

SUPPORTING STATEMENT

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR CHEMICAL MANUFACTURING AREA SOURCES

Part A of the Supporting Statement

1. Identification of the Information Collection

(a) *Title and Number of the Information Collection.*

“NESHAP for Chemical Manufacturing Area Sources.” This is a new information collection request (ICR) and the EPA tracking number is 2323.02

(b) *Short Characterization.*

This ICR covers information collection requirements in the final area source rule for chemical manufacturing (40 CFR part 63, subpart VVVVVV). There are nine area source categories in the chemical manufacturing sector: Agricultural Chemicals and Pesticides Manufacturing, Cyclic Crude and Intermediate Production, Industrial Inorganic Chemical Manufacturing, Industrial Organic Chemical Manufacturing, Inorganic Pigments Manufacturing, Miscellaneous Organic Chemical Manufacturing, Plastic Materials and Resins Manufacturing, Pharmaceutical Production, and Synthetic Rubber Manufacturing. The requirements apply to process vents, storage tanks, equipment leaks, wastewater systems, transfer operations, and heat exchange systems at affected sources in each area source category and are combined in one subpart. The standards are based on EPA’s determination regarding the generally available control technology or management practices for each area source category. This information is being collected to assure compliance with 40 CFR part 63, subpart VVVVVV.

Each existing and new affected source is required to submit an initial notification of applicability and a notification of compliance status in accordance with requirements in the General Provisions (40 CFR part 63, subpart A). New sources must also notify the Administrator of intended construction or reconstruction. Each affected source must prepare a metal process vent monitoring plan if uncontrolled metal HAP emissions from process vents at a source exceed 400 lb/yr from any CMPU and either a heat exchange inspection plan or monitoring plan depending on the cooling water flow rate. An owner or operator with batch process vents must estimate and keep records of either uncontrolled organic HAP emissions or, if applicable, the organic HAP usage. An owner or operator with metal process vents must estimate and keep records of the uncontrolled metal HAP emissions, or if applicable the metal HAP usage. An owner or operator must estimate and keep records of the total resource effectiveness index value for each continuous process vent. The management practices require an owner or operator to conduct quarterly sensory-based inspections for leaks from process vessels, storage tanks, and transfer racks as well as pumps, valves, connectors, and other equipment. The owner or operator also must keep records of the occurrence and results of the quarterly inspections and actions taken in response to findings. Sources subject to emission

standards for process vents must conduct either performance tests or design evaluations to demonstrate initial compliance, and they must conduct monitoring and keep records of the monitoring data to demonstrate continuous compliance. Sources using floating roofs to comply with standards for storage tanks must conduct and keep records of inspections for defects in the seals and roof. Sources must keep records identifying wastewater streams that must be separated into an organic phase and water phase before discharge of the water phase to treatment, and they must keep records of the disposition of the organic phase. Semiannual compliance reports are required to document deviations from any requirements in the rule that occurred during the reporting period, to provide information related to any delay of repair, to describe process changes and provide updated certification that the facility complies with applicable requirements after the process change, and to report each opening of a safety device. In addition, when applicable, an owner or operator must report any changes to the list of provisions in overlapping rules with which they comply and information related to demonstrating compliance with the alternative standard for process vents. These notifications, reports, and records are needed to determine compliance.

Any owner or operator subject to the provisions of 40 CFR part 63 shall maintain required records for at least five years. All reports are sent to the delegated state or local authority. In the event that there is no such delegated authority, the reports are sent directly to the United States Environmental Protection Agency (EPA) regional office.

Approximately 452 chemical manufacturing area source facilities are currently subject to the regulation, and it is estimated that an additional 27 new sources will become subject to the regulation in the next three years.

It is estimated that the information collection will involve 10,566 hours from 1,213 annual responses and respondent labor costs of \$803,906/yr. Total annualized capital costs will be \$69,484/yr, and total O&M costs will be \$28,787/yr. The total Agency burden is estimated to be 831 hours per year at a cost of \$39,417.

2. Need for and Use of the Collection

(a) Need/Authority for the Collection.

Section 112(k)(3)(B) of the Clean Air Act (CAA) requires EPA to identify at least 30 hazardous air pollutants (HAP), which, as the result of emissions of area sources, that pose the greatest potential health threat in urban areas, and section 112(c)(3) requires EPA to regulate the area source categories that represent 90 percent of the emissions of the 30 “listed” HAP (“urban HAP”). We implement these listing requirements through the Integrated Urban Air Toxics Strategy (64 FR 38715, July 19, 1999). Sierra Club sued EPA, alleging a failure to complete standards for the source categories listed pursuant to CAA section 112(c)(3) within the timeframe specified by the statute. See *Sierra Club v. Johnson*, No. 01-1537, (D.D.C.). On March 31, 2006, the court issued an order requiring EPA to promulgate standards under CAA section 112(d) for those area source categories listed pursuant to CAA section 112(c)(3). We listed the nine source categories identified above on July 19, 1999, June 26, 2002, and November 22, 2002 (64 FR 38721, 67 FR 43112, and 67 FR 70427).

Under CAA section 112(d)(5), the Administrator may, in lieu of standards requiring maximum achievable control technology (MACT) under section 112(d)(2), elect to promulgate standards or requirements for area sources "which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants." Under section 112(d)(5), the Administrator has the discretion to use generally available control technology or management practices (GACT) in lieu of MACT. Pursuant to section 112(d)(5), we have decided not to issue MACT standards and concluded that GACT is appropriate for chemical manufacturing area sources.

Legislative history describes GACT as standards or requirements reflecting application of generally available control technology or management practices, that is, "methods, practices and techniques which are commercially available and appropriate for application by the sources in the category considering economic impacts and the technical capabilities of the firms to operate and maintain the emissions control systems" (Senate Report Number 101-228, December 20, 1989). Consistent with the legislative history, in addition to considering technical capabilities of the facilities and the availability of control measures, we may consider costs and economic impacts in determining GACT.

Certain records and reports are necessary for the Administrator to confirm the compliance status of area sources, identify any new or reconstructed sources subject to the standards, and confirm that the GACT standards are being achieved on a continuous basis. These recordkeeping and reporting requirements are specifically authorized by section 114 of the Clean Air Act (42 U.S.C. 7414) and set out in the part 63 NESHAP General Provisions.

(b) Use/Users of the Data.

The information will be used by the delegated authority (State agency or Regional Administrator if there is no delegated State agency) to ensure that the emissions limits and other requirements are being achieved. Based on review of the recorded information at the site and the reported information, the delegated permitting authority can identify facilities that may not be in compliance and decide which plants, records, or processes may need inspection.

3. Nonduplication, Consultations, and Other Collection Criteria

(a) Nonduplication.

Some of the affected facilities under this NESHAP will also be subject to requirements under 40 CFR part 60 new source performance standards in subparts Kb, VV, DDD, III, NNN, and/or RRR. Some chemical manufacturing area sources also may be subject to 40 CFR parts 260 through 270. In all such cases, the area source NESHAP specifies that compliance with requirements in the other rule that are at least as stringent as requirements in the area source rule constitutes compliance with the area source NESHAP. The owner or operator must demonstrate in their notification of compliance status report that any provision in the other rule with which they will comply is at least as stringent as the otherwise applicable requirements in the area source rule. These provisions eliminate duplication.

Some of the affected facilities under this NESHAP also may be subject to requirements under 40 CFR part 60 NSPS in subparts G, H, T, U, V, W, X, and/or PP. There is no duplication of effort in these cases, however, because the standards and associated information collection requirements are for different pollutants that are not regulated under the area source NESHAP (e.g., acid gases or fluorides).

Certain reports required by State or local agencies may duplicate information required by these area source standards. In such cases, a copy of the report submitted to the State or local agency may be sent to the Administrator in lieu of the report required by the standards.

(b) Public Notice Required Prior to ICR Submission to OMB.

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

(c) Consultations.

No consultations were held during development of the area source standards. However, all interested parties were given an opportunity to comment on the recordkeeping and reporting requirements and associated burden during the public comment period for the rule.

(d) Effects of Less Frequent Collection.

If the relevant information were collected less frequently, the delegated permitting authority (State or EPA) would not be reasonably assured that an affected facility is in compliance with the standards.

(e) General Guidelines.

This section is not applicable because none of the OMB guidelines in 5 CFR 1320.5 are being exceeded by the final area source standards.

(f) Confidentiality.

The required information has been determined not to be confidential. However, any information submitted to the Agency for which a claim of confidentiality is made is safeguarded according to CAA section 114(c) and the Agency's implementing regulations in Title 40, chapter 1, part 2, subpart B - Confidentiality of Business Information (CBI) (see 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 40000, September 8, 1978; 43 FR 42251, September 20, 1978; 44 FR 17674, March 23, 1979).

(g) Sensitive Questions.

None of the reporting or recordkeeping requirements contain sensitive questions.

4. The Respondents and the Information Requested

(a) *Respondents/NAICS Codes.*

Respondents are owners and operators of chemical manufacturing facilities that are located at area sources of HAP emissions and use as feedstocks, generate as byproducts, or produce as products any of the 15 urban HAP that must be regulated to achieve the section 112(c)(3) requirement to regulate 90 percent of urban HAP. The applicable North American Industry Classification System (NAICS) code for respondents affected by the NESHAP is 325, with certain exceptions. The chemical manufacturing area source category excludes: (1) production operations classified in NAICS 325222, 325314, 325413, or 325998; (2) facilities subject to standards for other listed area source categories (Acrylic Fibers/Modacrylic Fibers Production, Carbon Black, Chemical Manufacturing: chromium compounds, Polyvinyl Chloride and Copolymers Production, Paint and Allied Coatings, and Mercury Cell Chlor-Alkali Manufacturing) in NAICS 325; (3) certain fabricating operations; (4) manufacture of photographic film, paper, and plate where material is coated or contains chemicals (only the manufacture of the photographic chemicals would be regulated); and (5) manufacture of radioactive elements or isotopes, radium chloride, radium luminous compounds, strontium, and uranium.

(b) *Information Requested.*

(i) *Data Items, Including Recordkeeping Requirements.* Table 1 summarizes the final data items, including recordkeeping and reporting requirements.

Types of reports that may be required are listed below:

Reports for 40 CFR part 63, subpart VVVVVV	
Notification of intended construction/reconstruction (new sources)	63.5(b)(4) and 63.9(b)(5)
Initial notification (all sources)	63.9(b)
Notification of performance test (sources subject to emission limits for process vents and storage tanks)	63.7(b) and 63.9(e)
Performance test results (same as for notification of performance tests)	63.7(g) and 63.10(d)(2)
Notification of compliance status (all sources)	63.9(h), 63.11501(b)
Semiannual compliance reports (all sources when criteria for reporting are met)	63.11501(d)

A source must maintain the following records:

Recordkeeping for 40 CFR part 63, subpart VVVVVV	
Emission estimates and TRE index calculations for process vents	63.11496(a), (b), and (f)
Records are required to be retained for five (5) years	63.10(b)(2), 63.11410(g), (i), and (j)(1), 63.11496, 63.11497, 63.11501(c)
Heat exchange system inspection plan or monitoring plan	63.104, 63.11495(b), 63.11499, and Table 8 to Subpart VVVVVV
Metal process vent monitoring plan	63.11410(g)(2) and (h), 63.11496(f)(3)
Records of wastewater streams, type of treatment, and if applicable, disposition of separated organic phases	Table 6 to subpart VVVVVV
Inspections and monitoring results.	60.115b, 60.116b, 63.104(f), 63.998, 63.11410(d) and (g)(4), and 63.11495.

(ii) *Respondent Activities*. The respondent activities required by the rule are identified in Table 1 and introduced in section 6(a).

The respondent activities required by subpart VVVVVV are listed in the following table.

Respondent Activities
Read instructions.
Write plans for heat exchange system monitoring and metal process vent monitoring.
Perform initial performance test using appropriate Reference Method, and repeat performance tests if necessary, or conduct design evaluation.
Write the notifications and reports listed above.
Enter information required to be recorded above.
Submit the required reports developing, acquiring, installing, and utilizing technology and systems for the purpose of collecting, validating, and verifying information.
Develop, acquire, install, and utilize technology and systems for the purpose of processing and maintaining information.
Develop, acquire, install, and utilize technology and systems for the purpose of 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.
Transmit, or otherwise disclose the information.

5. The Information Collected: Agency Activities, Collection Methodology, and Information Management

(a) Agency Activities.

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.
Review notifications and reports, including initial notification, notification of compliance status, performance test reports, and periodic compliance reports, required to be submitted by industry.
Input, analyze, and maintain data in the AIRS Facility Subsystem (AFS) database.

(b) Collection Methodology and Management.

Data and records maintained by the respondents are tabulated and published for use in compliance and enforcement programs of the delegated permitting authority. The monitoring reports submitted to the permitting authority are used for problem identification, as a check on source operation and maintenance, and for compliance determinations. EPA is the permitting authority until the State agency is delegated authority to implement the final rule. Therefore, information contained in the reports submitted to the Regional Administrator will be entered into the Air Facility System (AFS), which is operated and maintained by EPA's Office of Compliance. AFS is EPA's database for the collection, maintenance, and retrieval of compliance data for approximately 125,000 industrial and government-owned facilities. EPA uses the AFS for tracking air pollution compliance and enforcement by local and state regulatory agencies, EPA regional offices and EPA headquarters. EPA and its delegated authorities can edit, store, retrieve and analyze the data.

(c) Small Entity Flexibility.

Many of the facilities affected by this final rule are small entities. The classification of a small entity is defined as having less than a specified number of employees. The specific number varies based on the NAICS code. For this overall source category, a small entity is defined as having less than 1,000 employees, less than 750 employees, or less than 500 employees, depending on the NAICS code. The impact on small entities was taken into consideration during the development of the regulation by mandating minimal notification and reporting requirements for all sources. The Agency considers these requirements the minimum needed to ensure compliance and, therefore, cannot reduce them further for small entities. To minimize recordkeeping and reporting for all facilities, only brief documentation of quarterly inspections is required, and compliance reports are required only if certain conditions are met during the reporting period. Analyses indicate that the final rule will not impose a significant adverse impact on any facilities, large or small.

(d) *Collection Schedule.*

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

6. **Estimating the Burden and Cost of the Collection**

Table 1 documents the computation of individual burdens for the recordkeeping and reporting requirements applicable to the industry for the subpart included in this ICR. The individual burdens are expressed under standardized headings believed to be consistent with the concept of burden under the Paperwork Reduction Act. Where appropriate, specific tasks required and major assumptions made 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.

(a) *Estimating Respondent Burden.*

The average annual burden to industry over the next three years from these recordkeeping and reporting requirements is estimated to be 10,566 hours per year (Total Labor Hours from Table 1: Annual Burden of Reporting and Recordkeeping Requirements, NESHAP for Chemical Manufacturing Area Sources (40 CFR part 63, subpart VVVVVV)).

(b) *Estimating Respondent Costs.*

(i) *Estimating Labor Costs.* Labor rates and associated costs are based on Bureau of Labor Statistics (BLS) data. Technical, management, and clerical average hourly rates for private industry workers were taken from the United States Department of Labor, Bureau of Labor Statistics, May 2007 for NAICS Code 325 at “May 2007 National Industry-Specific Occupational Employment and Wage Estimates,” available at <http://stats.bls.gov/oes/current/oesrci.htm>. Wages for occupational groups are used as the basis for the labor rates with a total compensation of \$36.78 per hour for technical, \$62.20 per hour for managerial, and \$17.75 per hour for clerical. These rates represent salaries plus fringe benefits and do not include the cost of overhead. An overhead rate of 110 percent is used to account for these costs. The fully-burdened hourly wage rates used to represent respondent labor costs are: technical at \$77.24, management at \$130.62, and clerical at \$37.28.

(ii) *Estimating Capital and Operations and Maintenance (O&M) Costs.* The NESHAP requires capital costs associated with performance tests, monitoring equipment, and water sampling and analyses. The total cost for these capital expenditures is \$632,823 for existing and new sources.

Operation and maintenance (O&M) costs for existing and new sources are associated with the cost of materials for temperature monitoring systems and bag leak detection systems,

labor costs for updating maintenance plans and conducting inspections, and the cost of operating monitoring equipment. The total estimated cost is \$28,787/yr.

(iii) *Annualizing Capital Costs.* Annualized costs are calculated by multiplying the capital recovery factor by the annual capital cost. The capital recovery factor is 0.1098 based on an interest rate of 7 percent and an assumed equipment life of 15 years. The total annualized capital cost is \$69,484.

(c) *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 the operating permits rules in 40 CFR part 70 or part 71 and the part 63 NESHAP General Provisions, no operational costs would be incurred by the Federal Government. Publication and distribution of the information are part of the Compliance Data System, 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 that the Federal government would incur are user costs associated with the analysis of the reported information, as presented in Table 2.

The Agency labor rates are from the Office of Personnel Management (OPM) 2007 General Schedule which excludes locality rates of pay. These rates can be obtained from Salary Table 2007-GS, available on the OPM website at www.opm.gov/oca/07tables/html/gs_h.asp. The government employee labor rates are \$14.60 per hour for clerical (GS-6, Step 3), \$26.98 for technical (GS-12, Step 1), and \$36.36 for managerial (GS-13, Step 5). These rates were increased by 60 percent to include fringe benefits and overhead. The fully-burdened wage rates used to represent Agency labor costs are: clerical at \$23.36, technical at \$43.17, and managerial at \$58.18.

(d) *Estimating the Respondent Universe and Total Burden and Costs.*

Approximately 452 chemical manufacturing area sources are currently subject to the regulation. Twenty seven new sources are estimated during the next 3 years.

The total annual number of responses for the monitoring, recordkeeping, and reporting requirements in subpart VVVVVV is 1,213. This number is calculated by summing the product of columns B and D for each of the activities listed in Table 1.

The total annual labor costs are \$803,906. Details upon which this estimate is based appear in Table 1.

(e) *Bottom Line Burden Hours Burden Hours and Cost Tables.*

(i) *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, managerial, and clerical staff, and by adding down the cost column.

The average annual burden for the monitoring, recordkeeping, and reporting requirements in subpart VVVVVV is 10,566 hours, with annual labor costs of \$803,906, annualized capital costs of \$69,484, and annualized O&M costs of \$28,787.

(ii) *The Agency Tally.* The average annual Federal Government cost for labor and travel costs is \$39,417 for 831 hours for subpart VVVVVV. The bottom line Agency burden hours and costs presented in Table 2 are calculated by adding person-hours per year down each column for technical, managerial, and clerical staff, and by adding down the cost column.

(iii) *Variations in the Annual Bottom Line.* This section does not apply since no significant variation is anticipated.

(f) *Reasons for Change in Burden.*

This section does not apply because this is a new ICR.

(g) *Burden Statement.*

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 9 hours per response. 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-2008-0334. An electronic version of the public docket is available at www.regulations.gov which may be used to obtain a copy of the draft collection of information, submit or view public comments, access the index listing of the contents of the docket, and to access those documents in the public docket that are available electronically.

When in the system, select “search,” then key in Docket ID Number EPA-HQ-OAR-2008-0334. The documents are also available for public viewing at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, DC. 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 docket center is (202) 566-1742. Send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for EPA, 725 17th St., NW, Washington, DC 20503. Please include the EPA Docket ID Number EPA-HQ-OAR-2008-0334 and OMB Control Number 2060-NEW in any correspondence.

Part B of the Supporting Statement

This part is not applicable because statistical methods are not used in data collection associated with the rule.

Table 1. Annual Respondent Burden and Cost— NESHAP for Chemical Manufacturing Area Sources

	Technical hours per occurrence (A)	Occurrences/respondent/year (B)	Technical hours/respondent/year (C = A * B)	Respondents per year ^a (D)	Total technical hours per year (E = C * D)	Management hours per year (F = 0.05 * E)	Clerical hours per year (G = 0.1 * E)	Cost per year ^b (H)
1. APPLICATIONS	N/A							
2. SURVEY AND STUDIES								
Heat exchange system monitoring plan ^c	40	1	40	0	0	0	0	\$0
Metal process vent monitoring plan ^d	30	1	30	17.3	519	26.0	51.9	\$45,411
3. REPORTING REQUIREMENTS								
A. <u>Read Instructions</u> ^e	4	1	4	160	640	32.0	64.0	\$55,998
B. <u>Required Activities</u>								
Initial Performance test ^f	24	1	24	5.66	135.84	6.8	13.6	\$11,886
Design evaluation for process vent sources ^f	40	1	40	22.64	905.6	45.3	90.6	\$79,237
Repeat Performance test ^g	24	1	24	1.1	26.4	1.3	2.6	\$2,310
C. <u>Create Information</u>	Included in 3B							
D. <u>Gather Existing Information</u>	Included in 3E							
E. <u>Write Report</u>								
Notification of construction/reconstruction ^h	2	1	2	9	18	0.9	1.8	\$1,575
Initial notification ⁱ	2	1	2	160	320	16.0	32.0	\$27,999
Notification of compliance status ^j	8	1	8	160	1,280	64.0	128.0	\$111,996
Notification of initial performance test ^k	2	1	2	5.66	11.32	0.6	1.1	\$990
Report of performance test	Included in 3B							
Semiannual compliance reports ^l	8	1	8	7.2	57.6	2.9	5.8	\$5,040

4. RECORDKEEPING REQUIREMENTS								
A. <u>Read Instructions</u> ^e	4	1	4	160	640	32.0	64.0	\$55,998
B. <u>Plan Activities</u>	Included in 3B							
C. <u>Implement Activities</u>								
Initial calculations and demonstrations								
- TRE calculation for continuous process vents ^m	3	1	3	24.2	72.6	3.6	7.3	\$6,352
- calculation of batch process vent emissions ⁿ	6	1	6	31.4	188.4	9.4	18.8	\$16,484
- calculation of metal HAP emissions ^o	2	1	2	38.7	77.4	3.9	7.7	\$6,772
- capacity and MTVP calculations for storage tanks ^p	1	1	1	3.3	3.3	0.2	0.3	\$289
- inspection or seal gap measurement for storage tanks ^q	2	1	2	3.3	6.6	0.3	0.7	\$577
- determination of HAP concentrations in wastewater streams ^r	20	1	20	48.4	968	48.4	96.8	\$84,697
Recurring calculations and tracking requirements								
- number of batches per month (or HAP usage) to show less than 10,000 lb/yr of organic HAP emissions ^s	0.5	12	6	8.1	48.6	2.4	4.9	\$4,252
- metal PV emissions ^t	0.5	12	6	7	42	2.1	4.2	\$3,675
- quarterly CMPU management practice inspections ^u	3	4	12	0	0	0.0	0.0	\$0
D. <u>Develop Record System</u>	20	1	20	160	3200	160.0	320.0	\$279,989
E. <u>Time to Enter Information</u>								
Operating parameters for control devices (batch and continuous process vents) ^v	0.25	52	13	0	0	0.0	0.0	\$0
Records of CMPU leak inspections	Included in emission control option costs							
Records of heat exchange system monitoring	Included in emission control option costs							
Information related to bag leak detection systems	2	4	8	3.4	27.2	1.4	2.7	\$2,380
Records of inspections or seal gap measurements for storage tanks equipped with floating roofs ^w				0				
F. <u>Train Personnel</u>								
Initial	N/A							
Refresher and new personnel	N/A							
G. <u>Audits</u>	N/A							

5. TOTAL LABOR BURDEN AND COST					9,188	459	919	\$803,906
						10,566	hours	
6. CAPITAL/O&M COSTS								
Annual capital costs								
Metal process vent performance tests ^x								\$30,299
Monitoring equipment for metal process vents ^y								\$303,905
Batch process vent and continuous process vent performance tests ^z								\$53,724
Monitoring equipment for batch process vent and continuous process vent control devices ^{aa}								\$39,820
Initial wastewater sampling and analysis ^{bb}								\$205,075
Cooling water sampling and analysis ^{cc}								\$0
Annualized Capital Cost ^{dd}								\$69,484
Annual O&M Cost ^{ee}								\$28,787
Total Annual Capital and O&M Cost								\$98,271

^aAssume 452 existing facilities are subject to the NESHAP (228 have only organic HAP emissions, 178 have only metal HAP emissions, and 46 have both types of emissions). Thus, on average, $452/3 = 151$ existing sources/yr will be subject. Assume 2 percent growth in new facilities each year ($0.02 \times 452 = 9$ new facilities per year; $9 \times 274/452 = 5.4$ with organic HAP emissions and $9 \times 224/452 = 4.5$ with metal HAP emissions).

^bUnited States Department of Labor, Bureau of Labor Statistics, May 2007 National Industry-Specific Occupational Employment and Wage Estimates, NAICS 325000 Chemical Manufacturing. The wages are for Environmental Engineers, General and Operations Managers, and Office and Administrative Support Occupations. The rates have been increased by 110 percent to account for the benefit packages available to those employed by private industry. Technical - \$77.24/hr; Managerial - \$130.62/hr; Clerical - \$37.28/hr.

^cAssume 80 percent of facilities with organic HAP emissions have heat exchange systems and will need to prepare a heat exchange system inspection or monitoring plan ($274/3 \times 0.8 = 73.1$ existing sources/yr plus $5.4 \times 0.8 = 4.3$ new sources/yr). However, this cost was included as part of the heat exchange system monitoring program cost.

^d All sources with a CMPU that has uncontrolled metal HAP emissions greater than 400 lb/yr must prepare a metal process vent monitoring plan. ($30/3 = 10$ existing uncontrolled sources/yr plus $19/3 = 6.3$ existing controlled sources/yr plus 1 new source/yr). The plan is not submitted but must be maintained onsite and made available upon request.

^e Assume an average of 8 hours/facility to read and understand the monitoring, recordkeeping, and reporting requirements. This time is split evenly between items 3A and 4A in this table.

^f Assume 82 existing facilities have to conduct a performance test or a design evaluation (49 with metal process vents, 5 with continuous process vents, and 28 with batch process vents). On average, this is 27.3/yr. Assume 1 new facility per year with metal HAP emissions has to conduct a performance test or design evaluation each year, i.e., they have uncontrolled metal HAP emissions greater than 400 lb/yr. Although a small percentage of new sources is expected to meet the conditions under which control of batch process vents and continuous process vents is required, this analysis assumes that none are constructed in the 3 years of this ICR. Assume 24 hours for facility technical staff to arrange for a performance test, provide support to test crew during the test, review final report, and submit report. Assume 40 hours for a design evaluation instead of performance testing. Assume 20% of the sources will conduct performance testing and 80% of the sources will opt for the design evaluation.

^g Assume 20 percent of performance tests must be repeated.

^h All new sources must submit notification of construction/reconstruction.

ⁱ All existing and new sources must submit initial notification. On average, 151 existing sources per year submit the initial notification during the 3 years of this ICR ($452/3 = 151$).

^j All existing and new sources must submit notification of compliance status. Assume no facilities elect to comply with the overlapping rule provisions which means no stringency determinations will be conducted (such determinations could double the cost of preparing the notification). Assume that all existing sources submit the notification prior to the compliance date (i.e., within the 3 years of this ICR).

^k Assume 2 hours per notification with the same number of respondents as those performing the performance test.

^l For each semiannual reporting period, assume 20 percent of facilities meet conditions requiring submittal of a compliance report. In the 3 years of this ICR, these reports would be submitted only by new sources (average of 18 new facilities in the 2nd year operating $\times 2$ semiannual reporting periods/yr $\times 0.2 = 7.2$ compliance reports/yr).

^m Assume 25 percent of facilities with organic HAP emissions have continuous process vents, and each of these facilities must calculate the TRE ($274/3 \times 0.25 = 22.8$ existing sources/yr plus $5.4 \times 0.25 = 1.35$ new sources/yr).

ⁿ Assume 130 of the facilities with organic HAP emissions must calculate the total emissions from batch process vents. Assume the remaining facilities meet conditions under which calculation is not required. Also assume that 40% existing sources already have historical records of emissions developed for emissions inventories or other purposes that can be used. All new sources would need to project emissions from scratch (5.4 new sources/yr). Assume 25 steps per process and 1 batch process per facility which corresponds to approximately 6 hours of effort per respondent.

^o Assume 110 of the facilities with metal HAP emissions must calculate the total metal HAP emissions from process vents. Also assume that 2 new sources with metal HAP emissions would also calculate the total metal HAP emissions.

^p Assume 10 storage tanks at existing sources meet the thresholds for control and that 5 are already controlled. Records of the dimensions, capacity, and MTVP are required for all storage tanks that must be controlled ($10/3 = 3.33$ existing sources/yr). Assume no storage tanks at new sources during the 3 years of this ICR meet the thresholds for control.

^q Assume 10 storage tanks at existing sources meet the thresholds for control and that all are equipped with either an internal floating roof or external floating roof. Assume no storage tanks at new sources during the 3 years of this ICR meet the thresholds for control ($10/3 = 3.33$ per year).

^r Assume each facility with organic HAP emissions has process wastewater and must determine the HAP concentrations in each stream ($274/3 = 91.3$ existing sources/yr plus 5.4 new sources/yr). Assumed 50 percent of them will use process knowledge to characterize the HAP concentrations. The other 50% will use sampling and analysis (these costs are calculated below).

^s All facilities with batch process vents, except those using control devices, must track emissions from batch process vents or HAP usage. However, only new sources must comply during the 3 years of this ICR. Assume an average number of new sources in 2nd year ($2 \times 5.4 \times 0.75 = 8.1$ new sources/yr; assume no new sources use control devices during 3 years of this ICR).

^t All facilities with metal process vents that are not required to use control devices must track metal HAP emissions from metal process vents or HAP usage. However, only new sources must comply during the 3 years of this ICR. Use the estimated number of new sources in the 2nd year as the average number per year ($2 \times (4.5 - 1) = 7$ new sources/yr).

^u Only new sources would be subject in the 3 years of this ICR. Assume all new facilities would be performing the required inspections in the absence of the rule.

^v No existing sources are required to monitor operating parameters on control devices during the 3 years of this ICR. Although a small percentage of sources is expected to meet the conditions under which control devices are required for batch process vents and continuous process vents, this analysis assumes no new sources will meet these conditions during the 3 years of this ICR. When operating parameters must be monitored, it is assumed that the data will be collected automatically so that the only burden will be 0.25 hr/week to review results and verify that the system is operating properly.

^w Only new sources have to comply in the 3 years of this ICR. Assume none of the new sources have a subject storage tank.

^x All facilities with control devices for metal process vents must conduct an initial performance test or design evaluation ($49/3 = 13.3$ existing sources/yr plus 1 new source/yr). Assumes average cost for a performance test using Method 5 is \$8,740 per test. Twenty percent will conduct a performance test and 80% will conduct a design evaluation.

^y Assumes each source with a control device for metal process vents uses a fabric filter. Includes $49/3 = 16.3$ existing sources/yr plus 1 new source/yr. Assumes total purchase and installation costs for a bag leak detection system is \$17,533.

^z All facilities with control devices for batch process vents and continuous process vents must conduct an initial performance test or design evaluation. Assumes 20% will conduct a performance test and 80% will perform a design evaluation. Assumes 5 existing sources have continuous process vents, 28 existing sources have batch process vents, and no new sources in the 3 years of this ICR have subject batch or continuous process vents. Assumes average cost for a performance test using Method 18 is \$24,420.

^{aa} Assumes a temperature monitoring system is needed for each control device used to control batch process vents or continuous process vents. Assumes the monitoring equipment cost is \$3,620 per system.

^{bb} Assumes all facilities with organic HAP emissions have wastewater streams for which concentrations must be determined (274 existing sources and 5.4 new sources/yr). Assumes 50 percent of the facilities conduct sampling and analysis for an average of 2 streams per facility. Assumes cost of analysis is \$435/sample. Assumes labor cost of \$125/hr and 20 hr/facility for sampling. (Assumes other 50 percent of facilities determine concentrations based on knowledge of the wastewater; no capital cost.)

^{cc} Assumes cost of sampling and analysis is part of the monitoring program cost.

^{dd} Annualized costs are calculated by multiplying the capital recovery factor by the annual capital cost. The capital recovery factor is 0.1098 based on an interest rate of 7 percent and an assumed equipment life of 15 years.

^{ee} Includes each of the following assumptions: (1) average annual cost of materials for temperature monitoring systems for sources that must use control devices for batch and continuous process vents (33 existing facilities and zero new facilities per year) and bag leak detection systems (49 existing and 1 new facility per year for facilities that must control metal process vents) are \$200/yr and \$1,219/yr, respectively; (2) 5 percent of heat exchange system and metal process vent monitoring plans must be updated each year (5 technical hr/update); (3) the average amount of time to operate, maintain, and repair monitoring equipment is 3 hr month for the 1 new facility per year with metal process vents; (4) 5 percent of new sources with wastewater will make process changes each year that require a new determination or analysis of the organic HAP concentration ($2 \times 5.4 \times 0.05 = 0.54$ new sources/yr). Also assumes cost of periodic equipment leak inspections is part of the inspection program cost, and cost of quarterly heat exchange system water monitoring is part of the monitoring program cost. Note that in years after the 3 years of this ICR all sources that are required to use control devices (28 existing facilities with batch process vents and 5 existing facilities with continuous process vents) will need to operate and maintain monitoring equipment (10 hr/yr for temperature monitor). Also, all 49 existing facilities with uncontrolled metal HAP emissions greater than 400 lb/yr will need to operate and maintain monitoring equipment (3 hr/month for bag leak detection systems).

Table 2. Annual Burden and Cost to the Agency—NESHAP for Chemical Manufacturing Area Sources

Activity	(A) EPA Hours/ Occurrence	(B) Occurrences/ Plant/Year	(C) EPA Hours/ Plant/Year ^a	(D) Plants/Year	(E) EPA Technical Hours/ Year ^b	(F) EPA Managerial Hours/Year	(G) EPA Clerical Hours/Year	(H) Cost, \$
Attendance of Initial Performance Test ^c	24	1	24	5.7	136.00	6.80	13.60	\$6,584
Attendance of Repeat Performance Tests ^d	24	1	24	1.1	27.20	1.36	2.72	\$1,317
Report Review								
Notification of construction/reconstruction commencement	2	1	2	9	18.00	0.90	1.80	\$871
Initial Notification ^e	0.5	1	0.5	160	79.85	3.99	7.99	\$3,866
Notification of compliance status ^f	2.5	1	2.5	160	399.27	19.96	39.93	\$19,330
Notification of initial test ^c	0.5	1	0.5	5.7	2.83	0.14	0.28	\$137
Review test results ^c	8	1	8	5.7	45.33	2.27	4.53	\$2,195
Semiannual compliance reports ^g	2	1	2	7.2	14.4	0.72	1.44	\$697
Total Annual Hours					722.89	36.14	72.29	\$34,997
						831.32	hours	
Travel Expenses ^h								\$4,420
								\$39,417

^a C = A x B^b E = C x D

^cAssume 82 existing facilities have to conduct a performance test or design evaluation (49 with metal process vents, 5 with continuous process vents, and 28 with batch process vents). On average, this is 27.3/yr. Assume 1 new facility with metal HAP emissions has to conduct a performance test or design evaluation each year. Although a small percentage of new sources is expected to meet the conditions under which control of batch process vents and continuous process vents is required, this analysis assumes that none are constructed in the 3 years of this ICR. Only 20% of these sources are expected to conduct a performance test; 80% will perform a design evaluation.

^d Assume 20% of initial performance tests must be repeated due to failure

^eAll existing and new sources must submit initial notification. On average, 151 existing sources per year submit the initial notification during the 3 years of this ICR (452/3 = 151) and 9 new sources per year. Only 20% will perform performance test.

^fAll existing and new sources must submit notification of compliance status. Assume that all existing sources submit the notification prior to the compliance date (i.e., within the 3 years of this ICR).

^gFor each semiannual reporting period, assume 20 percent of facilities meet conditions requiring submittal of a compliance report. In the 3 years of this ICR, these reports would be submitted only by new sources (average of 18 new facilities operating/yr x 2 semiannual reporting periods x 0.2 = 7.2 compliance reports/yr).

^h Travel Expenses = (1 person x 5.7 plants/year x 3 days/plant x \$50 per diem) + (\$500 round trip/plant x 5.7 plants/year) + (1 person x 1.1 plants/year x 3 days/plant x \$50 per diem) + (\$500 round trip/plant x 1.1 plants/year)= \$4,966/year.