and purchased services costs for</i></p> <ul style="list-style-type: none"> • Municipal waste disposal for office buildings or cafeteria trash and sanitary services • Research and development services
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Note: The lists are intended as examples and are not inclusive.

Depreciation is related to capital expenditures but reported in a separate item in the survey. Depreciation and amortization charged during the year is attributed to the wear and tear on equipment or structures and obsolescence due to changing technology. Depreciation expense recorded on the survey is for all pollution abatement equipment operating in the facility in 2005, including equipment installed prior to and during 2005. This includes the depreciation against fixed assets acquired since the beginning of the year and those sold during the year or retired and no longer carried on the books at the end of the year. At the end of the expected life of the equipment or structure, the entire cost of the equipment or structure will have been depreciated.

4.4.2 Item 4B: Total Pollution Abatement Operating Costs

In **Item 4B**, provide an actual value or estimate of the total operating costs for pollution abatement in 2005.

4.4.3 Item 4C: Activity Categories

In **Item 4C**, total pollution abatement operating costs are divided into the four major activity categories defined in Section 3.1. Examples of pollution abatement operating costs to be included and excluded are provided below.

Activity Category	Examples of Pollution Abatement Operating Costs	Operating Costs to be Excluded
Treatment/capture	<ul style="list-style-type: none"> Operating and maintaining pollution treatment/capture equipment Incremental cost increase of operating the new or retrofit technology relative to conventional technology Fuel and utilities costs for operating pollution treatment/capture equipment Leasing of pollution treatment/capture equipment Cost for pollution treatment/capture equipment replacement and repair 	Taxes, fines, legal fees, superfund taxes, environmental contribution or insurance
Recycling	Annual costs of on-site (postproduction process) and off-site recycling	Recycling for profitability reasons (not with the primary purpose of pollution abatement)
Disposal	<ul style="list-style-type: none"> Annual costs of on-site and off-site disposal Payments to a private or government contractor for solid waste disposal 	<ul style="list-style-type: none"> Collection/disposal of office and cafeteria trash (if you can not separate from industrial, report the entire amount) Sanitary sewage (if you can not separate from industrial, report the entire amount)
Pollution Prevention	<ul style="list-style-type: none"> Cost of running leak detection programs Incremental cost associated with using new raw material versus the conventional/standard raw material Incremental cost associate with burning "cleaner fuel" 	Use of a new raw material that reduces pollutants generated but is less expensive than previously used raw material

Note: The lists are intended as examples and are not inclusive.

Note: Testing and monitoring operating costs may be distributed across some or all of the activity categories listed above.

4.4.4 Item 4D: By Pollution Medium

In **Item 4D**, total pollution abatement operating costs are divided by media categories defined in Section 3.2. For operating costs that affect multiple media categories (such as both water and solids), partition the costs across individual categories as best as possible.

4.5 ITEM 5: COSTS NOT INCLUDED IN PREVIOUS ITEMS (PERMITS AND FEES, SITE CLEANUP, AND PRODUCT REDESIGN)

Costs not included in previous items include permits and fees, site cleanup, and product redesign expenditures.

In **Item 5A, permits and fees** include payments to local, state, and federal government agencies related to purchasing permits or paying fees associated with pollution abatement (e.g., Title V permit fees; emission fees). Tradable permits or emission credits are not included in this category. In addition, labor costs associated with permit preparation should be excluded; these costs are captured in operating costs salaries and wages and consultant fees should be included under operating costs contract work (see examples on page 19).

In **Item 5B, site cleanup** includes remediation of contamination due to leaks, spills, waste disposal, or other releases from current or past on-site production processes. Costs of site assessments, sampling, analysis, and other activities associated with the site should also be included. The pollution must be on the site of the facility named on the survey form (see examples on page 19).

In **Item 5C, product redesign** includes expenditures and costs of product redesign or reformulation intended to reduce the pollution generated by consumers or users from products manufactured at the facility. This is also referred to as downstream pollutants. For example in expenditures associated with reformulated gasoline and the reformulation of paint from oil to latex. In both cases, emissions from the consumers of the final products (gasoline and paint) are reduced. Product redesign to reduce pollution from the manufacturing process should be excluded; these costs are captured under pollution prevention (see examples on page 20).

4.6 ITEM 6: COST OFFSETS

Cost offsets are related to operating costs but reported in a separate item in the survey. Cost offsets are pollution abatement operating expenses recovered as a result or an offshoot of pollution abatement techniques. This is usually the value of recovered (recycled) materials or reduced energy. In addition, cost reductions from waste minimization for environmental protection and energy recovery for environmental protection are cost offsets. Cost offsets must be motivated by pollution abatement; cost reductions from energy-efficiency improvements or revenue from recycling activities that are profitable in the absence of environmental concerns are not to be included (see examples on page 20).

4.7 ITEM 7: BURDEN

Report the burden in terms of the number of hours it took to fill out the survey. Include the time for the lead contributors to complete the survey as well as staff at your facility who answered questions or looked up information.

4.8 ITEM 8: CERTIFICATION

Provide certification information on the person at the facility to contact regarding this report and name, title, and signature of a person who verified that the information reported in this survey is accurate to the best of your knowledge.

ADDITIONAL EXAMPLES

This section provides example activities and projects and indicates how they link to the definitions and the items in the survey form.

TREATMENT/CAPTURE

- A facility installs an electrostatic precipitator (ESP) to reduce particulate matter (PM) emissions from one of its process units. The facility also installs a continuous opacity monitoring system (COMS) at the outlet of the ESP to monitor opacity as a surrogate for PM emissions. The total capital expenditure on the ESP (including installation, fans, and ductwork, for example) and the COMS should be included in the **capital expenditures** for pollution treatment/capture. The costs associated with operating the ESP and the COMS (e.g., electricity costs to run the ESP and COMS and labor involved in collecting and reporting COMS data) should be included in the **operating costs** for pollution treatment/capture.
- A facility installs a new flotation clarifier as part of its on-site wastewater treatment unit. All capital expenditures associated with the purchase, installation, and start-up of the new clarifier should be included in the **capital expenditures** for pollution treatment/capture. All costs associated with operating the new clarifier (e.g., cost of electricity to run the compressor, cost of flocculating chemicals) plus the costs for operating the other wastewater treatment equipment should be included in the **operating costs** for pollution treatment/capture.
- A facility hires an environmental consulting company to conduct an emission source test to measure air pollutant emissions from the facility's control device. The contractor costs associated with conducting this source test should be included as **pollution abatement operating costs**. The labor costs for facility personnel to supervise and assist in conducting this source test should be included as **pollution abatement operating costs**.

RECYCLING

- A facility installs and operates equipment used to recycle former waste streams to comply with environmental regulations or for other environmental reasons. Costs associated with installing the equipment (e.g., purchased equipment, engineering, site preparation, installation, and other associated costs) should be included as **capital expenditures**. Costs associated with operating the equipment (e.g., cost of electricity, operating labor, and maintenance labor) should be included as **pollution abatement operating costs**.

DISPOSAL

- A facility constructs a new on-site landfill for disposing of solid waste. All costs associated with constructing the landfill (including the capital expenditures of equipment and machinery necessary for managing the landfill) should be included as **pollution abatement capital expenditures** for disposal.
- A facility generates solid waste from several sources including sludge from an on-site wastewater treatment operation and solid waste generated during the manufacturing process. All of the solid waste is sent to an on-site landfill operated by a contractor. The payments to the on-site contractor should be reported as **pollution abatement operating costs** under disposal.
- A facility hires an outside contractor to periodically pick up spent process catalyst for disposal. Contract fees for disposing of spent process catalyst should be included as **pollution abatement operating costs**.
- A facility pays its local government to accept wastewater, which is then sent to a public water treatment facility. The payments to government should be included as **pollution abatement operating costs**.

POLLUTION PREVENTION

- A facility switches to using a new, more expensive raw material that either contains fewer pollutants or releases fewer pollutants when used in the production process. The facility makes some slight modifications to the process to accommodate the use of the new raw material. The **capital expenditures** associated with the equipment modifications should be included in pollution prevention. The incremental cost increase associated with using the new raw material versus the conventional/standard raw material should be included as an **operating cost** for pollution prevention.
- A facility implements a new leak detection and repair (LDAR) program to reduce equipment leaks. The **capital expenditures** associated with the LDAR program (e.g., cost of equipment for leak prevention, such as pump seals, and the cost of leak monitoring equipment, such as handheld organic vapor detectors) should be included in pollution prevention. The **operating costs** associated with running the LDAR program (e.g., labor for staff to monitor for leaks and prepare periodic reports) should be included in pollution prevention.
- A facility installs a new technology for the primary purpose of reducing air pollutants released per ton of product manufactured. The new technology has slightly higher electricity and labor costs than the conventional technology. The **capital expenditures** associated with purchasing and installing the new technology should be included in the capital expenditures for pollution prevention. The incremental electricity and labor costs of operating the new technology relative to the conventional technology should be included in the **operating costs** for pollution prevention.

OTHER COSTS NOT INCLUDED IN PREVIOUS ITEMS

Permits and Fees

- A facility plans a major expansion that triggers new environmental requirements. Any fees associated with obtaining environmental permits from the state or federal government should be reported under **permits and fees** along with other annual payments such as Title V permit fees. The staff time for related activities should be reported in **pollution abatement operating costs (salaries and wages)**, while any fees to consultants associated with environmental permitting activity should be in **pollution abatement operating costs (contract work, leasing, and other purchase services)**.

Site Cleanup

- A facility treats contaminated soil on-site via soil vapor extraction and, in the process, purchases a vacuum system and carbon treatment unit. The cost of the treatment equipment should be included in **site cleanup capital expenditures**. The cost to operate this equipment and labor and materials associated with conducting any follow-on soil testing and monitoring activities should also be included **site cleanup operating costs**.
- A facility hires a contractor to remove contaminated soil and pays the contractor rather than purchasing any cleanup equipment itself. In this cases, the payments made to the contractor should be considered **site cleanup operating costs**.

Product Redesign

- A facility that sells petroleum products changes its production process to generate low-sulfur diesel and gasoline fuels that decrease pollution expelled by motor vehicles. This change was made to meet the requirements of environmental regulations. The capital expenditures and operating costs associated with changing the production process for the new product specifications are considered product redesign that reduces the pollution generated by consumers or users of the products manufactured. These costs should be reported as **product redesign capital expenditures** and **product redesign operating costs**.

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- A surface coatings manufacturer reformulates its product to reduce the amount of hazardous air pollutants (HAPs) contained in its coating product to help its customers comply with federal environmental regulations that require the use of low-HAP coatings in certain surface coating operations. This product reformulation does not reduce air emissions from the surface coatings manufacturing process; however, the use of the low-HAP coatings in its customers' surface coating operations will reduce air emissions from its customers' facilities. The capital expenditures and operating costs associated with reformulating the product should be considered **product redesign capital expenditures** and **product redesign operating costs**.

COST OFFSETS

- As an environmental protection alternative to used oil disposal, a printing plant has used machinery oil picked up by a hazardous waste collection and treatment service. The service charges a fee. The fee is reported in disposal operating costs. The service returns the oil clean. Thus, the printer avoids buying new oil. The value of the oil is a **cost offset** to the service's fees.
- A manufacturer purchases a cardboard baler to recycle cardboard containers associated with the manufacturing process. The capital expenditure should be reported in recycling capital expenditures. The costs of operating the baler should be reported in recycling operating costs. The manufacturer sells the cardboard to a recycler. The activity is not a potentially profit-making venture; it is conducted for pollution abatement. The revenues received from the recycler are **cost offsets**.
- A manufacturer installs a closed-cycle recovery system in the production process to prevent the dumping of chemicals into the water system. Because the closed-cycle recovery system recaptures and reuses the chemicals in the production process, it reduced expenses for chemicals. The pollution abatement portion of the capital expenditure pertaining to the closed-cycle recovery system is reported in pollution prevention capital expenditures. The operating expenses to maintain the system are reported in pollution prevention operating costs. The value of the recovered chemicals is reported as a **cost offset**.

Appendix B.

Qualifications of the Data

SAMPLING ERRORS

The survey estimates presented in this report are subject to sampling errors. The panel for this survey was sampled using probabilities that varied depending on the size of the establishment. Independent samples were chosen for each North American Industry Classification System (NAICS) industry subject to the constraint that the overall sample size was fixed at about 20,000 establishments.

The particular sample selected was but one of many similar probability samples that could have resulted using this sampling methodology. Each of the possible samples would yield somewhat different sets of results. The sampling errors—the differences between the estimates obtained from the sample actually selected and the results theoretically obtainable from a comparable complete canvass of the same target universe—are unknown. However, the estimated standard errors of the survey estimates are guides to the potential size of the sampling error.

The estimated standard error of a survey estimate may be used to define a confidence interval about that estimate such that the complete coverage result will be included within that interval with known probability. As examples:

1. The interval defined by one standard error below the estimate to one standard error above contains the complete coverage result with approximately 67 percent confidence.
2. The interval defined by two standard errors below the estimate to two standard errors above contains the complete coverage result with approximately 95 percent confidence.
3. The interval defined by three standard errors below the estimate to three standard errors above contains the complete coverage result with approximately 99 percent confidence.

Thus, an inference that the complete coverage result lies within the indicated intervals would, with the prescribed confidence, be correct. For example, if an estimated total is 100 with an associated standard error of 5, there is approximately 67 percent confidence that the interval of 95–105 includes the complete coverage result, about 95 percent confidence that the interval of 90–110 included the complete coverage result and approximately 99 percent confidence that the interval of 85–115 includes the complete coverage result.

In the tables, only relative standard errors are presented. A relative standard error is the standard error of the estimate divided by the estimate multiplied by 100. Thus, to obtain the standard error, take the product of the relative standard error and the estimate.

NONSAMPLING ERRORS

Nonsampling errors include various response and operational errors; errors of collection, reporting, transcription, and bias due to nonresponse, etc. These errors would also occur if a complete canvass were conducted under the same conditions as this survey. Most of the important operational errors were detected and corrected in the course of the review of the data for reasonableness and consistency. Explicit measures of the nonsampling errors do provide a guide to the size of the sampling error. The total error most likely will exceed the standard error measures.

Although the survey respondents were provided detailed instructions for estimating pollution abatement costs and expenditures (see Appendix A), it is extremely difficult to translate the concept of pollution abatement activity into a working definition that is applicable to all industries and situations.

Appendix C.

Description of Survey Sample, Estimation Methodology, and Imputation Methodology

SURVEY SAMPLE

The 2005 estimates presented in this report are based on a newly selected probability sample comprised of approximately 20,000 establishments. The scope of the 2005 survey is defined as establishments with 20 or more employees classified within the Manufacturing sector, excluding Apparel Manufacturing (NAICS 315). Prior to the 2005 survey, the Pollution Abatement Costs and Expenditures (PACE) survey was last conducted for survey year 1999. The scope of the 2005 survey differs from the 1999 survey. In 1999, Apparel Manufacturing, the Minerals sector, and the Electric Power Generating industry were defined as in-scope. In addition, establishments with less than 20 employees were also in-scope. Consequently, comparisons to the 1999 survey estimates should be made with caution.

In the 1999 PACE survey, only half of the responding establishments reported pollution abatement activity (operating costs or capital expenditures). The lack of reported activity among establishments in the sample adversely impacted the reliability of the survey estimates. In response, the decision was made to mail a screener questionnaire prior to selecting the 2005 PACE sample. The primary goal of this screener was to determine if an establishment had any pollution abatement activities, and if so, the order of magnitude of these activities. In particular, each establishment was asked to check a box indicating a range for pollution abatement capital expenditures and for operating costs: \$1,000–\$25,000; \$25,000–\$100,000; or over \$100,000.

In general, two types of industries were targeted by the screener: 1) industries that had a high percentage of establishments reporting zero pollution abatement operating costs in 1994, and 2) industries that did not have a measure-of-size (MOS) (e.g., value of shipments, number of employees, etc.), which was highly correlated with pollution abatement operating costs. Within these industries, the screener targeted the larger establishments. Larger establishments are those with more significant MOS relative to other establishments in their respective industries. This was based on the assumption that larger establishments were more likely to have significant pollution abatement activities than smaller establishments. Industries already known to have significant pollution abatement activities were largely exempt from the screener. In the Spring of 2005, the PACE screener was mailed to approximately 29,000 establishments. Final response to the

screener was 69 percent. The information obtained from the screener was incorporated in the sample design for the 2005 PACE survey. For more details on the screener and sample design, please visit: <http://yosemite.epa.gov/ee/epa/eed.nsf/Webpages/PACE2005.html>.

In addition to the screener, a pilot survey instrument was mailed to approximately 2,100 establishments in July 2005. The primary purpose of this pilot survey was to evaluate whether there were any systematic issues with the survey instrument and/or the ability of establishments to respond; estimates would not be produced. Given this objective, establishments and industries with significant pollution abatement activity were purposely targeted—these industries were supplied by the EPA. In particular, nearly 80 percent of this sample was allotted to 86 6-digit NAICS industries in five sectors known to have major pollution abatement expenditures: Paper (NAICS 322), Petroleum (NAICS 324), Chemicals (NAICS 325), Primary Metals (NAICS 331), and Electric Power Generation (NAICS 22111). The final response rate for the pilot survey was 71 percent. The response data collected from the pilot survey were converted to screener check-box data for the sample selection operation.

The sample frame for the 2005 PACE survey was extracted from the 2004 Business Register. All active manufacturing establishments (excluding Apparel Manufacturing) with 20 or more employees in 2004 (or annual payroll in excess of \$1 million) were defined as eligible for the 2005 PACE survey. The approximately 106,000 establishments that satisfied these criteria comprised the sample frame.

The sample frame was partitioned into 412 nonoverlapping industry groups. Every establishment in the sample frame was assigned to one of these industry groups: 398 of these industry groups correspond to specific 6-digit NAICS industries, six correspond to 5-digit NAICS industries, and the remaining eight correspond to 4-digit NAICS industries.

Within each industry group, a probability-proportionate-to-size (PPS) sampling method was employed. Under this method, larger establishments are more likely to be selected for the survey than smaller establishments. This approach makes the assumption that larger establishments are more likely to have significant pollution abatement activities than smaller establishments. Each establishment was assigned a probability of selection for the PACE survey based on its relative importance within its

industry and the priority assigned to the industry by the EPA. The establishment's relative importance was determined by the nominal dollar value for an industry-specific MOS variable. The MOS variable differed across industries, but the annual value of shipments was used as the MOS for most industry groups. A minimum probability of .05 was imposed to guard against the risk associated with the large sample weights (the inverse of the probabilities of selection) being assigned to establishments believed to be small. If an establishment reported data far in excess of our expectations (based on its MOS), the combination of the large sample weight and the large data could adversely affect the survey estimates. It is important to note that the establishment probabilities reflect the establishment's importance within its industry and not across industries. Within an industry, establishments with the same MOS value have the same probability of selection. Establishments with the same MOS value, but classified in different industries, would most likely have different probabilities.

Establishments with response data from the screener and/or the pilot received special treatment. For the set of high priority industries, establishments with any pollution abatement activity (per the screener and/or the pilot) were selected for the 2005 PACE Survey with a probability of one. For the medium/low priority industries, only establishments with \$25,000 or more of pollution abatement activity (per the screener and/or the pilot) were included in the 2005 PACE survey with a probability of one. Collectively, these establishments are the units believed to be the most likely establishments to have significant pollution abatement activity. Sampling them, as opposed to including them with certainty, would introduce a degree of uncertainty in the survey estimates that could be avoided via full inclusion in the PACE survey. For the medium/low priority industries, screener respondents with pollution abatement activity between \$1,000 and \$25,000, were merged in the nonscreener/pilot population for sampling purposes. Their MOS value was adjusted upward by a factor of two prior to the assignment of the probabilities. A small sample of screener/pilot respondents, which indicated that they had no pollution abatement activity, was randomly selected to ensure representation of the screener respondents.

The sampling program used to select the 2005 PACE sample was a fixed sample size program. Fixed means that the expected sample size for every sampling stratum is exactly realized. The elimination of the variability associated with the sample size effectively removes a primary source of uncertainty from the survey estimates. Each of the 412 industry groups was sampled independently. Ultimately, a sample of 20,378 establishments was selected for the 2005 PACE survey.

ESTIMATION PROCEDURE

1. *Weight Adjustment for Complete Nonrespondents*

We accounted for complete nonresponse in the survey estimates by adjusting the original sample weights for response cases using nonresponse weight adjustment factors calculated at the sample control industry level, either the NAICS-6 or the NAICS-4 level. Typically, two factors were developed for each NAICS industry, one for certainty cases and one for noncertainty cases. For industries with no certainty cases, just one adjustment factor was calculated for the entire industry. The nonresponse weight adjustment factors were computed as the ratio of a weighted MOS variable summed across all sample cases in each NAICS industry to the same weighted MOS variable summed across reported cases only. The inverse of this ratio is a measure of the industry coverage provided by the respondents in terms of the specified MOS variable. Depending on the NAICS industry, the MOS variable used in the nonresponse weight adjustment was either total value of shipments, cost of fuels, or cost of materials.

2. *Imputation of Partial Nonrespondents*

When establishments reported data in either total capital expenditures or total operating costs and the detailed information was missing, the detailed information was imputed.

All imputation was calculated using weighted industry averages and applied at the NAICS-6 level. A ratio based on survey respondents for the missing item to the total was used. There had to be a minimum of three establishments with positive data for this ratio to be accepted. If not accepted, then weighted totals of detailed items were done at the NAICS-5 level. The "minimum three establishments" rule could be continued through the NAICS-4 level. If not accepted at the NAICS-4 level, we imputed at the NAICS-3 level. These ratios were then applied to the value for total capital expenditures or total operating costs to obtain imputed values.

There was also imputation of total pollution abatement operating costs in cases of item nonresponse and when a response was outside a probable range given the industry and size of the establishment. Imputed values were largely computed using an industry-level ratio of the weighted total pollution abatement operating costs for survey respondents to weighted total value of shipments. These ratios were then applied to the establishment's total value of shipments. The value of shipments was from the 2005 Annual Survey of Manufactures, the PACE survey itself, or the prior Census of Manufactures.

3. *Calculation of Estimates and Relative Standard Errors*

Each estimate for industry or geographic level j is of the following form:

$$\hat{Y}_j = \sum_{i \in j} w_i y_i$$

where w_i is the adjusted weight of the i^{th} establishment in level j , and y_i is the value of the variable of interest for the i^{th} establishment in level j . y_i could be either reported or imputed.

The relative standard error for

$$\hat{Y}_j$$

is calculated as

$$\text{RSE}(\hat{Y}_j) = \frac{\hat{\sigma}(\hat{Y}_j)}{\hat{Y}_j}$$

where

$$\hat{\sigma}^2(\hat{Y}_j) = \sum_h \hat{\sigma}^2(\hat{Y}_{hj})$$

The term on the left is the variance of the estimated total, and each term in the summation on the right is the variance contribution of the h^{th} stratum to the overall variance where

$$\hat{\sigma}^2(\hat{Y}_{hj}) = \frac{n_h}{n_h - 1} \left[\sum_{i \in h \& j} (1 - \Pi_i)(w_i y_i)^2 - \frac{\left[\sum_{i \in h \& j} (1 - \Pi_i)(w_i y_i) \right]^2}{\sum_{i \in h \& j} (1 - \Pi_i)} \right]$$

In this formula, n_h is the sample size of stratum h and Π_i is the probability of selecting the i^{th} sampling unit, equal to the reciprocal of the original sampling weight.

