

PART A OF THE SUPPORTING STATEMENT
Hospital/Medical/Infectious Waste Incinerators

Identification of the Information Collection

Title and Number of the Information Collection

“Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators (40 CFR part 60, subpart Ce).” This is a revision of an existing Information Collection Request (ICR), which is assigned EPA tracking number 1899.04 and Office of Management and Budget (OMB) Control Number 2060-0422.

Short Characterization

The emission guidelines for hospital/medical/infectious waste incinerators (HMIWI), 40 CFR part 60, subpart Ce, were promulgated on September 15, 1997. The guidelines apply to owners or operators of HMIWI for which construction commenced on or before June 20, 1996 and State regulatory agencies. Subpart Ce requires States to develop plans to implement the emission guidelines. If approvable State Plans were not developed, EPA was required to develop a Federal plan to implement the emission guidelines in those States. The Federal plan, 40 CFR part 62, subpart HHH, was promulgated on September 14, 2000. States may choose to impose more stringent requirements. However, the burden estimates in this ICR assume that the State Plans mirror the emission guidelines.

The emission guidelines require initial notifications, performance tests, and annual and semiannual reporting. Owners or operators are also required to maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. These notifications reports, and records are essential in determining compliance and are required of all sources subject to the guidelines.

Any owner or operator subject to the provisions of this part will maintain a file of these measurements, and retain the file for at least 5 years following the date of such occurrence, measurements, maintenance, corrective action, reports, and records. All reports are sent to the State authority with an approved plan. In the event that there is no such approved plan, the reports are sent directly to the U.S. Environmental Protection Agency (EPA) Regional office.

Reporting and recordkeeping requirements differ for incinerators burning hospital/medical/infectious waste; for combustors co-firing hospital/medical/infectious waste with other fuels; and for incinerators burning only pathological, low-level radioactive, and/or chemotherapeutic waste. No exemption claims are expected over the next 3 years for co-fired

combustors or for incinerators burning only pathological, low-level radioactive, and/or chemotherapeutic waste. For this reason, no burden or cost has been estimated for these types of units. This information is being collected to determine compliance with 40 CFR part 60, subpart Ce.

Based on an EPA Office of Air Quality Planning and Standards (OAQPS) facility and emissions inventory effort for HMIWI, we have determined that there are 72 existing HMIWI located at 67 different facilities. The emission guidelines regulate only existing sources; therefore, no new respondents will become subject to the guidelines over the next 3 years.

Need for and Use of the Collection

Need/Authority for the Collection

The EPA is required under Sections 111 and 129 of the Clean Air Act (CAA), as amended, to establish guidelines for existing stationary sources that reflect the maximum achievable control technology (MACT) for achieving continuous emission reductions. Section 111(d)(1) states:

The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 110 under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued...but (ii) to which a standard of performance under this section would apply if such existing source were a new source, and (B) provides for the implementation and enforcement of such standards of performance.

Section 129(a)(1)(A) states:

The Administrator shall establish performance standards and other requirements pursuant to section 111 and this section for each category of solid waste incineration units. Such standards shall include emissions limitations and other requirements applicable to new units and guidelines (under section 111(d) and this section) and other requirements applicable to existing units.

Section 129(a)(2) states:

Standards applicable to solid waste incineration units promulgated under section 111 and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category.

Section 129(b)(1) states:

Performance standards under this section and section 111 for solid waste incineration units shall include guidelines promulgated pursuant to section 111(d) and this section applicable to existing units. Such guidelines shall include, as provided in this section, each of the elements required by subsection (a) (emissions limitations, notwithstanding any restriction in section 111(d) regarding issuance of such limitations), subsection (c) (monitoring), subsection (d) (operator training), subsection (e) (permits), and subsection (h)(4) (residual risk).

Subpart B of 40 CFR part 60 requires State Plans to include monitoring, recordkeeping and reporting provisions consistent with the emission guidelines. In addition, section 114(a)(1) states that that the Administrator may require any owner or operator subject to any requirement of the CAA to:

(A) Establish and maintain such records; (B) make such reports; (C) install, use, and maintain such monitoring equipment, and use such audit procedures, or methods; (D) sample such emissions (in accordance with such procedures or methods, at such locations, at such intervals, during such periods, and in such manner as the Administrator shall prescribe); (E) keep records on control equipment parameters, production variables or other indirect data when direct monitoring of emissions is impractical; (F) submit compliance certifications in accordance with Section 114(a)(3); and (G) provide such other information as the Administrator may reasonably require.

In the Administrator's judgment, dioxin/furan, particulate matter (PM), carbon monoxide (CO), hydrogen chloride (HCl), sulfur dioxide (SO₂), nitrogen oxides (NO_x), lead (Pb), cadmium (Cd), and mercury (Hg) emissions from HMIWI cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Therefore, emission guidelines were promulgated for this source category at 40 CFR part 60, subpart Ce.

Section 129 of the CAA also requires EPA to review and, if appropriate, revise the emission guidelines every 5 years. Section 129(a)(5) states:

Not later than 5 years following the initial promulgation of any performance standards and other requirements under this section and section 111 applicable to a category of

solid waste incineration units, and a 5 year intervals thereafter, the Administrator shall review, and in accordance with this section and section 111, revise such standards and requirements.

Consequently, revised emission guidelines are currently being processed for proposal for this source category.

Practical Utility/Users of the Data

Emissions of dioxins/furans, PM, CO, HCl, SO₂, NO_x, Pb, Cd, and Hg result from the operation of the facilities affected by the emission guidelines. The emission guidelines are achieved by the reduction of these emissions using good combustion practices and appropriate filter and scrubber technology. The control of these emissions from HMIWI requires not only the installation of properly designed equipment, but also the operation and maintenance of that equipment.

The notifications required in the HMIWI regulation are used to inform the designated agency that an existing source is subject to the guidelines. The reviewing authority may then inspect the source to check if the pollution control devices are properly installed and operated and the guidelines are being met. Performance test reports are needed, as these are the Agency's records of a source's initial capability to comply with the emission guidelines, and serve as a record of the operating conditions under which compliance was achieved. Operating conditions monitored include the highest maximum and lowest minimum operating parameters and exceedances of emission rates or operating parameters.

Semiannual reports are used for problem identification, as a check on source operation and maintenance, and for compliance determinations. Annual reports are also required, which include: (1) values for site-specific operating parameters; (2) the highest maximum operating parameter and the lowest minimum operating parameter; (3) exceedances of emissions or operating parameters; (4) malfunctions; (5) periods when data on emissions/operating parameters were not obtained; (6) results of any performance test conducted during the year; (7) if no exceedances or malfunctions, a report stating there were no exceedances; (8) any uses of a bypass stack, the duration, reason for malfunction, and corrective action taken; and (9) information recorded during the annual control equipment inspection (included in proposed amendments to the emission guidelines). The information generated by the monitoring, recordkeeping and reporting requirements described in this ICR is used by the Agency to ensure that facilities that are affected by the emission guidelines continue to operate the control equipment in compliance with the regulation. Adequate monitoring, recordkeeping, and reporting are necessary to ensure compliance with the applicable regulations, as required by the

emission guidelines. The information collected from recordkeeping and reporting requirements is also used for targeting inspections, and is of sufficient quality to be used as evidence in court.

Nonduplication, Consultations, and Other Collection Criteria

The requested recordkeeping and reporting are required under 40 CFR part 60, subpart Ce.

Nonduplication

If a State Plan is disapproved, the State can respond to EPA's concerns and submit a revised plan. If a State does not submit a revised, approvable State Plan by the second year after adoption of the emission guidelines, EPA will adopt and implement a Federal Plan that applies to existing HMIWI in the State. Consequently, the information would be submitted to the appropriate EPA Regional office, until such time as the State is delegated this authority. Therefore, no duplication exists.

Public Notice Required Prior to ICR Submission to OMB

This section is not applicable because this is a rule-related ICR.

Consultations

The HMIWI inventory and emissions data used as the basis for the revised guidelines were developed with the help of States and representatives from industry. A 60-day public comment period will be provided after proposal, during which the public will be given the opportunity to comment on the proposed amendments. Public hearings and meetings with State and industry stakeholders will also be held, as necessary, following proposal to discuss EPA's assessment of new information submitted with comments, to gather additional information, and to solicit further comments. All comments received will be considered and may be reflected in the development of the final guidelines.

Effects of Less Frequent Collection

Less frequent information collection would decrease the margin of assurance that facilities are continuing to meet the guidelines. Requirements for information gathering and recordkeeping are a useful technique to ensure that good operation and maintenance practices are applied and emission limitations are met. If the information required by these guidelines was collected less frequently, the likelihood of detecting poor operation and maintenance of control equipment and noncompliance would decrease. In addition, EPA's authority to take

administrative action would be significantly reduced. Section 113(d) of the CAA limits the assessment of administrative penalties to violations which occur no more than 12 months before initiation of the administrative proceeding. Since administrative proceedings are less costly and require use of fewer resources than judicial proceedings, both EPA and the regulated community benefit from preservation of EPA's administrative powers. Also, the reporting frequency in the guidelines is consistent with the requirements of the title V permit program. Consequently, less frequent reports would not result in a reduced burden.

General Guidelines

None of the reporting or recordkeeping requirements in the emission guidelines violate any of the regulations established by OMB at 5 CFR 1320.5. The guidelines require the respondents to maintain all records, including reports and notifications for at least 5 years. This is consistent with the General Provisions as applied to the guidelines. EPA believes that the 5-year records retention requirement is consistent the Part 70 permit program and the 5-year statute of limitations on which the permit program is based. The retention of records for 5 years allows EPA to establish the compliance history of a source, any pattern of non-compliance and to determine the appropriate level of enforcement action. EPA has found that the most flagrant violators have violations extending beyond 5 years. In addition, EPA would be prevented from pursuing the violators due to the destruction or nonexistence of essential records.

Confidentiality

Any information submitted to the Agency for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in Title 40, Chapter 1, Part 2, Subpart B--Confidentiality of Business Information (see 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 39999, September 28, 1978; 43 FR 42251, September 28, 1978; 44 FR 17674, March 23, 1979).

Sensitive Questions

None of the reporting or recordkeeping requirements in the guidelines contain sensitive questions.

The Respondents and the Information Requested

Respondents/NAICS Codes

The respondents to the recordkeeping and reporting requirements in the emission guidelines are owners or operators of HMIWI for which construction commenced before March 20, 1996. An estimated 72 existing HMIWI are currently required to comply with the requirements of the guidelines. The NAICS codes for the respondents affected by the guidelines are listed below for source category description.

Guidelines (40 CFR Part 60, Subpart Ce)	NAICS Codes
General Medical and Surgical Hospitals	622110
Specialty Hospitals	622310
Medicinal and Botanical Manufacturing	325411
Pharmaceutical Preparation Manufacturing	325412
Solid Waste Combustors and Incinerators	562213
Colleges, Universities, and Professional Schools	611310
Research and Development in Physical, Chemical, and Life Sciences	541710
National Security	928110

Not all processes classified in these NAICS codes are regulated by the guidelines.

Information Requested

None of these reporting or recordkeeping requirements violate any of the regulations established by OMB at 50 CFR 1320.5.

Data items. All data in this ICR that are recorded and/or reported are required by emission guidelines for HMIWI (40 CFR part 60, subpart Ce). Respondents must make the following reports:

Requirement	Guidelines Citation by Section
State Plan to implement and enforce emission guidelines	60.39e(a) and 60.23(a)
Notification of public hearing on State Plan	60.23(d)
Certification that public hearing on State Plan conducted according to subpart B State procedures	60.23(f)
Notification of initial CMS demonstration	60.7(a)

Requirement	Guidelines Citation by Section
Notification of initial performance test (PM, stack opacity, fugitive ash emissions, dioxins/furans, HCl, Cd, Pb, Hg)	60.8(d)
Notification of exemption claim for combustors burning pathological, low-level radioactive, and/or chemotherapeutic waste	60.32e(b)(1)
Notification of exemption claim for co-fired combustors	60.32e(c)(1)
Notification of relative weight of hospital waste, medical/infectious waste, and other fuels and/or wastes to be combusted at co-fired combustor	60.32e(c)(2)
Waste management plan	60.35e, 60.38e(a), 60.55c, 60.58c(c)(3), and 62.14430
Report of initial CMS demonstration	60.7(c)
Report of initial performance test (PM, stack opacity, fugitive ash emissions, dioxins/furans, HCl, Cd, Pb, Hg)	60.38e(a), 60.58c(d)(6), 60.8(a), and 62.14463(a)
Initial report of values for site-specific operating parameters	60.38e(a), 60.58c(c)(2), and 62.14463(b)
Annual report of values for site-specific operating parameters	60.38e(a), 60.58c(d), and 62.14463(d)-(f)
Annual and semiannual reports of emissions or operating parameter exceedances, malfunctions, and periods for which data on emissions/operating parameters were not obtained	60.38e(a), 60.58c(d) and (e), 60.7(c), 62.14463(g), and 62.14464(b) and (c)
Annual report of no excess emissions	60.38e(a), 60.58c(d)(7), 60.7(c), and 62.14463(i)
Report of results of annual performance test	60.38e(a), 60.58c(d)(6), and 62.14463(h)
Results of previous performance tests (included in proposed amendments to emission guidelines)	60.38e(a) and 60.58c(g)
Annual report containing information from annual equipment inspection, required maintenance, and repairs not completed during established timeframe	60.38e(b)(2)
Annual report containing information from annual control equipment inspection, required maintenance, and repairs not completed during established timeframe (included in proposed amendments to emission guidelines)	60.38e(c)(2)

Respondents must keep the following records:

Requirement	Guidelines Citation by Section
Records of public hearing conducted on State Plan	60.23(e)
Retention of records for 5 years	60.38e(a), 60.58c(b), and 62.14461
Records of startup, shutdown, or malfunction	60.7(b)
Records of operators completing review of HMIWI operating manual	60.38e(a), 60.58c(b) (8), and 62.14460(g)
Records of operators completing operator training course and qualification requirements	60.38e(a), 60.58c(b) (9) and (10), and 62.14460(h) and (i)
Records of initial testing of fugitive ash emissions (included in proposed amendments to emission guidelines)	60.38e(a) and 60.58c(b)(2)(ii)
Records of process and control device operating parameters	60.38e(a) and 60.58c(b)(2)(iii)-(xv), and 62.14460(b)(2)-(12), (14) and (15)
Records of CMS operation and maintenance	60.7(f)
Records of emissions or operating parameter exceedances, malfunctions, and periods for which data on emissions/operating parameters were not obtained	60.38e(a), 60.58c(b) (3)-(5), and 62.14460(c)-(e)
Records of initial, annual, and any subsequent performance tests	60.38e(a), 60.58c(b) (6), and 62.14460(f)
Records of calibration of monitoring devices	60.38e(a), 60.58c(b) (11), and 62.14460(j)
Records of annual equipment inspections, required maintenance, and repairs not completed during established timeframe	60.38e(b)(1) and 62.14460(b)(13)
Records of annual control equipment inspections, required maintenance, and repairs not completed during established timeframe (included in proposed amendments to emission guidelines)	60.58c(c)(1)
Records on quarterly basis of types and amounts of materials charged for co-fired combustors and for incinerators burning only pathological, low-level radioactive, and/or chemotherapeutical waste	60.32(e)(b) and (c) and 62.14400(b)

Respondent activities. The respondent activities required by the guidelines in the first 3 years following the effective date are provided below:

Respondent Activities
Read instructions.
Develop State Plan and inventory and update inventory annually
Conduct public hearing on State Plan
Perform CMS demonstrations and repeat CMS demonstrations if necessary
Perform performance tests and repeat performance tests if necessary
Develop, update, and review operating information
Perform inspections
Prepare and submit the notifications and reports listed in the table above
Develop waste management plan
Prepare and review reports of performance tests
Prepare and review reports of CMS demonstrations
Complete operator training and qualification
Maintain the records listed in the table above
Train personnel

Currently, sources are using monitoring equipment that provides automated parameter data, e.g., scrubber pressure drop. Although personnel at the affected facility still need to evaluate the data, this type of monitoring equipment has significantly reduced the burden associated with monitoring and recordkeeping. In addition, some regulatory agencies are setting up electronic reporting systems to allow sources to report electronically which is reducing the reporting burden. However, electronic reporting systems are still not widely used by the regulatory agencies. It is estimated that approximately 15 percent of the respondents use electronic reporting.

The Information Collected--Agency Activities, Collection Methodology, and Information Management

Agency Activities

The EPA conducts the following activities in connection with the acquisition, analysis, storage, and distribution of the required information.

Agency Activities
Observe initial performance tests and repeat performance tests if necessary
Respond to litigation of the guidelines
Observe enforcement activities (retesting) related to excess emissions
Review notifications and reports (listed in the table above), including performance test reports, excess emissions reports, study addressing siting requirements, waste management, required to be submitted by industry
Audit facility records
Input, analyze, and maintain data in the Air Facility System (AFS)

Collection Methodology and Management

Following initial notification, the reviewing authority may inspect the source to determine whether the pollution control devices are properly installed and operated. Performance test reports are used by the Agency to discern a source’s initial capability to comply with the emission guidelines. Data and records maintained by the respondents are tabulated and published for use in compliance and enforcement programs. The semiannual reports are used for problem identification, as a check on source operation and maintenance, and for compliance determinations.

Information contained in the reports is entered into the AFS, which is operated and maintained by EPA’s Office of Compliance. The AFS is EPA’s database for the collection, maintenance, and retrieval of compliance data for approximately 125,000 industrial and government-owned facilities. The EPA uses the AFS for tracking air pollution compliance and enforcement by local and State regulatory agencies, EPA Regional offices and EPA headquarters. The EPA and its delegated authorities can edit, store, retrieve and analyze the data.

The records required by this regulation must be retained by the owner or operator for 5 years.

Small Entity Flexibility

None of the HMIWI expected to be impacted under the revised guidelines are owned by small entities, and only a few HMIWI overall are owned by small entities, based on the definition used by the Small Business Administration (500, 750, or fewer employees; and \$11.5 million, \$31.5 million, or less in annual sales—depending on the company NAICS codes). However, the impact on small entities was taken into consideration during the development of the regulation. Due to technical considerations involving the process operations and types of control equipment employed, the recordkeeping and reporting requirements are the same for

both small and large entities. The Agency considers these requirements the minimum needed to ensure compliance and, therefore, cannot reduce them further for small entities. However, the regulation includes various provisions that would reduce the burden on HMIWI, including small entities. For example, there are less restrictive guidelines and reporting requirements for small rural HMIWI, for co-fired combustors, and for incinerators burning only pathological, low-level radioactive, and/or chemotherapeutic waste. There are also provisions allowing HMIWI to skip annual tests and reports for 2-year periods if they have demonstrated compliance for three annual tests in a row. Also, the current proposal would allow HMIWI to submit previous emission tests to demonstrate compliance with the emission limits in the revised guidelines.

Collection Schedule

The specific frequency for each information collection activity within this request is shown in Table 1.

Estimating the Burden and Cost of the Collection

This section presents estimates of the burden and cost associated with the reporting and recordkeeping requirements in the emission guidelines. Table 1 presents the average annual burden and cost estimates for respondents, while Table 2 presents the average annual burden and cost estimates for the Federal government.

Estimating Respondent Burden

Table 1 documents the computation of individual burdens for the recordkeeping and reporting requirements applicable to the 72 existing HMIWI subject to the emission guidelines. The individual burdens are expressed under standardized headings designed to be consistent with the concept of burdens under the Paperwork Reduction Act. Where appropriate, specific tasks and major assumptions have been identified. Responses to this information collection are mandatory. The Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number.

The annual average burden to industry over the next 3 years from these recordkeeping and reporting requirements is estimated to be 49,878 hours. These hours are based on Agency studies and background documents from the development of the regulation, Agency knowledge and experience with the part 60 and 62 regulations, the previously approved ICR, and any comments received.

Estimating Respondent Costs

Estimating labor costs. Table 1 presents the costs of the recordkeeping and reporting requirements applicable to the 72 existing HMIWI subject to the emission guidelines. The average annual labor cost for industry during the 3 years of the ICR is estimated to be \$2,433,045. The ICR uses the following labor rates to estimate the industry and State government labor costs:

	Industry	State Government
Technical	\$45.29 (\$27.12 x 167%)	\$54.38 (\$33.99 x 160%)
Management	\$73.10 (\$43.77 x 167%)	\$72.32 (\$45.20 x 160%)
Clerical	\$32.90 (\$19.70 x 167%)	\$40.74 (\$25.46 x 160%)

These labor rates are from the U.S. Department of Labor, Bureau of Labor Statistics, June 2006, “Table 9. Private industry workers, by occupational group” and “Table 4. State and local government workers, by occupational and industry group.” The rates from both tables are from column 1, “Total compensation.” The industry labor rates were adjusted by an overhead and profit rate of 167 percent, while the State government labor rates were multiplied by the standard government benefits factor of 1.6.

Estimating capital/startup and operation and maintenance costs. The types of industry costs associated with the information collection activities in the guidelines are labor costs associated with recordkeeping and reporting, which are addressed elsewhere in this ICR, and costs associated with continuous monitoring. The capital/startup costs are the one-time costs incurred when a facility becomes subject to the regulation, and typically include equipment purchased for the purpose of satisfying EPA requirements (e.g., monitoring equipment, in-house testing equipment, file cabinets). A one-time capital/startup cost can be estimated over multiple years by annualizing the cost using an OMB-approved interest rate. The annual operation and maintenance (O&M) costs are the ongoing costs incurred to maintain the capital equipment (e.g., labor, maintenance materials, and overhead) and the costs associated with the paperwork requirements incurred continuously over the life of the ICR (e.g., photocopying and postage). Tables 3 through 7 present the annualized capital/startup and O&M costs associated with the emission guidelines.

The 72 existing HMIWI have already installed monitoring equipment to comply with the original emission guidelines, and no additional monitoring equipment are needed for the revised guidelines. Consequently, annualized capital costs and annual O&M costs for these equipment are already being incurred. Under the revised guidelines, all existing HMIWI will need to purchase equipment for in-house testing of fugitive ash emissions.

The capital/startup costs associated with file cabinets for storing collected data and reports include the purchase of one standard four-drawer file cabinet for each facility (assume \$235 per file cabinet). Photocopying costs per response are estimated at 0.5 hour of clerical labor at a rate of \$32.90/hr. Postage costs are estimated at \$4.05 per response for mailing to regulatory agencies, based on the Priority Mail shipping rate for the U.S. Postal Service.

The total annualized capital/startup cost over the first 3 years after the effective date is \$407,953, while the total annual O&M cost is \$333,258. Combining the annualized capital costs with the annual O&M cost gives a total annualized cost of \$741,211 for the 3 years after the effective date.

Estimating Agency Burden and Cost

Because the information collection requirements were developed as an incidental part of standards development, no costs can be attributed to the development of the information collection requirements. Because reporting and recordkeeping requirements on the part of the respondents are required under Section 111 of the CAA, no operational costs will be incurred by the Federal government. Publication and distribution of the information are part of the AFS, with the result that no Federal costs can be directly attributed to the ICR. Examination of records to be maintained by the respondents will occur incidentally as part of the periodic inspection of sources that is part of EPA's overall compliance and enforcement program and, therefore, is not attributable to the ICR.

The only costs to the Federal government are those costs associated with the analysis of the reported information, onsite observation of the initial CMS demonstrations and initial performance tests and retests, review and approval of State Plans and inventories, enforcement activities due to excess emissions, and litigation activities.

Table 2 presents the average annual burden and cost estimates for the Federal government. The average annual Agency burden and cost during the 3 years of the ICR are estimated to be 1,277 hours and \$608,392 (including travel expenses). The cost is based on the following average hourly labor rates:

Technical	\$42.45 (GS-12, Step 1, \$26.53 x 160%)
Management	\$57.20 (GS-13, Step 5, \$35.75 x 160%)
Clerical	\$22.96 (GS-6, Step 3, \$14.35 x 160%)

These labor rates are from the Office of Personnel Management (OPM) "2006 General Schedule," which excludes locality rates of pay. The rates were multiplied by the standard government benefits factor of 1.6.

Estimating the Respondent Universe and Total Burden and Costs

Based on our research for this ICR, 72 existing HMIWI, and the 23 States in which they reside, will be subject to the requirements of the revised guidelines. (Only 13 of the 23 States currently have approved State Plans under the original guidelines, but all 23 States are assumed to have State Plans approved by the third year after promulgation of the revised guidelines.) The emission guidelines regulate only existing sources; therefore, no new respondents will become subject to the guidelines over the next 3 years. The total number of responses per year is calculated using the following table:

Total Annual Responses				
(A) Information Collection Activity	(B) Number of respondents	(C) Number of responses	(D) Number of respondents that keep records but do not submit reports	(E) Total annual responses E = (B x C) + D
Read instructions (States)	7.7	1	N/A	7.7
Develop State Plan/inventory	7.7	1	N/A	7.7
Annual update of State Plan inventory	16	1	N/A	16
Public hearing on State Plan	7.7	1	N/A	7.7
Notification of public hearing on State Plan	7.7	1	N/A	7.7
Certification that public hearing conducted according to subpart B State procedures	7.7	1	N/A	7.7
Read instructions (HMIWI)	24	1	N/A	24
Initial CMS demonstration	6.3	1	N/A	6.3
Annual update of operating information	72	1	N/A	72
Review of operating information with each operator	72	2	N/A	144
Annual equipment inspection (small rural HMIWI)	6	1	N/A	6
Initial control equipment inspection (all other HMIWI)	22	1	N/A	22
Notification of initial performance test (CDD/CDF, metals, fugitive ash emissions)	4	1	N/A	4
Notification of initial performance test (fugitive ash emissions)	20	1	N/A	20
Notification of initial CMS demonstration	6	1	N/A	6
Report of initial performance test (CDD/CDF, metals, fugitive ash emissions)	4	1	N/A	4
Report of initial performance test (fugitive ash emissions)	20	1	N/A	20
Annual report				
CMS emissions and operating parameters	72	1	N/A	72
Exceedances, malfunctions, and periods for which data not obtained	14	1	N/A	14
Results of performance tests conducted during the year	72	1	N/A	72

Total Annual Responses				
(A) Information Collection Activity	(B) Number of respondents	(C) Number of responses	(D) Number of respondents that keep records but do not submit reports	(E) Total annual responses E = (B x C) + D
Report of no exceedances	58	1	N/A	58
Semiannual report of exceedances, malfunctions, and periods for which data not obtained ^a	14	1	N/A	14
			Total	614

^a Because the semiannual report coincides once each year with the annual report and both reports include information on exceedances, malfunctions, and periods for which data were not obtained, the frequency of the semiannual report is shown in the table as only once per year to avoid double-counting.

The number of total annual responses is 614.

Bottom Line Burden Hours and Costs/Master Tables

Respondent tally. The bottom line respondent burden hours and costs, presented in Table 1, are calculated by adding person-hours per year down each column for technical, management, and clerical staff, and by adding down the cost column. The total hours requested are 49,878 hours (19,587 hours for States; 30,291 hours for HMIWI). The total annual labor cost is \$2,433,045 (\$1,057,197 for States; \$1,375,848 for HMIWI). The total annual capital/startup and O&M costs to the regulated entities are \$741,211 (\$802 for States; \$740,409 for HMIWI).

The Agency tally. The bottom line Agency burden hours and costs, presented in Table 2, are calculated as in the respondent table, by adding person-hours per year down each column for technical, managerial, and clerical staff, and by adding down the cost column. In this case, travel expenses for performance tests and CMS demonstrations attended are also added to this salary cost. The annual average burden for all Agency activities is 1,277 hours, and the total annual cost is \$608,392 (including travel expenses).

Variations in the annual bottom line. Each year, all existing HMIWI, and the States with approved State Plans where those HMIWI reside, incur the same recurring burden and costs associated with the emission guidelines (update of State Plan inventory, submittal of annual and semiannual reports). In the first year after promulgation, all 23 States in which the 72 existing HMIWI reside will also be required to prepare and submit new State Plans and inventories to EPA under the revised emission guidelines and prepare for and hold public hearings, if requested, on the new State Plans. In the third year after promulgation, all 72 existing HMIWI also incur the additional burden and cost associated with preparing and submitting notifications and reports of the initial fugitive ash emission tests required for all existing HMIWI under the

revised emission guidelines. Also, all but the 6 small rural HMIWI incur the additional burden and cost associated with conducting control equipment inspections under the revised emission guidelines. (The 6 small rural HMIWI are already required under the original emission guidelines to conduct equipment inspections, including control equipment.)

Similarly, each year, the Federal government incurs the same recurring burden and costs associated with the emission guidelines (reviewing annual and semiannual reports, conducting enforcement activities related to excess emissions), but also incurs the same burden and costs associated with litigation related to the revised emission guidelines. In the first year, the Federal government also incurs the additional burden and cost of reviewing public hearing notifications and certifications on the new State Plans. In the second year after promulgation, the Federal government also incurs the additional burden and cost of reviewing the new State Plans and inventories submitted to EPA and developing a new Federal Plan, if necessary. In the third year after promulgation, the Federal government also incurs the additional burden of attending initial performance tests and reviewing notifications and reports of initial performance tests and CMS demonstrations.

Reasons for Change in Burden

The reduction in burden from the most recently approved ICR is primarily due to a decrease in applicable burden items and hours. The ongoing recordkeeping requirements for co-fired combustors and incinerators burning only pathological, low-level radioactive, and/or chemotherapeutic waste have been omitted. The burden estimate associated with records of CMS O&M has also been reduced based on average O&M estimates for existing sources. These reductions in burden offset the increase in burden associated with the new requirements in the revised emission guidelines (e.g., new State Plans and inventories, initial stack tests and CMS demonstrations for all HMIWI impacted under the revised guidelines, initial fugitive ash emission tests for all HMIWI, and initial and annual control equipment inspections for all but small rural HMIWI). The industry labor rates associated with the burden estimates have also been revised and updated.

Burden Statement

The annual burden for this collection of information is estimated to average 358 hours per response for States and 54 hours per response for HMIWI. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and

disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB Control Number. The OMB Control Numbers for EPA's regulations are listed at 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OAR-2006-0534, which is available for online viewing at www.regulations.gov, or in person viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select "search," then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2006-0534 and OMB Control Number 2060-0422 in any correspondence.

PART B OF THE SUPPORTING STATEMENT

Hospital/Medical/Infectious Waste Incinerators

This section is not applicable because statistical methods are not used in data collection associated with this regulation.

TABLE 1. ANNUAL RESPONDENT BURDEN AND COST OF REPORTING AND RECORDKEEPING REQUIREMENTS - EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (40 CFR PART 60, SUBPART CE)

Burden item	(A) Person- hours per occurrence	(B) Number of occurrences per year	(C) Person-hours per respondent per year (C = A x B)	(D) Respondents per year ^a	(E) Technical person-hours per year (E = C x D)	(F) Management person-hours per year (F = E x 0.05)	(G) Clerical person-hours per year (G = E x 0.1)	(H) Total person-hours per year H = E + F + G	(I) Cost, \$ ^b	(J) No. of responses	(K) No. of responses per respondent	(L) Hours per response	(M) Monitoring cost per response
1. Applications	N/A												
2. Surveys and studies	N/A												
3. Reporting requirements (States)													
A. Read instructions	1	1	1	8	8	0.4	0.8	8.8	\$476	7.7			
B. Required activities													
--Development of State Plan/inventory ^c	2,080	1	2,080	8	15,947	797	1,595	18,339	\$989,810	7.7			
--Annual update of State Plan inventory ^d	20	1	20	16	327	16	33	376	\$20,276	16			
--Public hearing on State Plan ^e	8	1	8	8	61	3.1	6.1	71	\$3,807	7.7			
C. Create information	Incl. in 3B												
D. Gather existing information	Incl. in 3B												
E. Write report													
--State Plan/inventory	Incl. in 3B												
--Annual update of State Plan inventory	Incl. in 3B												
--Notification of public hearing on State Plan ^f	8	1	8	8	61	3.1	6.1	71	\$3,807	7.7			
--Certification that public hearing on State Plan conducted according to subpart B State procedures	2	1	2	8	15	0.8	1.5	18	\$952	7.7			
4. Reporting requirements (HMIWI)													
A. Read instructions	1	1	1	24	24	1.2	2.4	28	\$1,254	24			
B. Required activities													
--Perf. spec. tests (certif.) for CMS ^g	11	1	11	6	70	3.5	7.0	80	\$3,639	6.3			
--Repeat perf. spec. tests (certif.) for CMS ^h	11	1	11	0	0	0	0	0	\$0	0			
--Development of operating information ⁱ	160	1	160	0	0	0	0	0	\$0	0			
--Annual update of operating information ^j	20	1	20	72	1,440	72	144	1,656	\$75,218	72			
--Review of operating information with each operator ^{k,l}	8	2	16	72	1,152	58	115	1,325	\$60,175	144			
--Initial equipment inspection (small rural HMIWI) ^m	15	1	15	0	0	0	0	0	\$0	0			
--Annual equipment inspection (small, rural HMIWI) ⁿ	15	1	15	6	90	4.5	9.0	104	\$4,701	6.0			
--Initial control equipment inspection (all other HMIWI) ^m	15	1	15	22	330	17	33	380	\$17,238	22			
--Annual control equipment inspection (all other HMIWI) ⁿ	15	1	15	0	0	0	0	0	\$0	0			
C. Create information													
--Development of operating information ^o	160	1	160	0	0	0	0	0	\$0	0			
D. Gather existing information	Incl. in 4B												
E. Write report													
--Notification of initial performance test													
--CDD/CDF, metals, fugitive ash emissions	2	1	2	4	8	0.4	0.8	9	\$418	4.0			
--Fugitive ash emissions	1	1	1	20	20	1.0	2.0	23	\$1,045	20			
--Notification of initial CMS demonstration	2	1	2	6	13	0.6	1.3	15	\$662	6.3			
--Waste management plan ^o	160	1	160	0	0	0	0	0	\$0	0			
--Report of initial performance test													
--CDD/CDF, metals, fugitive ash emissions ^p	8	1	8	4	32	1.6	3.2	37	\$1,672	4.0			
--Fugitive ash emissions ^q	2	1	2	20	40	2.0	4.0	46	\$2,089	20			
--Report of initial CMS demonstration	Incl. in 4B												
--Annual report													
--CMS emissions/operating parameters ^r	23	1	23	72	1,656	83	166	1,904	\$86,501	72			
--Exceedances/malfunctions/periods for which data not obtained ^{s,t}													
--Small rural HMIWI	16	1	16	1	19	1.0	1.9	22	\$1,003	1.2			
--All other HMIWI	64	1	64	13	845	42	84	972	\$44,128	13			
--Results of performance tests conducted during the year ^u													
--Small rural HMIWI	8	1	8	6	48	2.4	4.8	55	\$2,507	6.0			
--All other HMIWI	40	1	40	66	2,640	132	264	3,036	\$137,900	66			
--Report of no exceedances ^{s,t}													
--Small rural HMIWI	8	1	8	5	38	1.9	3.8	44	\$2,006	4.8			
--All other HMIWI	32	1	32	53	1,690	84	169	1,943	\$88,256	53			
--Report of annual equipment inspection (small rural HMIWI)	Incl. in 4B												
--Report of annual control equipment inspection (all other HMIWI)	Incl. in 4B												
--Semiannual report of exceedances/malfunctions/periods for which data not obtained ^{s,t,v}													
--Small rural HMIWI	8	1	8	1	9.6	0.5	1.0	11	\$501	1.2			
--All other HMIWI	32	1	32	13	422	21	42	486	\$22,064	13			

TABLE 1. (CONTINUED)

Burden item	(A) Person- hours per occurrence	(B) Number of occurrences per year	(C) Person-hours per respondent per year (C = A x B)	(D) Respondents per year ^a	(E) Technical person-hours per year (E = C x D)	(F) Management person-hours per year (F = E x 0.05)	(G) Clerical person-hours per year (G = E x 0.1)	(H) Total person-hours per year H = E + F + G	(I) Cost, \$ ^b	(J) No. of responses	(K) No. of responses per respondent	(L) Hours per response	(M) Monitoring cost per response
5. Recordkeeping requirements (States)													
A. Read instructions	Incl. in 3A												
B. Plan activities	N/A												
C. Implement activities	N/A												
D. Develop record system	N/A												
E. Time to enter information													
--Records of public hearing on State Plan ^c	80	1	80	8	613	31	61	705	\$38,070				
F. Time to train personnel	N/A												
G. Time for audits	N/A												
6. Recordkeeping requirements (HMIWI)													
A. Read instructions	Incl. in 4A												
B. Plan activities	N/A												
C. Implement activities	N/A												
D. Develop record system	N/A												
E. Time to enter information													
--Records of operators completing operator training requirements ⁵	2	2	4	0	0	0	0	0	\$0				
--Records of operators that have been qualified as HMIWI operators ⁵	2	2	4	0	0	0	0	0	\$0				
--Records of initial performance test	Incl. in 4E												
--Records of startup, shutdown, or malfunction ⁷	1.5	52	78	72	5,616	281	562	6,458	\$293,352				
--Records of persons completing review of operating information ⁵	2	2	4	72	288	14	29	331	\$15,044				
--Records of annual and any subsequent compliance tests	Incl. in 4E												
--Records of process and control device operating parameters ^{5,2}													
--Small rural HMIWI	0.5	52	26	6	156	8	16	179	\$8,149				
--All other HMIWI	1.5	52	78	66	5,148	257	515	5,920	\$268,906				
--Records of CMS operation and maintenance ^{3d}	0.023	365	8	72	604	30	60	695	\$31,573				
--Records of exceedances/malfunions/periods for which data not obtained ^{5,2}													
--Small rural HMIWI	0.5	52	26	1	31	2	3	36	\$1,630				
--All other HMIWI	1.5	52	78	13	1,030	51	103	1,184	\$53,781				
--Records of annual equipment inspection (small rural HMIWI)	Incl. in 4B												
--Records of annual control equipment inspection (all other HMIWI)	Incl. in 4B												
F. Time to train personnel ^{4b}	40	1	40	72	2,880	144	288	3,312	\$150,437				
G. Time for audits	N/A												
TOTAL LABOR BURDEN AND COST^{4c}:					43,372	2,169	4,337	49,878	\$2,433,045				
TOTAL REPORTING LABOR BURDEN (STATES):					16,419	821	1,642	18,882	\$1,019,127	55	2.4	345.40	\$15
TOTAL RECORDKEEPING LABOR BURDEN (STATES):					613	31	61	705	\$38,070	55	2.4	12.90	\$0
TOTAL LABOR BURDEN (STATES):					17,032	852	1,703	19,587	\$1,057,197	55	2.4	358.30	\$15
TOTAL REPORTING LABOR BURDEN (HMIWI):					10,586	529	1,059	12,174	\$552,977	559	7.8	21.78	\$665
TOTAL RECORDKEEPING LABOR BURDEN (HMIWI):					15,753	788	1,575	18,116	\$822,870	559	7.8	32.40	\$659
TOTAL LABOR BURDEN (HMIWI):					26,340	1,317	2,634	30,291	\$1,375,848	559	7.8	54.18	\$1,324

^a Estimate that 72 HMIWI are operating. The average number of HMIWI over the first 3 years after promulgation for one-time activities is $(0 + 0 + 72)/3 = 24$. Of those 72 HMIWI, 6 are small rural HMIWI; the remaining 66 make up the small, medium, and large HMIWI. The average number of small rural HMIWI over the first 3 years after promulgation for one-time activities is $(0 + 0 + 6)/3 = 2$. The average number for the remaining HMIWI (medium and large HMIWI) is $(0 + 0 + 66)/3 = 22$. An estimated 22 HMIWI will be impacted, and 19 of the 22 will need to conduct CMS demonstrations to reestablish their parameter limits; the other 3 HMIWI are impacted for pollutants for which no parameter limits are required. The average number of respondents over the first 3 years after promulgation needing to conduct CMS demonstrations is $(0 + 0 + 19)/3 = 6$. All of the existing HMIWI will need to conduct control equipment inspections, except for the 6 small rural HMIWI (which already must conduct annual inspections). Only 12 of the 22 impacted HMIWI will need to conduct additional tests to demonstrate compliance; the other 10 HMIWI already conduct annual tests for the pollutants for which they are impacted, or they are not required to test for the pollutants. The average number of respondents over the first 3 years after promulgation needing to conduct additional stack tests is $(0 + 0 + 12)/3 = 4$. All of the existing HMIWI will need to conduct fugitive ash emissions tests. Subtracting the 12 HMIWI conducting both stack tests and fugitive ash tests, the average number of respondents needing to conduct fugitive ash tests is $(72 - 12)/3 = 20$. The 72 HMIWI operate in 23 States, and each of the 23 States will be required to develop a new State Plan under the guidelines. The average number of States required to develop a new State Plan over first 3 years after promulgation is $(23 + 0 + 0)/3 = 8$. Assume one affected facility per respondent.

^b Industry costs are based on the following hourly rates: technical at \$45.29, management at \$73.10, and clerical at \$32.90. The composite hourly labor rate is $(\$45.29/\text{hr}) + (0.05 \times \$73.10/\text{hr}) + (0.1 \times \$32.90/\text{hr}) = \$52.24/\text{hr}$. State government costs are based on the following hourly rates: technical at \$54.38, management at \$72.32, and clerical at \$40.74.

^c Based on the requirement in the emission guidelines for States to develop a State Plan within 1 year (2,080 hours) after promulgation. Also includes the requirement for States to develop a State Plan inventory.

TABLE 1. (CONTINUED)

- ^d Assume 20 hours to update the State Plan inventory each year. Of the 23 States with HMIWI currently operating, 13 have approved State Plans under the original emission guidelines, but all 23 States are assumed to have State Plans approved under the revised guidelines. The average number of States for this activity is $(13 + 13 + 23)/3 = 16$.
- ^e Assume 8 hours for each State to conduct a public hearing on the new State Plan.
- ^f Assume 8 hours for each State to provide notification of a public hearing on the new State Plan.
- ^g Person-hours per occurrence are based on the performance specification costs to certify CMS (\$600) divided by the composite hourly labor rate (\$52.24/hr).
- ^h Assume no failures of the initial CMS demonstrations, given the small number of demonstrations estimated to be necessary.
- ⁱ Assumes 160 hrs to develop the operating information.
- ^j Assume 20 hours to update the operating information each year.
- ^k Assume 8 hours to review the operating information with each operator.
- ^l Assume 2 operators per facility. Also assume there is no operator turnover at the affected facilities.
- ^m Person-hours per occurrence are based on the inspection cost (\$800) divided by the composite hourly labor rate (\$52.24/hr). Because the annual control equipment inspection will not be performed until after the first 3 years after promulgation, the average number of respondents over the first 3 years for this task is 0.
- ⁿ Assume 160 hours for each facility to develop the operating information, but no facilities will need to develop new operating information.
- ^o Assume 160 hours for each facility to develop the waste management plan, but no facilities will need to develop a new waste management plan.
- ^p Assume 8 hours for each facility to review the report of the initial performance test for CDD/CDF, metals, and fugitive ash.
- ^q Assume 2 hours for each facility to review the report of the initial performance test for fugitive ash.
- ^r Person-hours per occurrence are based on the reporting and recordkeeping costs for CMS (\$1,200) divided by the composite hourly rate (\$52.24/hr).
- ^s Assume 16 and 8 person-hours per report per pollutant to report monitoring exceedances and no excess emissions, respectively. For small rural HMIWI, testing and monitoring focus on stack opacity. For the remaining HMIWI, testing and monitoring focus primarily on three pollutants (PM, CO, and HCl) and stack opacity.
- ^t Assume 20 percent of respondents report monitoring exceedances, and 80 percent report no exceedances.
- ^u For small rural HMIWI, assume 8 hours to review report of annual stack opacity compliance test. For the remaining HMIWI, assume 40 hours to review report of annual PM, CO, HCl, and stack opacity compliance tests.
- ^v Because the semiannual report coincides once each year with the annual report and both reports include information on exceedances, malfunctions, and periods for which data were not obtained, the frequency of the semiannual report is shown in the table as only once per year to avoid double-counting.
- ^w Assume 80 hours for each State to compile the summary of presentations and/or comments submitted at the public hearing and develop responses to the comments.
- ^x Assume 2 operators per facility and no operator turnover at the affected facilities, but no facilities will need to complete initial operator training requirements (only annual refresher training; see Table 2).
- ^y These records are kept on a weekly basis.
- ^z For small rural HMIWI, assume 0.5 hours per week to record process and control device operating parameters and to record any exceedances of these parameters. For the remaining HMIWI, assume 1.5 hours per week to record operating parameters and parameter exceedances.
- ^{aa} Person-hours per occurrence for this daily activity are based on the operation and maintenance (O&M) cost for CMS divided by the composite hourly labor rate and the operating days per year, determined for each existing HMIWI, and then averaged.
- ^{ab} Based on the time per year to train one person to perform the Method 9 and Method 22 tests. The labor requirements to train the personnel were estimated to be 8 hours per day for 5 days per year.
- ^{ac} The average recurrent burden and cost in the first 3 years after promulgation for the sources with recurrent burden are equal to the person-hours added down each column for technical, management, and clerical and the sum of the cost column.

TABLE 2. ANNUAL BURDEN AND COST TO THE FEDERAL GOVERNMENT -
EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (40 CFR PART 60, SUBPART CE)

Activity	(A) EPA-hours per occurrence	(B) Number of occurrences per year	(C) EPA-hours per facility per year (C = A x B)	(D) Facilities per year ^a	(E) Technical person-hours per year (E = C x D)	(F) Management person-hours per year (F = E x 0.05)	(G) Clerical person-hours per year (G = E x 0.1)	(H) Cost, \$ ^b
1. Attend initial performance test ^c	32	1	32	0.3	10	0.5	1.0	\$487
2. Repeat performance test								
A. Retesting preparation ^d	12	1	12	0.8	9.6	0.5	1.0	\$457
B. Attend retesting ^e	32	1	32	0.1	2.6	0.1	0.3	\$122
3. Litigation ^f	2,080	1	2,080	0.7	1,498	75	150	\$71,295
4. Excess emissions--enforcement activities ^g	32	1	32	0.7	23	1.2	2.3	\$1,097
5. Report review								
A. Review reports for States								
--Review notification of public hearing on State Plan	2	1	2	8	15	0.8	1.5	\$730
--Review certification that public hearing on State Plan conducted according to subpart B State procedures	2	1	2	8	15	0.8	1.5	\$730
--Review/approve State Plan/inventory ^h	1,040	1	1,040	8	7,973	399	797	\$379,579
--Review annual update of State Plan inventory ⁱ	8	1	8	16	131	6.5	13	\$6,221
D. Review reports for HMIWI								
--Review waste management plan ^j	8	1	8	0	0	0	0	\$0
--Review notification of initial performance test								
--CDD/CDF, metals, fugitive emissions	2	1	2	4	8.0	0.4	0.8	\$381
--Fugitive emissions	2	1	2	20	40	2.0	4.0	\$1,904
--Review notification of initial CMS demonstration	2	1	2	6	13	0.6	1.3	\$603
--Review report of initial performance test ^k								
--CDD/CDF, metals, fugitive emissions	12	1	12	4	48	2.4	4.8	\$2,285
--Fugitive emissions	6	1	6	20	120	6.0	12	\$5,713
--Review report of initial CMS demonstration ^l	8	1	8	6	51	2.5	5.1	\$2,412
--Review annual report								
--CMS emissions/operating parameters ^m								
--Small rural HMIWI	2	1	2	6	12	0.6	1.2	\$571
--All other HMIWI	6	1	6	66	396	20	40	\$18,852
--Report of exceedances/malfunctions/periods for which data not obtained ^{n,o}								
--Small rural HMIWI	4	1	4	1	4.8	0.2	0.5	\$229
--All other HMIWI	16	1	16	13	211	11	21	\$10,054
--Results of performance tests conducted during the year ^p								
--Small rural HMIWI	6	1	6	6	36	1.8	3.6	\$1,714
--All other HMIWI	24	1	24	66	1,584	79	158	\$75,408
--Report of no exceedances ^{n,o}								
--Small rural HMIWI	2	1	2	5	9.6	0.5	1.0	\$457
--All other HMIWI	8	1	8	53	422	21	42	\$20,109
--Report of annual equipment inspection (small rural HMIWI) ^q	4	1	4	6	24	1.2	2.4	\$1,143
--Report of annual control equipment inspection (all other HMIWI) ^q	4	1	4	0	0	0	0	\$0
--Review semiannual report of exceedances/malfunctions/periods for which data not obtained ^{n,o,r}								
--Small rural HMIWI	2	1	2	1	2.4	0.1	0.2	\$114
--All other HMIWI	8	1	8	13	106	5.3	11	\$5,027
AVERAGE TRAVEL EXPENSES ^s = [(1 person x 1 facility/yr x 4 d/facility x \$50/d) + (\$500/round trip x 1 round trip/yr)] =								\$700
TOTAL LABOR BURDEN AND COST ^t :					12,765	638	1,277	\$608,392

TABLE 2. (CONTINUED)

^a Estimate that 72 HMIWI are operating. The average number of HMIWI over the first 3 years after promulgation for one-time activities is $(0 + 0 + 72)/3 = 24$. Of those 72 HMIWI, 6 are small rural HMIWI; the remaining 66 make up the small, medium, and large HMIWI. The average number of small rural HMIWI over the first 3 years after promulgation for one-time activities is $(0 + 0 + 6)/3 = 2$. The average number for the remaining HMIWI (medium and large HMIWI) is $(0 + 0 + 66)/3 = 22$. An estimated 22 HMIWI will be impacted, and 19 of the 22 will need to conduct CMS demonstrations to reestablish their parameter limits; the other 3 HMIWI are impacted for pollutants for which no parameter limits are required. The average number of respondents over the first 3 years after promulgation needing to conduct CMS demonstrations is $(0 + 0 + 19)/3 = 6$. All of the existing HMIWI will need to conduct control equipment inspections, except for the 6 small rural HMIWI (which already must conduct annual inspections). Only 12 of the 22 impacted HMIWI will need to conduct additional tests to demonstrate compliance; the other 10 HMIWI already conduct annual tests for the pollutants for which they are impacted, or they are not required to test for the pollutants. The average number of respondents over the first 3 years after promulgation needing to conduct additional stack tests is $(0 + 0 + 12)/3 = 4$. All of the existing HMIWI will need to conduct fugitive ash emissions tests. Subtracting the 12 HMIWI conducting both stack tests and fugitive ash tests, the average number of respondents needing to conduct fugitive ash tests is $(72 - 12)/3 = 20$. The 72 HMIWI operate in 23 States, and each of the 23 States will be required to develop a new State Plan under the guidelines. The average number of States required to develop a new State Plan over first 3 years after promulgation is $(23 + 0 + 0)/3 = 8$. Assume one affected facility per respondent.

^b Costs are based on the following hourly rates: technical at \$42.45, management at \$57.20, and clerical at \$22.96.

^c Assume EPA personnel attend 8 percent of the initial performance tests.

^d Of the 20 percent that are assumed to fail the initial performance test, assume all repeat the performance test.

^e Assume 10 percent of retests are attended by EPA personnel.

^f Assume 1 percent of the affected facilities will be involved in litigation. Assume litigation will continue for the entire year (2,080 hours) for each of the 3 years after promulgation.

^g Assume 10 percent of the affected facilities are required to retest as a result of excess emissions, and that EPA personnel attend 10 percent of these tests.

^h Based on the requirement in the emission guidelines for EPA to review and approve/disapprove a State Plan within 6 months (1,040 hours) after receipt of the Plan from each of the 23 States with HMIWI currently operating.

ⁱ Assume 8 hours to review the annual update of the State Plan inventory. Of the 23 States with HMIWI currently operating, 13 have approved State Plans under the original emission guidelines, but all 23 States are assumed to have State Plans approved under the revised guidelines. The average number of States associated with this activity is $(13 + 13 + 23)/3 = 16$.

^j Assume 8 hours to review the waste management plan prepared by each of the affected facilities, but no facilities will need to develop a new waste management plan.

^k Assume 6 person-hours per report per pollutant. For the 12 HMIWI required to conduct additional tests, only two pollutants are required to be tested (fugitives and either Pb, Cd, Hg, or CDD/CDF). The remaining 60 HMIWI are required to test for fugitives only.

^l Assume 4 person-hours per report per CMS. Assume average of 2 CMS per impacted HMIWI based on CMS required for HCl, CO, metals, and CDD/CDF.

^m Assume 1 person-hour per report per CMS. For small rural HMIWI, there are two CMS (secondary chamber temperature and charge weight). For the remaining HMIWI (small, medium, and large HMIWI), assume each uses six CMS (flue gas temperature, secondary chamber temperature, charge weight, scrubber liquor pH, scrubber liquor flow, and scrubber energy input).

ⁿ Assume 4 and 2 person-hours per pollutant to report monitoring exceedances and no excess emissions, respectively, for the annual report. Assume 2 person-hours per pollutant to report monitoring exceedances for the semi-annual report. For small rural HMIWI, testing and monitoring focus on stack opacity. For the remaining HMIWI (small, medium, and large HMIWI), testing and monitoring focus primarily on three pollutants (PM, CO, and HCl) and stack opacity.

^o Assume 20 percent of the affected facilities report monitoring exceedances, and 80 percent report no exceedances.

^p Assume 6 person-hours per report per pollutant. For annual tests for small rural HMIWI, there is stack opacity. For annual tests for the remaining HMIWI (small, medium, and large HMIWI), there are three pollutants (PM, CO, and HCl) and stack opacity.

^q Assume 4 hours to review the annual equipment inspection report from small rural HMIWI and the annual control equipment inspection report from the remaining HMIWI (small, medium, and large HMIWI). Because the annual control equipment inspection will not be performed until after the first 3 years after promulgation, the average number of respondents over the first 3 years for this task is 0.

^r Because the semiannual report coincides once each year with the annual report and both reports include information on exceedances, malfunctions, and periods for which data were not obtained, the frequency of the semiannual report is shown in the table as only once per year to avoid double-counting.

^s Tests attended = 0.3 (initial tests) + 0.1 (repeat tests) + 0.7 (excess emissions enforcement tests) = 1 test.

^t The total burden and cost for all activities in the 3 years after promulgation for EPA are equal to the person-hours added down each column for technical, management, and clerical and the sum of the cost column including travel expenses.

TABLE 3. ANNUAL MONITORING COSTS - EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (40 CFR PART 60, SUBPART CE)

Parameters	Existing Large																		
	5	15--1	15--2	22	36--1	36--2	40	42	45	51	55	60	69	74	84	87	93	109	1
1. Facility ID																			
2. APCD	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	FF
3. Operating Parameters																			
a. Recording time																			
i. Charge weight, sec/load	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
ii. Lime/carbon flow, min/4-hr period	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
b. Loads per hour	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
c. Operating hours, hr/yr	4321	8736	8736	2184	865	5753	1248	7951	8064	6247	8008	7456	2808	4080	6240	3120	2873	1872	2072
4. Cost Factors																			
a. CEPCI index																			
i. 2005	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2
ii. 1997	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
iii. 1993	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2
iv. 1991	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3
b. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64
c. Equipment CRF (7%, 20-yr life)	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746
5. Capital Costs, \$																			
a. Planning	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
b. Select type of equipment	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
c. Provide support facilities	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
d. Purchased equipment cost ^{a-d}	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800	\$14,800
i. Scale	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900
ii. Parameter monitors	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800	\$9,800
iii. Taxes and freight	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
e. Install and check equipment ^e	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900
i. Scale installation	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200
ii. Monitor installation	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700
f. Perf. spec. tests (certif.)	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
g. Prepare QA/QC plan ^f	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
h. Total capital cost	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100	\$19,100
6. Direct Annual Costs, \$/yr																			
a. Operating labor	\$4,318	\$8,729	\$8,729	\$2,182	\$864	\$5,749	\$1,247	\$7,945	\$8,058	\$6,242	\$8,002	\$7,450	\$2,806	\$4,077	\$6,235	\$3,118	\$2,871	\$1,871	\$2,070
i. Charge rate	\$1,502	\$3,036	\$3,036	\$759	\$301	\$1,999	\$434	\$2,763	\$2,803	\$2,171	\$2,783	\$2,591	\$976	\$1,418	\$2,169	\$1,084	\$999	\$651	\$720
ii. Dry, dry/wet scrubber monit.	\$2,816	\$5,693	\$5,693	\$1,423	\$564	\$3,749	\$813	\$5,181	\$5,255	\$4,071	\$5,219	\$4,859	\$1,830	\$2,659	\$4,066	\$2,033	\$1,872	\$1,220	\$1,350
b. Maintenance materials/supplies	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382	\$382
c. Recordkeeping and reporting	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
d. Total direct annual cost	\$5,900	\$10,300	\$10,300	\$3,800	\$2,400	\$7,300	\$2,800	\$9,500	\$9,600	\$7,800	\$9,600	\$9,000	\$4,400	\$5,700	\$7,800	\$4,700	\$4,500	\$3,500	\$3,700
7. Indirect Annual Costs, \$/yr																			
a. Overhead	\$2,820	\$5,467	\$5,467	\$1,539	\$748	\$3,678	\$977	\$4,996	\$5,064	\$3,974	\$5,030	\$4,699	\$1,913	\$2,675	\$3,970	\$2,100	\$1,952	\$1,352	\$1,471
b. Property tax, insurance, and admin.	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764	\$764
c. Capital recovery	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243	\$2,243
d. Total indirect annual cost	\$5,800	\$8,500	\$8,500	\$4,500	\$3,800	\$6,700	\$4,000	\$8,000	\$8,100	\$7,000	\$8,000	\$7,700	\$4,900	\$5,700	\$7,000	\$5,100	\$5,000	\$4,400	\$4,500
8. Total Annual Cost, \$/yr ^g	\$11,700	\$18,800	\$18,800	\$8,300	\$6,200	\$14,000	\$6,800	\$17,500	\$17,700	\$14,800	\$17,600	\$16,700	\$9,300	\$11,400	\$14,800	\$9,800	\$9,500	\$7,900	\$8,200
9. Annualized Capital Cost, \$/yr	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007	\$3,007
10. O&M Cost, \$/yr	\$7,519	\$14,578	\$14,578	\$4,103	\$1,994	\$9,809	\$2,606	\$13,323	\$13,504	\$10,599	\$13,414	\$12,532	\$5,101	\$7,134	\$10,587	\$5,599	\$5,204	\$3,604	\$3,924
11. O&M Hours per Occurrence, hr/occure.	0.03	0.03	0.03	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
12. Total Annualized and O&M Cost, \$/yr ^h	\$10,527	\$17,585	\$17,585	\$7,110	\$5,002	\$12,816	\$5,614	\$16,330	\$16,511	\$13,606	\$16,422	\$15,539	\$8,108	\$10,142	\$13,595	\$8,607	\$8,212	\$6,612	\$6,931

^a Good combustion parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 200 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^b Wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^c Dry scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^d Dry/wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 400 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^e Installation=3 hours for scale, 8 hours plus travel and per diem for parameter monitoring system.

^f Cost associated with Appendix F requirements.

^g Includes recordkeeping and reporting cost.

^h Does not include recordkeeping and reporting cost.

TABLE 3. (CONTINUED)

Parameters	Existing Large																											
	14	20-1	20-2	43	44	46	48	49	52	53	54	57	59-1	59-2	64	65-1	65-2	71	77	94	98-1	106	110	29	7			
1. Facility ID	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	DI-ESP/WS	DIFE/WS	FF/WS			
2. APCD																												
J. Operating Parameters																												
a. Recording time																												
i. Charge weight, sec/load	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10			
ii. Lime/carbon flow, min/4-hr period	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5			
b. Loads per hour	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8			
c. Operating hours, hr/yr	6032	1300	1300	8736	3024	2964	4992	7280	3016	2160	3352	2764	8400	8400	4800	7664.75	7557.5	4800	8395	7904	5328	8760	7309	2080	2496			
4. Cost Factors																												
a. CIPCI Index																												
i. 2005	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2			
ii. 1997	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5			
iii. 1993	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2			
iv. 1991	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3			
b. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64			
c. Equipment CRF (7%, 20-yr life)	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746			
5. Capital Costs, \$																												
a. Planning	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600			
b. Select type of equipment	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400			
c. Provide support facilities	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200			
d. Purchased equipment cost ^{a,b}	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000			
i. Scale	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900			
ii. Parameter monitors	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,700	\$14,700	\$14,700			
iii. Taxes and freight	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500			
e. Install and check equipment ^c	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900			
i. Scale installation	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200			
ii. Monitor installation	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700			
f. Perf. spec. tests (certif.)	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600			
g. Prepare QA/QC plan	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600			
h. Total capital cost	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,400	\$24,400	\$24,400				
6. Direct Annual Costs, \$/yr																												
a. Operating labor	\$2,096	\$452	\$452	\$3,036	\$1,051	\$1,030	\$1,735	\$2,530	\$1,048	\$751	\$1,165	\$961	\$2,919	\$2,919	\$1,668	\$2,664	\$2,627	\$1,668	\$2,918	\$2,747	\$1,852	\$3,045	\$7,303	\$2,078	\$2,494			
i. Charge rate	\$2,096	\$452	\$452	\$3,036	\$1,051	\$1,030	\$1,735	\$2,530	\$1,048	\$751	\$1,165	\$961	\$2,919	\$2,919	\$1,668	\$2,664	\$2,627	\$1,668	\$2,918	\$2,747	\$1,852	\$3,045	\$2,540	\$723	\$867			
ii. Dry, dry/wet scrubber monet.	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486			
b. Maintenance materials/supplies	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200			
c. Recordkeeping and reporting	\$3,800	\$2,100	\$2,100	\$4,700	\$2,700	\$2,700	\$3,400	\$4,200	\$2,700	\$2,400	\$2,900	\$2,600	\$4,600	\$4,600	\$3,400	\$4,300	\$4,300	\$3,400	\$4,600	\$4,400	\$3,500	\$4,700	\$9,000	\$3,800	\$4,200			
d. Total direct annual cost																												
7. Indirect Annual Costs, \$/yr																												
a. Overhead	\$1,549	\$563	\$563	\$2,113	\$922	\$910	\$1,333	\$1,810	\$921	\$742	\$991	\$868	\$2,043	\$2,043	\$1,293	\$1,890	\$1,868	\$1,293	\$2,042	\$1,940	\$1,403	\$2,118	\$4,675	\$1,540	\$1,789			
b. Property tax, insurance, and admin.	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972			
c. Capital recovery	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854			
d. Total indirect annual cost	\$5,400	\$4,400	\$4,400	\$5,300	\$4,700	\$4,700	\$5,200	\$5,600	\$4,700	\$4,600	\$4,800	\$4,700	\$5,300	\$5,300	\$5,100	\$5,700	\$5,700	\$5,100	\$5,300	\$5,800	\$5,200	\$5,300	\$6,300	\$5,400	\$5,600			
8. Total Annual Cost, \$/yr ^d	\$9,200	\$6,500	\$6,500	\$10,600	\$7,400	\$7,400	\$8,600	\$9,800	\$7,400	\$7,000	\$7,700	\$7,300	\$10,500	\$10,500	\$8,500	\$10,000	\$10,000	\$8,500	\$10,500	\$10,200	\$8,700	\$10,600	\$17,500	\$9,200	\$9,800			
9. Annualized Capital Cost, \$/yr	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826			
10. O&M Cost, \$/yr	\$4,132	\$1,501	\$1,501	\$5,636	\$2,459	\$2,426	\$3,554	\$4,826	\$2,455	\$1,979	\$2,642	\$2,315	\$5,449	\$5,449	\$3,447	\$5,040	\$4,980	\$3,447	\$5,446	\$5,173	\$3,740	\$5,649	\$12,466	\$4,106	\$4,771			
11. O&M Hours per Occurrence, hr/occure.	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.04	0.04			
12. Total Annualized and O&M Cost, \$/yr ^e	\$7,958	\$5,327	\$5,327	\$9,462	\$6,285	\$6,252	\$7,380	\$8,652	\$6,281	\$5,805	\$6,468	\$6,141	\$9,275	\$9,275	\$7,273	\$8,866	\$8,807	\$7,273	\$9,272	\$8,999	\$7,567	\$9,475	\$16,308	\$7,948	\$8,613			

^a Good combustion parameter monitoring equipment=4x4' scale with digital display and ramp, data logger, 200 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^b Wet scrubber parameter monitoring equipment=4x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^c Dry scrubber parameter monitoring equipment=4x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^d Dry/wet scrubber parameter monitoring equipment=4x4' scale with digital display and ramp, data logger, 400 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^e Installation=3 hours for scale, 8 hours plus travel and per diem for parameter monitoring system.

^f Cost associated with Appendix F requirements.

^g Includes recordkeeping and reporting cost.

^h Does not include recordkeeping and reporting cost.

TABLE 3. (CONTINUED)

Parameters	Existing Medium																			
	63	73	95	13	16	18	21	25	30	34	41	47	80	81	82	85	88	90	108-1	111
1. Facility ID	63	73	95	13	16	18	21	25	30	34	41	47	80	81	82	85	88	90	108-1	111
2. APCD	DIFF	DIFF	DIFF	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
3. Operating Parameters																				
a. Recording time																				
i. Charge weight, sec/load	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
ii. Lime/carbon flow, min/4-hr period	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
b. Loads per hour	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
c. Operating hours, hr/yr	1050	1800	1404	1440	1350	5408	2496	3944	2920	1022	2080	1664	2080	2028	2574	2184	3016	1690	1248	989
4. Cost Factors																				
a. CEPCI index																				
i. 2005	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2
ii. 1997	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
iii. 1993	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2
iv. 1991	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3
b. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64
c. Equipment CRF (7%, 20-yr life)	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746
5. Capital Costs, \$																				
a. Planning	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
b. Select type of equipment	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400
c. Provide support facilities	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
d. Purchased equipment cost ^{a-d}	\$14,800	\$14,800	\$14,800	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
i. Scale	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900
ii. Parameter monitors	\$9,800	\$9,800	\$9,800	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600
iii. Taxes and freight	\$1,100	\$1,100	\$1,100	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
e. Install and check equipment ^e	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900
i. Scale installation	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200
ii. Monitor installation	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700
f. Perf. spec. tests (certif.)	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
g. Prepare QA/QC plan ^f	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600
h. Total capital cost	\$19,100	\$19,100	\$19,100	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300	\$24,300
6. Direct Annual Costs, \$/yr																				
a. Operating labor	\$1,049	\$1,799	\$1,403	\$500	\$469	\$1,880	\$867	\$1,371	\$1,015	\$355	\$723	\$578	\$723	\$705	\$895	\$759	\$1,048	\$587	\$434	\$344
i. Charge rate	\$365	\$626	\$488	\$500	\$469	\$1,880	\$867	\$1,371	\$1,015	\$355	\$723	\$578	\$723	\$705	\$895	\$759	\$1,048	\$587	\$434	\$344
ii. Dry, dry/wet scrubber maint.	\$684	\$1,173	\$915																	
b. Maintenance materials/supplies	\$382	\$382	\$382	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486	\$486
c. Recordkeeping and reporting	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
d. Total direct annual cost	\$2,600	\$3,400	\$3,000	\$2,200	\$2,200	\$3,600	\$2,600	\$3,100	\$2,700	\$2,000	\$2,400	\$2,300	\$2,400	\$2,400	\$2,600	\$2,400	\$2,700	\$2,300	\$2,100	\$2,000
7. Indirect Annual Costs, \$/yr																				
a. Overhead	\$859	\$1,308	\$1,071	\$592	\$573	\$1,419	\$812	\$1,114	\$901	\$505	\$725	\$639	\$725	\$715	\$828	\$747	\$921	\$644	\$552	\$498
b. Property tax, insurance, and admin.	\$764	\$764	\$764	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972	\$972
c. Capital recovery	\$2,243	\$2,243	\$2,243	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854	\$2,854
d. Total indirect annual cost	\$3,900	\$4,300	\$4,100	\$4,400	\$4,400	\$5,200	\$4,600	\$4,900	\$4,700	\$4,300	\$4,600	\$4,500	\$4,600	\$4,500	\$4,700	\$4,600	\$4,700	\$4,500	\$4,400	\$4,300
8. Total Annual Cost, \$/yr ^g	\$6,500	\$7,700	\$7,100	\$6,600	\$6,600	\$8,800	\$7,200	\$8,000	\$7,400	\$6,300	\$7,000	\$6,800	\$7,000	\$6,900	\$7,300	\$7,000	\$7,400	\$6,800	\$6,500	\$6,300
9. Annualized Capital Cost, \$/yr	\$3,007	\$3,007	\$3,007	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826	\$3,826
10. O&M Cost, \$/yr	\$2,290	\$3,489	\$2,856	\$1,578	\$1,528	\$3,785	\$2,166	\$2,971	\$2,401	\$1,346	\$1,934	\$1,703	\$1,934	\$1,905	\$2,209	\$1,992	\$2,455	\$1,717	\$1,472	\$1,328
11. O&M Hours per Occurrence, hr/occur.	0.04	0.04	0.04	0.02	0.02	0.01	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
12. Total Annualized and O&M Cost, \$/yr ^h	\$5,297	\$6,496	\$5,863	\$5,405	\$5,355	\$7,611	\$5,992	\$6,797	\$6,228	\$5,172	\$5,761	\$5,529	\$5,761	\$5,732	\$6,035	\$5,818	\$6,281	\$5,544	\$5,298	\$5,154

^a Good combustion parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 200 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^b Wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^c Dry scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^d Dry/wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 400 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^e Installation=3 hours for scale, 8 hours plus travel and per diem for parameter monitoring system.

^f Cost associated with Appendix F requirements.

^g Includes recordkeeping and reporting cost.

^h Does not include recordkeeping and reporting cost.

TABLE 3. (CONTINUED)

Parameters	Existing Small		Existing Small Rural						Total Each Year
	50	86	3	4	104	105	115	116	
1. Facility ID	50	86	3	4	104	105	115	116	
2. APCD	WS	WS	UNC	UNC	UNC	UNC	UNC	UNC	
3. Operating Parameters									
a. Recording time									
i. Charge weight, sec/load	10	10	10	10	10	10	10	10	
ii. Lime/carbon flow, min/4-hr period	5	5	5	5	5	5	5	5	
b. Loads per hour	8	8	8	8	8	8	8	8	
c. Operating hours, hr/yr	2000	5018	1089	1410.5	1300	1352	1430	1560	
4. Cost Factors									
a. CEPCI index									
i. 2005	468.2	468.2	468.2	468.2	468.2	468.2	468.2	468.2	
ii. 1997	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	
iii. 1993	359.2	359.2	359.2	359.2	359.2	359.2	359.2	359.2	
iv. 1991	361.3	361.3	361.3	361.3	361.3	361.3	361.3	361.3	
b. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	
c. Equipment CRF (7%, 20-yr life)	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	0.11746	
5. Capital Costs, \$									
a. Planning	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	
b. Select type of equipment	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	
c. Provide support facilities	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	
d. Purchased equipment cost ^{a-d}	\$20,000	\$20,000	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	\$14,600	
i. Scale	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	\$3,900	
ii. Parameter monitors	\$14,600	\$14,600	\$9,600	\$9,600	\$9,600	\$9,600	\$9,600	\$9,600	
iii. Taxes and freight	\$1,500	\$1,500	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	
e. Install and check equipment ^e	\$900	\$900	\$900	\$900	\$900	\$900	\$900	\$900	
i. Scale installation	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	
ii. Monitor installation	\$700	\$700	\$700	\$700	\$700	\$700	\$700	\$700	
f. Perf. spec. tests (certif.)	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	
g. Prepare QA/QC plan ^f	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	
h. Total capital cost	\$24,300	\$24,300	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	
6. Direct Annual Costs, \$/yr									
a. Operating labor	\$695	\$1,744	\$378	\$490	\$452	\$470	\$497	\$542	
i. Charge rate	\$695	\$1,744	\$378	\$490	\$452	\$470	\$497	\$542	
ii. Dry, dry/wet scrubber monit.									
b. Maintenance materials/supplies	\$486	\$486	\$378	\$378	\$378	\$378	\$378	\$378	
c. Recordkeeping and reporting	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	
d. Total direct annual cost	\$2,400	\$3,400	\$2,000	\$2,100	\$2,000	\$2,000	\$2,100	\$2,100	
7. Indirect Annual Costs, \$/yr									
a. Overhead	\$709	\$1,338	\$454	\$521	\$498	\$509	\$525	\$552	
b. Property tax, insurance, and admin.	\$972	\$972	\$756	\$756	\$756	\$756	\$756	\$756	
c. Capital recovery	\$2,854	\$2,854	\$2,220	\$2,220	\$2,220	\$2,220	\$2,220	\$2,220	
d. Total indirect annual cost	\$4,500	\$5,200	\$3,400	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	
8. Total Annual Cost, \$/yr ^g	\$6,900	\$8,600	\$5,400	\$5,600	\$5,500	\$5,500	\$5,600	\$5,600	\$659,600
9. Annualized Capital Cost, \$/yr	\$3,826	\$3,826	\$2,976	\$2,976	\$2,976	\$2,976	\$2,976	\$2,976	\$252,424
10. O&M Cost, \$/yr	\$1,890	\$3,568	\$1,210	\$1,389	\$1,328	\$1,357	\$1,400	\$1,472	\$320,971
11. O&M Hours per Occurrence, hr/occure.	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.023
12. Total Annualized and O&M Cost, \$/yr ^h	\$5,716	\$7,394	\$4,186	\$4,365	\$4,304	\$4,333	\$4,376	\$4,448	\$573,395

^a Good combustion parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 200 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^b Wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^c Dry scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 300 ft of thermocouple wire, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^d Dry/wet scrubber parameter monitoring equipment=4'x4' scale with digital display and ramp, data logger, 400 ft of thermocouple wire, 300 ft of signal wire, two liquid flow transducers, one pressure transducer, controller element and transmitter for pH meter, computer, data logger/computer interface, logging and reporting software, and printer. Taxes and freight=8% of equipment cost.

^e Installation=3 hours for scale, 8 hours plus travel and per diem for parameter monitoring system.

^f Cost associated with Appendix F requirements.

^g Includes recordkeeping and reporting cost.

^h Does not include recordkeeping and reporting cost.

TABLE 4. ANNUAL TESTING COSTS -
EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (40 CFR PART 60, SUBPART CE)

Parameters	Existing Large																			
	5	15--1	15--2	22	36--1	36--2	40	42	45	51	55	60	69	74	84	87	93	109	1	
1. Facility ID																				
2. APCD	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	DIFF	FF
3. Cost Factors																				
a. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64
b. Equipment CRF (7%, 5-yr life)	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389
4. Capital Cost, \$																				
a. Fugitive ash testing equipment ^a	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
5. Annual Cost, \$/yr																				
a. In-house fugitive ash testing																				
i. Operating labor ^b	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47
iv. Overhead ^c	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28
v. Taxes, insurance, and admin. ^d	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20
vi. Capital recovery ^e	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122
b. Stack testing ^f	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Total annual cost	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217
6. Annualized Capital Cost, \$/yr	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142
7. O&M Cost, \$/yr	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75
8. Total Annualized and O&M Cost, \$/yr	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217

^a Fugitive ash testing equipment cost includes two stopwatches, light meter (for interior observations), and anemometer (for wind speed measure).
^b Operating labor cost for annual fugitive ash readings assumes 1 hr/reading, 3 readings/test, 1 test, and \$15.64/hr.
^c Overhead cost equivalent to 60 percent of labor for annual fugitive ash readings (based on standard OAQPS cost procedures).
^d Taxes, insurance, and administration costs equivalent to 4 percent of the capital cost for fugitive ash testing system (based on standard OAQPS cost procedures).
^e Capital recovery cost equivalent to capital recovery factor (0.24389) times capital cost for fugitive ash testing system. The capital recovery factor is based on a 5-year equipment life and a 7 percent interest rate.
^f HMIWI already required to test annually for HCl and CO, and they are not required to test for NO_x and SO_x, so no testing costs for those pollutants.

TABLE 4. (CONTINUED)

Parameters	Existing Large																								
	14	20-1	20-2	43	44	46	48	49	52	53	54	57	59-1	59-2	64	65-1	65-2	71	77	94	98-1	106	110	29	7
1. Facility ID	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
2. APCD	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	DI-ESP/W	DIFF/WS	FF/WS
3. Cost Factors																									
a. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64
b. Equipment CRF (7%, 5-yr life)	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389
4. Capital Cost, \$																									
a. Fugitive ash testing equipment ^d	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
5. Annual Cost, \$/yr																									
a. In-house fugitive ash testing																									
i. Operating labor ^b	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47
iv. Overhead	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28
v. Taxes, insurance, and admin. ^u	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20
vi. Capital recovery ^e	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122
b. Stack testing ^f	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,500	\$0	\$0	\$0	\$0	\$10,500	\$0	\$10,500	\$10,500	\$27,400	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$0	\$0
c. Total annual cost	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$10,717	\$217	\$10,717	\$10,717	\$27,617	\$10,717	\$10,717	\$10,717	\$10,717	\$217	\$217	\$217
6. Annualized Capital Cost, \$/yr	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$10,642	\$142	\$142	\$142	\$142	\$10,642	\$142	\$10,642	\$10,642	\$27,542	\$10,642	\$10,642	\$10,642	\$10,642	\$142	\$142	\$142
7. O&M Cost, \$/yr	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75
8. Total Annualized and O&M Cost, \$/yr	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$10,717	\$217	\$10,717	\$10,717	\$27,617	\$10,717	\$10,717	\$10,717	\$10,717	\$217	\$217	\$217

^a Fugitive ash testing equipment cost includes two stopwatches, light meter (for interior observations), and anemometer (for wind speed measure).

^b Operating labor cost for annual fugitive ash readings assumes 1 hr/reading, 3 readings/test, 1 test, and \$15.64/hr.

^c Overhead cost equivalent to 60 percent of labor for annual fugitive ash readings (based on standard OAQPS cost procedures).

^d Taxes, insurance, and administration costs equivalent to 4 percent of the capital cost for fugitive ash testing system (based on standard OAQPS cost procedures).

^e Capital recovery cost equivalent to capital recovery factor (0.24389) times capital cost for fugitive ash testing system. The capital recovery factor is based on a 5-year equipment life and a 7 percent interest rate.

^f HMIWI already required to test annually for HCl and CO, and they are not required to test for NO_x and SO_x, so no testing costs for those pollutants.

TABLE 4. (CONTINUED)

Parameters	Existing Medium																			
	63	73	95	13	16	18	21	25	30	34	41	47	80	81	82	85	88	90	108-1	111
1. Facility ID																				
2. APCD	DIFF	DIFF	DIFF	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS
3. Cost Factors																				
a. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64
b. Equipment CRF (7%, 5-yr life)	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389
4. Capital Cost, \$																				
a. Fugitive ash testing equipment ^a	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
5. Annual Cost, \$/yr																				
a. In-house fugitive ash testing																				
i. Operating labor ^b	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47
iv. Overhead ^c	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28
v. Taxes, insurance, and admin. ^d	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20
vi. Capital recovery ^e	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122
b. Stack testing ^e	\$0	\$0	\$0	\$10,500	\$0	\$0	\$0	\$0	\$0	\$0	\$10,500	\$0	\$0	\$0	\$0	\$0	\$10,500	\$0	\$0	\$0
c. Total annual cost	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217
6. Annualized Capital Cost, \$/yr	\$142	\$142	\$142	\$10,642	\$142	\$142	\$142	\$142	\$142	\$142	\$10,642	\$142	\$142	\$142	\$142	\$142	\$10,642	\$142	\$142	\$142
7. O&M Cost, \$/yr	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75
8. Total Annualized and O&M Cost, \$/yr	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217	\$217	\$217	\$10,717	\$217	\$217	\$217

^a Fugitive ash testing equipment cost includes two stopwatches, light meter (for interior observations), and anemometer (for wind speed measure).

^b Operating labor cost for annual fugitive ash readings assumes 1 hr/reading, 3 readings/test, 1 test, and \$15.64/hr.

^c Overhead cost equivalent to 60 percent of labor for annual fugitive ash readings (based on standard OAQPS cost procedures).

^d Taxes, insurance, and administration costs equivalent to 4 percent of the capital cost for fugitive ash testing system (based on standard OAQPS cost procedures).

^e Capital recovery cost equivalent to capital recovery factor (0.24389) times capital cost for fugitive ash testing system. The capital recovery factor is based on a 5-year equipment life and a 7 percent interest rate.

^f HMIWI already required to test annually for HCl and CO. and they are not required to test for NO_x and SO_x, so no testing costs for those pollutants.

TABLE 4. (CONTINUED)

Parameters	Existing Small		Existing Small Rural						Total Each Year
	50	86	3	4	104	105	115	116	
1. Facility ID									
2. APCD	WS	WS	UNC	UNC	UNC	UNC	UNC	UNC	
3. Cost Factors									
a. Operating labor wage rate, \$/hr	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	\$15.64	
b. Equipment CRF (7%, 5-yr life)	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	0.24389	
4. Capital Cost, \$									
a. Fugitive ash testing equipment ^a	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	
5. Annual Cost, \$/yr									
a. In-house fugitive ash testing									
i. Operating labor ^b	\$47	\$47	\$47	\$47	\$47	\$47	\$47	\$47	
iv. Overhead ^c	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	
v. Taxes, insurance, and admin. ^d	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	
vi. Capital recovery ^e	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	
b. Stack testing ^e	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
c. Total annual cost	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$158,525
6. Annualized Capital Cost, \$/yr	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$142	\$153,120
7. O&M Cost, \$/yr	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$5,405
8. Total Annualized and O&M Cost, \$/yr	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$217	\$158,525

^a Fugitive ash testing equipment cost includes two stopwatches, light meter (for interior observations), and anemometer (for wind speed measure).

^b Operating labor cost for annual fugitive ash readings assumes 1 hr/reading, 3 readings/test, 1 test, and \$15.64/hr.

^c Overhead cost equivalent to 60 percent of labor for annual fugitive ash readings (based on standard OAQPS cost procedures).

^d Taxes, insurance, and administration costs equivalent to 4 percent of the capital cost for fugitive ash testing system (based on standard OAQPS cost procedures).

^e Capital recovery cost equivalent to capital recovery factor (0.24389) times capital cost for fugitive ash testing system. The capital recovery factor is based on a 5-year equipment life and a 7 percent interest rate.

^f HMIWI already required to test annually for HCl and CO, and they are not required to test for NO_x and SO_x, so no testing costs for those pollutants.

TABLE 5. ANNUAL FILE CABINET COSTS - EMISSION GUIDELINES
 FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS
 (40 CFR PART 60, SUBPART CE)

Parameters	Cost per HMIWI	Total Each Year
1. No. of HMIWI	72	
2. Cost Factor		
Equipment CRF (7%, 10-yr life)	0.14238	
3. Capital Cost, \$	\$235	\$16,920
4. Annual Cost, \$ ^a	\$33	\$2,409

^a Annual cost equivalent to capital recovery factor (0.14238) times capital cost for file cabinet. The capital recovery factor is based on a 10-year equipment life and a 7 percent interest rate.

TABLE 6. ANNUAL PHOTOCOPYING AND POSTAGE COSTS - EMISSION GUIDELINES
HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS (40 CFR PART 60, SUBPART CE)

Parameters	No. of Responses	Photocopying, \$/yr ^a	Postage, \$/yr ^b
1. State Plan/Inventory	7.7	\$127	\$31
2. Annual Update of State Plan Inventory	16	\$263	\$65
3. Notification of Public Hearing on State Plan	7.7	\$127	\$31
4. Certification that Public Hearing Conducted according to Subpart B State Procedures	7.7	\$127	\$31
5. Notification of Initial Performance Test	24	\$395	\$97
6. Notification of Initial CMS Demonstration	6.3	\$104	\$26
7. Report of Initial Performance Test	24	\$395	\$97
8. Report of Initial CMS Demonstration	6.3	\$104	\$26
9. Annual Report	222	\$3,652	\$899
10. Semiannual Report	14	\$230	\$57
11. Total	336	\$5,522	\$1,360

^a Photocopy cost based on 0.5 hr of clerical labor at \$30.18/hr for each report.

^b Postage cost based on \$4.05 per report for mailing packages to regulatory agencies based on the Priority Mail shipping rate (\$4.05) for the U.S. Postal Service.

TABLE 7. ANNUALIZED CAPITAL AND O&M COSTS -
EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS
WASTE INCINERATORS (40 CFR PART 60, SUBPART EC)

Parameters	Total Each Year
1. Annualized Capital Cost, \$/yr	
a. Monitoring	\$252,424
b. Testing	\$153,120
c. File cabinets	\$2,409
d. Total annualized capital cost	\$407,953
2. O&M Cost, \$/yr	
a. Monitoring	\$320,971
b. Testing	\$5,405
c. Photocopying	\$5,522
d. Postage	\$1,360
e. Total O&M cost	\$333,258
3. Total Annualized and O&M Cost (States), \$/yr	
a. Reporting	\$802
b. Recordkeeping	\$0
c. Total annualized and O&M cost	\$802
4. Total Annualized and O&M Cost (HMIWI), \$/yr	
a. Reporting ^a	\$372,040
b. Recordkeeping ^a	\$368,369
c. Total annualized and O&M cost	\$740,409
5. Total Annualized and O&M Cost, \$/yr	\$741,211

^a Assigned 50% of monitoring and testing costs to reporting, 50% to recordkeeping.

