PART A OF THE SUPPORTING STATEMENT

1. Identification of the Information Collection

a. Title and number of the information collection. "Maximum Achievable Control Technology Standards Development under Title III (Section 112 of the Clean Air Act) Regulatory Development Program." This is the second extension of the information collection which was approved for use through August 8, 1998. The OMB number is 2060-0239.

The EPA ICR #1602.02 was approved for 6,900 responses and 226,200 burden hours. The ICR was approved for three years for a total of 20,700 responses and 678,600 burden hours. In the three year period twelve industrial source categories were surveyed using ICR 1602.02. The number of facilities surveyed totaled 1,830. The number of reporting hours was estimated to be 155,550 hours.

b. Short characterization. Respondents are owners or operators of facilities included on the list of source categories for which EPA plans to initiate development of national emission standards for hazardous air pollutants (NESHAP) under Section 112(d) of the amended Clean Air Act within the next 3 years as well as a limited number of source categories for which NESHAP development studies are currently underway.

Depending on the size (number of facilities) of the individual source category, respondents will be required to complete one of two surveys. In those source categories with

400 or fewer facilities, respondents will complete a survey for maximum achievable control technology (MACT) standards development (Attachment 1). The purpose of this survey is to ensure that the EPA Office of Air Quality Planning and Standards (OAQPS) has sufficient information to make subcategory distinctions and MACT floor decisions for each NESHAP.

In those source categories with more than 400 facilities, respondents will complete a "screening" survey (Attachment 2). The results of the screening survey will be used to develop a sample design that will be applied to individual ICR's for the MACT standards development survey.

The ICR will be invoked for each source category as it enters the background information development phase of the NESHAP process. The data collected will be used primarily in the context of the individual project, although relevant data, such as control device performance information, may be shared across project lines. To the extent the data are not confidential business information (CBI), the data may be entered into data bases where they can be accessed by State and local air pollution control agencies.

2. Need for and Use of the Collection

a. Need/authority for the collection. The EPA is charged under Section 112(d) (copy provided as Attachment 3) of the Clean Air Act, as amended, to establish NESHAP that require "the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a prohibition on

such emissions, where achievable) 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 sources in the category or subcategory to which such emission standard applies...." The Administrator is also required to set a floor for the emission standards that is no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources in the category or subcategory with 30 or more sources. In categories or subcategories with less than 30 sources, the floor is to be based on the average emission limitation achieved by the best performing 5 sources. The floor for new sources is the emission control that is achieved in practice by the best controlled similar source.

These requirements mean that for NESHAP development to proceed, OAQPS needs facility-specific information on process types, emissions, controls, and factors affecting costs to ensure that the MACT standards are set in accordance with the Clean Air Act. The Clean Air Act Amendments also impose a stringent schedule for developing these standards. Under Section 112 (e), EPA published a schedule for the promulgation of emission standards (58 FR 63941, December 3, 1993) for categories of sources emitting hazardous air pollutants (HAP) initially listed pursuant to section 112(c)(1) and (3). The initial list includes 166 categories of major sources. The schedule for standards is organized such that the categories are grouped in four separate

time frames with promulgation deadlines of November 15, 1992, 1994, 1997, and 2000. This ICR applies to source categories scheduled for promulgation by November 15, 2000.

b. Use/users of the data. The OAQPS Emission Standards Division (ESD) will be the primary user of the data. The data received in response to the MACT standards development survey will be used to fulfill two primary objectives:

1. To compile process and cost factors needed to identify possible subcategories, and

2. To determine the distribution of controls and emissions in each subcategory so that EPA can identify the MACT floor. In addition to meeting these objectives, the data received from the MACT standards development survey (Attachment 1) will help EPA understand the potential value of different MACT bubble approaches. For example, if MACT bubbles are adopted for hazardous air pollutants (HAP's), the information received from the survey will be a good tool in understanding baseline emissions of HAP's from individual processes and the potential for industry to use bubble strategies to save money.

The data received in response to the screening survey (Attachment 2) will be used by ESD to determine an appropriate survey design for source categories with large numbers of facilities. The results of the screening survey will provide an understanding of the variability in process characteristics and emissions across the category and of the likely subcategories. The information will be used to develop a survey design for each

category that will generate adequate data for defining subcategories and establishing the MACT floor for each of those subcategories. A separate information collection request (ICR) will then be developed to request clearance to send the MACT standards development survey to the appropriate facilities as determined by the proposed survey design.

c. Results of Information Collection Under ICR 1602.02

The questionnaire has been an effective tool for determining the MACT floor. Baseline emissions information was used to determine the level of control at existing facilities.

3. The Respondents and the Information Requested

a. Respondents/SIC codes. The respondents are the owners and operators of facilities within each of the source categories for which EPA plans to start developing NESHAP over the next 3 years. Respondents are most likely members of industrial source categories, but it is possible that governments and nonprofit organizations will also be affected. The standard industrial classification (SIC) codes applicable to survey recipients are too numerous to mention in this ICR.

b. Information requested. (i) Data items. An example of the cover letter that will accompany the survey is provided as Attachment 4. This letter introduces the regulatory development process, identifies the purpose of the survey, instructs the recipient as to EPA's policies and procedures for handling CBI, and establishes deadlines and contacts for survey completion.

The MACT standards development survey (Attachment 1) includes detailed instructions for completing the survey and asks questions designed to provide data needed to make subcategory determinations and to assess control performance to make MACT floor determinations. Table 1

TABLE 1. SUMMARY OF MACT STANDARDS DEVELOPMENT SURVEY

Instructions/general	-- Informs respondent that no additional emission testing is required -- Identifies HAP's of concern -- Defines the source category -- Requests information on surrogates if individual HAP data are unavailable -- Provides EPA contacts/addresses -- Directs respondent to complete process flow diagram for each process line -- Asks for copies of worksheets to support information provided
Subcategory questions	-- Requests numbers of employees -- Requests age of process line and remaining economic life of line -- Requests information on production levels and plant capacity -- Asks for additional information relevant to a subcategory decision
Control performance questions for MACT floors	-- Directs respondent to complete a table describing HAP types, emission sources, flow rates, vent stream composition, controlled and uncontrolled emissions, control methods, and control efficiencies for each process line -- Asks the respondent to describe add-on controls or process changes that have been or could be adopted -- Determines whether the facility is subject to LAER and asks for documentation

is a synopsis of the key questions.

Part I, Instructions, defines the source category operations that are to be addressed in completing the survey. The respondent is instructed that no additional emission testing or monitoring is required to respond to the survey. The intent of this statement is to minimize the potential burden on the respondents who might otherwise feel compelled to conduct emission testing or monitoring to complete the survey. The instructions also list an EPA contact for questions and provide the name and address to which the completed survey should be mailed. Finally, the instructions direct the respondent to an attachment that provides additional background and detail on the scope of the survey. The purpose of the attachment is to provide the respondent with additional detail on the relevant requirements of the Clean Air Act and to provide an explanation of the purpose and objectives of individual survey sections or questions. A list of definitions of key terms used in the survey is provided as is a list of guidance documents that respondents may find useful in developing emission estimates.

Part II, General Information, is where the respondent, plant, and company are identified. Because of the complex relationships between and among corporations, the respondent is asked to distinguish between the legal owner and the legal operator. In some cases, one owner may sell a specific operation to another company, but continue to operate the facility. In

this case, the legal owner information may be used in the EPA's economic analysis to distinguish small businesses.

Questions F requests information concerning the number of affected parent company and facility employees, and Question K and L request annual sales revenue or budget information. This information is requested to allow the EPA to identify small entities to meet the requirements of the Regulatory Flexibility Act (Public Law 96-354, September 19, 1980, RFA) and the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996. These Acts require the EPA to analyze the impacts of regulations on small entities including small businesses, small governmental jurisdictions, and small organizations. The EPA must consider mitigating regulatory strategies in the event that a regulation results in significant impact to a substantial number of small entities, without compromising the objectives of, in this case, the Clean Air Act.

Information on the legal operator, plant name, and technical contact is used by EPA to ensure that the plant is properly identified and that the appropriate contacts are available to answer any questions EPA might have on the completed survey.

The respondent is also asked to provide the latitudinal and longitudinal coordinates of the facility. Some facilities may already have this information from sources such as permits (e.g., NPDES permits), county property records, facility blueprints, and site plans. Otherwise, facilities may refer to an appendix that includes instructions on how to develop the coordinates. This

information is required so that relevant, nonconfidential plant data can be entered into existing EPA data bases.

Part III, Plant Operations. The purpose of Question A is to obtain a list of processes within the source category and information on the relative magnitude of each operation in terms of production amounts, production capacity, and operating schedule. The processes listed will define the scope of the rest of the survey and ensure that consistent terminology is used throughout the survey. Information on production and operating schedules may be used in making subcategory decisions. The information on age of the line and its remaining economic life is used in the economic analysis to determine the potential impacts of equipment retrofits. This information may be used in making subcategory decisions.

The respondent is also asked to provide a process flow diagram for each process (or, depending on the source category, group of like processes) identified in the table. The process flow diagram includes all activities that generate HAP emissions, such as materials storage, materials transfer and handling, materials processing, and wastewater and solid waste handling. Generating the diagrams is a necessary step in completing Table 3 in Part IV. It is also an essential tool for EPA to use in understanding how the emissions data relate to plant-specific processes. An example of the nature and complexity of the diagrams is provided.

Question B is designed to allow EPA to project price increases due to regulation by identifying each process that will be affected directly or indirectly. The name and quantity of each input chemical and the number and quantity of each output chemical, producer-by-producer, provide the basis for tracing potential price increases through chemical trees and sometimes beyond the trees to consumer products. For example, there are several commercial processes for producing benzene. Typically, a portion of benzene production at a plant is used on site for the production of derivative chemicals, and the remainder is shipped off site for similar or other use. If a respondent were to omit captively-consumed benzene from process unit data, perhaps on the grounds that the benzene is not sold in the traditional meaning of the term, EPA's ability to model and project price increases would be hindered.

Part IV, HAP's Usage and Emissions, provides the bulk of the information required to set the MACT floor and will also help in identifying potential subcategories. In Question A, the respondent is asked to cross-reference the list of HAP's with each emission point identified in the process flow diagram(s). Then the respondent is to assess the certainty of the presence of each HAP at each emission point. The information on this table will allow EPA to determine the variability in HAP emissions and their sources within the source category as well as qualify the relative certainty of the data.

In Question B, the respondent is asked to complete Table 3, which requests information on levels of HAP emissions and the presence and effectiveness of capture and control systems. These two items are the key parameters in making a MACT floor determination. Information is also requested in Table 3 on the flow rate and HAP concentration of the captured emission stream, which may be used to distinguish subcategories based on control options and costs. It is particularly important that EPA be able to determine when certain control technologies may prove infeasible for some sources and to ensure that EPA properly estimates the cost of applying controls.

Question C requires the respondent to provide additional information on key design and operating parameters of emission capture and control equipment. This information is used to allow EPA to understand the basis of the efficiency estimates provided in Table 3 and to establish the MACT floor in terms of technological options.

Question D provides instructions to the respondent regarding the means and level of detail required to support the data requested in Part IV. This information is critical in understanding the data provided by the respondents. To address concerns regarding consistency and procedures in estimating emissions, a list of guidance documents and/or example calculations is provided in an attachment to the survey.

Part V, Factors that Affect HAP Emission Reductions, requests information that will help ensure that EPA considers

source reduction (pollution prevention) measures, which reduce the amount of any HAP prior to recycling, treatment, or disposal, in establishing the MACT floor. Completing this section is voluntary.

In order to determine MACT, EPA must obtain the data necessary to consider the source reduction measures listed in Section 112(d)(2)(A) (i.e., process changes, substitution of materials, or other modifications...). Therefore, Questions V.A and B are provided in the ICR to obtain this data.

Further, Title III Section 112(d)(2) states that standards must, "take into consideration...any nonair quality health and environmental impacts and energy requirements...." Therefore, Question V.C. is provided to obtain data on these other impacts.

Part VI, Miscellaneous, includes a question on whether the controls or process changes on the source are the result of new source review (NSR) requirements. Sources subject to the lowest achievable emission rate (LAER) requirements of the NSR program must be excluded from the MACT floor calculation under Section 112(d)(3)(A) for existing sources if LAER is achieved 18 months before the emissions standard is proposed or within 30 months before such standard is promulgated, whichever is later. The last question asks the respondent to describe any other factors not addressed in the above questions that might serve to distinguish subcategories.

The screening survey (Attachment 2) is a brief survey designed to provide information on the variability within the

source category related to the factors that could affect subcategory decisions. The more variable the source category, the larger the expected sample size of any follow-up survey. The key parameters in determining the variability are the size of the operation (number of employees), the type and distribution of HAP's among emission sources, and the relative amount of HAP emissions.

(ii) Respondent activities. The respondent activities required in order to complete each survey are listed in Table 2.

TABLE 2. RESPONDENT ACTIVITIES

1. Read collection instrument instructions (including compliance determination).
2. Plan activities
3. Create information
4. Gather information
5. Process, compile, and review information for accuracy and appropriateness
6. Complete written forms or other instruments

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

a. Agency activities. A list of Agency activities is provided in Table 3.

TABLE 3. FEDERAL GOVERNMENT ACTIVITIES

1. Customize survey
2. Distribute survey
3. Answer questions
4. Log in and acknowledge receipt of surveys
5. Process, analyze, and summarize surveys

b. Collection methodology and management.

(i) Survey approach. The purpose of the MACT standards development survey is to build a data base that EPA can use to determine subcategories and establish the MACT floor for each subcategory. A complete sample of facilities within source categories with less than 400 facilities is needed to provide EPA with sufficient data to make these decisions. The nature of the regulatory development process is such that final subcategory decisions may not be made until well into development of the promulgation package for the final rule. As a result, subcategories may be identified during the regulatory process that had not been previously considered in the initial data gathering effort. Without a complete data set, EPA will lack sufficient information to analyze the impacts of the regulatory alternatives on the industry and to set a MACT floor. The relatively short time allowed to EPA to develop the MACT standards means that additional, extensive information gathering at this phase could result in a failure to maintain the regulatory development schedule.

The EPA is also requesting clearance to send the screening survey to all facilities within source categories with more than 400 facilities. The purpose of this survey is to identify possible subcategories so that a survey design can be developed to send the MACT standards development survey to a representative sample of the source category.

(ii) Pretests. The general survey was formally pretested in two different source categories. Five companies producing nonnylon polyamide resins and four integrated iron and steel mills were included in the pretest. The nonnylon polyamide resin manufacturers were selected to represent chemical industry facilities with hazardous organic compound emissions. The integrated iron and steel mills have hazardous particulate emissions and are representative of source categories with multiple operations and multiple products and processes. In addition, previous to the development of the MACT standards development survey, a similar but not identical survey was sent to nine magnetic tape manufacturing operations. The results of the pretests and the magnetic tape survey were used to refine the general survey and to estimate respondent burden. Questions that were unclear, difficult to answer, or in need of other improvements were identified. Attachment 5 is a copy of the questions that were asked of plants to help EPA evaluate the pretests. Respondents in the magnetic tape industry were contacted with follow-up telephone calls to request feedback on their experience with the survey.

(iii) Data quality. To simplify completing the survey, most of the data requested can be entered directly onto the survey. We have also provided example figures and tables and have defined all of the key terms. A contact is also provided to answer questions that the respondents might have.

Once the surveys are received, the ESD project team for a given source category will review the responses and check for

data clarity and quality. Unclear responses will be researched with telephone calls. Several features in the MACT standards development survey will help the reviewers assess the quality of data. The integrated nature of the tables and figures with respect to the flow of materials and identification of emission points, process lines, and unit operations will allow ESD to ensure that it understands the source category operations described by the respondent. The purpose of Table 4 on capture and control system parameters is to allow ESD to understand the basis of emission estimates and control device efficiencies. Most importantly, the requirement to submit documentation for emission estimate calculations will allow EPA to evaluate the quality of these data.

The surveys will be sent under Section 114 authority, which means that the respondents must complete them. Because the surveys will be used in support of the MACT standards, respondents will also have incentive to ensure that EPA has sufficient information to establish subcategories. If EPA lacks the data to establish subcategories, it is possible that EPA could inadvertently apply control requirements that are not applicable or are too costly to small industry segments. Incomplete or inaccurate data could also affect the ability of EPA to set realistic emission limits.

(iv) Processing technology. The project teams will develop a data base and write computer programs to facilitate data entry and to analyze the data.

(v) Public access. The data will be available to the public through the docket developed as part of each rulemaking project. The docket will be maintained in Washington, D.C. Only persons who have been certified in ESD procedures for handling CBI will be allowed access to information that has been designated as confidential.

c. Small entity flexibility. Many potential subcategories include small businesses. Therefore, their input into the information collection process is critical to meeting the objectives of the overall effort. However, it is likely that these businesses will lack some of the information requested in the surveys. The absence of information and the inapplicability of questions to these businesses both serve to reduce the burden on these facilities. For example, most small businesses may not have any air pollution control equipment because they have not been regulated to date. Obviously, those questions related to control equipment will not apply to these facilities.

d. Collection schedule. These surveys will be sent throughout the 3-year clearance period. Surveys will be sent to the individual source categories as EPA initiates regulatory development for the affected source category. In other words, the surveys will not be sent to facilities in all source categories at one time.

5. Nonduplication, Consultations, and Other Collection Criteria.

a. Nonduplication. The information that will be requested is not available through other sources. For example, while the SARA Title 313 data base has facility-specific estimates of HAP emissions, the estimates are only provided on a facilitywide basis. The ESD requires this information on an emission source basis. In addition, the SARA Title 313 data base only includes facilities that estimate their emissions are above a 10,000-pound-per-year cutoff.

b. Consultations. Some of the trade associations covering source categories likely to be addressed through the scope of this ICR were contacted for input on the MACT standards development survey. Attachment 6 is a copy of the letter sent to the associations. They were asked to provide comments or suggestions on how to improve the survey and estimate burden. Of the 10 trade associations, 6 have provided written and/or oral comments. These comments have been considered, and where appropriate, incorporated into the survey. Table 4

TABLE 4. LIST OF CONTACTS

Contact	Affiliation	Comments received (Y or N)
Trade Associations		
Fred Kohloff	American Foundrymen's Society	N
Bruce Steiner	American Iron and Steel Institute	N
Karen Ritter	American Petroleum Institute	Y
Richard Sigman	Chemical Manufacturer's Association	Y
Mark Gallant	Chlorine Institute	N
Karl Johnson	Fertilizer Institute	N
W. E. Tessmer	International Institute of Synthetic Rubber Products	Y
John Pinkerton	National Council of the Paper Industry for Air and Stream Improvement	Y
Maureen Healey	Society of the Plastics Industry, Inc.	Y
Mary Legatski	Synthetic Organic Chemical Manufacturer's Association	Y
Pretest Recipients		
Chris Wilso	Amoco Performance Products, Inc.	N
Stephen Felton	ARMCO Steel Company, L.P.	Y
David Anderson	Bethlehem Steel Corp.	Y
John Herbst	Calloway Chemical Company	N
Keith Bentely	Georgia Pacific	Y
Bill Shaw	Henkel Corp.	Y
John Heintz	National Steel Corp.	Y
Tom Crosby	Pioneer Plastics Corp.	Y
Phillip Mascianto	United States Steel	Y
Magnetic Tape Survey Recipients		
Louis Gilmore	Ampex Recording Media Corp.	Y
Chris Van derWoerd	Anacomp, Inc.	Y
Susay Frey	BASF Corp.	Y
Doug Emerich	JVC Magnetics of America Company	Y
Bruce Coulter	Tandy Magnetics	Y
Michael Falco	3M	Y
J. Fritzmeier	Syncom	Y

is a list of contacts from the trade associations as well as the pretest recipients.

c. Effects of less frequent collection. This section does not apply because this ICR is for a one-time survey.

d. General guidelines. This ICR adheres to general guidelines set forth by OMB. Although small businesses will be sent the same questionnaire as other respondents, as stated in Section 4(c) of the supporting statement, it is expected that they will complete less of the survey and thereby spend less time completing the survey than larger businesses.

e. Confidentiality and sensitive questions.

(i) Confidentiality. As indicated by the example provided as Attachment 4, respondents will be instructed to label portions of their responses confidential if they contain trade secret information. They will be supplied with EPA guidelines on what information EPA considers confidential. If any information is submitted to EPA for which a claim of confidentiality is made, the information will be safeguarded according to EPA policies set forth in Title 40, Chapter 1, Part 2, Subpart B--Confidentiality of Business Information (see 40 CFR 2). Only those persons who have been trained and certified in the procedures for handling CBI will be allowed access to any confidential information. The EPA may disclose confidential information to other officers, employees, or authorized representatives of the United States Government, including contractors. This release of confidential

information is subject to the following provisions, detailed in 40 CFR 2.302(h)(2-3):

1. Access to the information must be necessary to carry out the work required under the contract;

2. The information must be used only for the purpose of carrying out the work required under the contract; and

3. The information must be treated as confidential by the contractor, subject to the provisions described in 40 CFR Part 2, Subpart B.

If a request is made for the release of information covered by a claim of confidentiality, or if EPA otherwise decides to make a determination as to whether or not the information is entitled to confidential treatment, the business that furnished the information will be notified. If no claim of confidentiality is made when information is furnished to EPA, the information will be considered nonconfidential. Nonconfidentiamaterial may be made available to the public without notice to the business.

(ii) Sensitive questions. This section does not apply because this ICR does not involve matters of a sensitive nature.

6. Estimating the Burden and Cost of the Collection.

a. Estimating Respondent Burden.

(i) Number of facilities. Table 5 is a list of the seventeen source categories with promulgation dates of November 15, 2000, that the EPA plans to survey. Table 5 also contains an estimate of the number of facilities for each of the source categories. The estimates for numbers of facilities are based on

general information from census data with respect to standard industrial classifications as well as estimates provided by EPA technical experts. The total number of facilities estimated to be covered by this ICR is 8,612. Of these, 2,612 are in source categories with 400 or fewer facilities and would receive the MACT standards development questionnaire. The remaining 6,000 facilities would receice the screening survey.

TABLE 5. LIST OF CATEGORIES OF SOURCES OF HAZARDOUS AIR POLLUTANTS

Category name	Number of Facilities
Metal coil	200
Miscellaneous metal parts	3000
Plastic parts	400
Plywood/particle board	400
Polyvinly chloride	40
Rocket engine testing	30
Cyanide production	15
Municipal solid waste landfill	3000
Engineered wood products	150
Asphalt on pipes	23
Asphalt concrete	400
Refractories	220
Engine testing	51
Hydrochloric acid	85
Site remediation	400

(ii) MACT standards development survey burden. The average burden estimate is based in part on information received from the industry, including the pretests. The pretests were mailed in late June 1991, and responses were requested by early August. Seven responses have been received to date. Two of the iron and steel respondents, National Steel and U.S.S., estimated that it took from 288 hours and 717 person-hours, respectively, to complete the survey. These surveys were very complete and very detailed. In the U.S.S. case, the company hired a consultant to assist with the survey. The other two iron and steel respondents estimated that it took approximately 60 hours per facility to complete the survey. These responses were far less detailed. The three other respondents, Henkel Corporation, Pioneer Plastics Corporation, and Georgia Pacific (representing five facilities) said that completing the survey for their nonnylon polyamide resin processes took from 8 to 18 hours per facility. The total time to complete the magnetic tape manufacturing HAP emission estimate surveys took from 3 to 100 hours per facility (with an average of 41 hours/facility). Finally, one of the trade associations, the Synthetic Organic Chemical Manufacturer's Association, estimated that it would take 40 hours per process line to complete the survey.

There is obviously a wide range of response times to a survey of this sort. Facilities such as the integrated iron and steel plant represent a worst-case situation because of the number of potential HAP's and the complexity and integrated

nature of the process operations. In other cases, the source category boundaries are sufficiently narrow that they only cover a single, relatively simple process line such as the case of a nonnylon polyamide resin facility. The magnetic tape industry represents a slightly more complex case than a single product source category because it is includes multiple process lines and products as well as less well defined emissions from some emission sources. Based on an arithmetic mean, we used 85 hours per facility as a reasonable estimate for the majority of facilities that will be subject to this survey.

TABLE 6. ANNUAL RESPONDENT BURDEN/COST ESTIMATES -- MACT STANDARDS DEVELOPMENT SURVEY

Collection activities	Burden hours, per year				
	Management at $49	Technical at $33	Clerical at $15	Hours	Costs, $
1. Read collection instrument instructions (including compliance determination)		3		3	99
2. Plan activities	1	1		2	82
3. Create information		29		29	957
4. Gather information		22		22	726
5. Process, compile, and review information for accuracy and appropriateness	5	11		16	608
6. Complete written forms or other instruments		7	6	13	321
Total	6	73	6	85	2,793

Annual burden: Total hours (85) x No. of respondents (870) = 74,000 hours
Annual cost: Total cost ($2,793) x No. of respondents (870) = $2,430,000

Table 6 is the annual respondent burden to complete the MACT standards development survey. We assumed that one-third of the 2612 facilities (870) in source categories with 400 on fewer facilities will be asked to complete the survey each year. Our analysis of the pretest and magnetic tape survey results showed that 40 to 75 percent of the technical burden is due to "creating and gathering information" with "processing and reviewing the results" next in level of burden. "Reading and plannning" both took less than 10 percent each and completing the form ranged from 10 to 20 percent. Approximately 70 to 100 percent of the burden was estimated to be technical with the exception of U.S.S., where technical was 60 percent and management was 36 percent. However, in this case, the use of a consultant resulted in the U.S.S. representatives listing all of their hours under management, when in fact some of these hours could be considered "technical." The remaining hours were split between clerical and management review, except in the National Steel and Georgia Pacific cases where hours spent in clerical tasks was 4 times that spent in management review and as discussed above for U.S.S. This information on the relative times spent per activity was incorporated into Table 6.

(iii) Screening survey burden.

The screening survey is a short, relatively simple collection instrument. The survey asks broad, general questions. Efforts to write, gather, and process information are expected to be minimal. Because the survey is so short, little time is

required to write the survey, plan activities, and complete the forms. Table 7 is the annual respondent burden to complete the screening survey. We assumed that one-third of the 6000 facilities will be asked to complete the survey each year.

b. Estimating respondent costs. The annual costs to respondents to complete the MACT standards development survey is found on Table 6. The annual costs to respondents to complete the screening survey is found on Table 7. Labor rates and associated costs are based on the Comprehensive Assessment and Information Rule (CAIR) economic analysis, and estimated hourly rates are as follows: technical at $33, management at $49, and clerical at $15.

c. Estimating Agency burden and cost. The annual cost to the Federal government for both surveys is summarized in Table 8.

TABLE 7. ANNUAL RESPONDENT BURDEN/COST ESTIMATES -- SCREENING SURVEY

Collection activities	Burden hours, per year				
	Management at $49	Technical at $33	Clerical at $15	Hours	Costs, $
1. Read collection instrument instructions (including compliance determination)		0.5		0.5	16.5
2. Plan activities	0.5			0.5	24.5
3. Create information		2		2	66
4. Gather information		2		2	66
5. Process, compile, and review information for accuracy and appropriateness	1	1		2	82
6. Complete written forms or other instruments		0.5	1	1.5	31.5
Total	1.5	6	1	8.5	286.5

Annual burden: Total hours (8.5) x No. of respondents (2,000) = 17,000 hours
Annual cost: Total cost ($287) x No. of respondents (2,000) = $574,000

TABLE 8. ANNUAL BURDEN AND COST FOR THE FEDERAL GOVERNMENT

Activity	MACT standards development survey		Screening survey		(E) Technical person-hours/year ([AxB]+[CxD])	(F) Management person-hours/year [Ex0.05)	(G) Clerical person-hours/year (Ex0.1)	Cost, $ [a]
	(A) Hours/occurrence	(B) Number of occurrences	(C) Hours/occurrence	(D) Number of occurrences				
1. Customize survey	40	5	[b] 4	1	[c] 204	10	20	7520
2. Distribute survey	80	5	[b] 120	81	520	26	52	19,210
3. Answer questions	0.25	44	[d] 0.25	100	[e] 36	2	4	1350
4. Log in and acknowledge receipt of surveys	0.10	830	[f] 0.10	1900	[f] 273	14	27	10,100
5. Process, analyze, and summarize surveys	8	830	[f] 1	1900	[f] 8540	427	854	315,550
Total burden and cost					9573	479	957	353,730

[a]Costs are based on the following hourly rates: technical at $33, management at $49, and clerical at $15.
[b]One-third of the 15 possible source categories are selected for standards development each year.
[c]One-third of the 24 possible source categories are selected for standards development each year.
[d]Five percent of 870 recipients have questions on the survey.
[e]Five percent of 2000 recipients have questions on the survey.
[f]Ninety-five percent of the surveys are received and analyzed.

Labor rates are based on the CAIR analysis, and estimated hourly rates are as follows: technical at $33, management at $49, and clerical at $15.

d. Bottom Line Burden Hours and Costs/Master Tables.

(i) Respondent tally. The bottom line burden hours and costs, presented in Table 5, 6 and 7 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 total cost of the ICR to respondents is summarized as follows:

	Hours	Cost
MACT standards development survey	74,000	2,430,000
Screening survey:	17,000	574,000
Total burden	91,000	3,004,000

(ii) The Agency tally. The bottom line Agency burden hours and costs, presented in Table 8 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. The total annual hours are 11,000. The total annual cost is $353,730.

(iii) Variations in the annual bottom line. This section does not apply because no significant variation is anticipated.

(iv) Reasons for change in burden. This section does not apply because there is no change in burden hours for Item 19.3 of the SF-83.

PART B OF THE SUPPORTING STATEMENT

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

Attachment 1

Form Approved
OMB No. 2060-
Approval expires / /

MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) STANDARDS DEVELOPMENT INFORMATION REQUEST

I. Instructions

This information request is to be completed for operations that comprise the **(variable)** source category at your plant. The source category is defined as **(variable)**.

We are requesting information regarding each compound identified as a hazardous air pollutant (HAP) that is used in or emitted by any operations, including fugitive emission sources, occurring from the **(variable)** source category at your facility. Fill out this information request as completely as possible from existing information. At a minimum, provide (1) information on the presence of HAP emissions and (2) HAP emission estimates based on previously obtained test data or on engineering calculations provided there is a basis for such calculations. No additional monitoring or emission testing is required by your company to respond to this request.

You may exclude the following sources of HAP emissions from your response: **(variable)**

If you have any questions regarding this request, please contact **(variable)**. For your convenience, we have provided in Attachment A additional information on the scope and purpose of this survey. Respondents should read this material before attempting to complete the survey. Attachment B is a copy of an example figure and example tables for the survey. Refer to these examples in completing your response.

Return this information request and any additional information to:

Emission Standards Division (MD-13)
U. S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711

Attention: Bruce C. Jordan, Director

II. General Information

A. Name of legal owner of plant
B. Name of legal operator of plant, if different from legal owner
C. Name of parent company (if applicable)
D. Address of legal owner/operator (please specify which)
E. Address of parent company (if applicable)
F. Size of company or government entity:
    1. Approximate number of employees of the business enterprise that owns this plant, including where applicable, the parent company and all subsidiaries, branches, and unrelated establishments owned by the parent company

2. Number of plant employees attached to the **(variable)** operation

G. Name of plant

H. Street address of plant

I. Dun & Bradstreet number (nine character identifier)

J. Facility's Standard Industrial Code (SIC) or North American Industrial Classification System (NAICS) codes (http://www.census.gov/epcd/www/naics.html)

K. Annual sales revenues for parent company (annual revenues or budget for government entities)

L. Annual sales for the facility (annual revenues or budget for government entities)

M. Latitude and longitude coordinates of plant (see Appendix A of Attachment A)

N. Name of contact(title and telephone number)able to answer technical questions about the completed survey

III. Plant Operations

A. Complete Table 1 for the most recent calendar year (unless the respondent can justify selection of an alternate base year) for all processes at your plant that are covered by the **(variable)** source category. For each type of process (i.e., process line), provide

a process flow diagram that includes all sources of air emissions (e.g., stack emissions, process fugitive emissions, and area fugitive emissions [including fugitive dust emissions]). Also include all activities that generate HAP emissions, including the storage, transfer, handling, and processing of the materials, and wastewater and solid waste handling. Indicate all feedstocks, products, and emissions that contain compounds that are listed in Table 2, below. Use the same terminology/codes in identifying unit operations and emissions points in this figure as you will use in completing Table 3, below.

B. List the products, coproducts, and by-products identified in the process flow diagram and indicate for each how much is produced annually.

_____

_____

_____

_____

_____

IV. HAP's--Usage and Emissions

A. Complete Table 2 for each emission point identified in the process flow diagram(s) developed for Part III.A., above. For each HAP listed on the table, indicate the likelihood, using the codes defined in Table 2, that the HAP is emitted from a given emission point within the source category. Identify the appropriate emission points using the same terminology/codes you used in completing the process flow diagram(s) in Part III.A, above.

B. Using copies of Tables 3A and 3B, complete the table for each process and emission point identified in Part III, with the following exceptions.

1. For those emission points from units with Resource Conservation and Recovery Act (RCRA) Part B permits, it is not necessary to complete Table 3 for wastewater and solid waste handling operations;

2. Sources with no air pollution capture or control systems will only complete columns 1-3, 8, and 10 of Table 3-A; and

3. Provide HAP data only for those HAP's identified with code "A" in Table 2, above.

C. Complete Table 4 for any air pollution capture or control equipment identified in Table 3, above.

D. For calculations based on emission factors, material balances, or engineering principles, submit a step-by-step description of the calculations, including assumptions used, and a brief rationale for the validity of the calculation method used. (See guidance documents listed in Attachment A, Section IV). If test reports are listed as the basis for emissions estimates or capture system and control device efficiencies, provide a brief summary of the relevant tests. Include information such as the purpose of the test, when it was conducted, what test methods were used, and information on the process operation during the test. It is not necessary to submit copies of actual test reports at this time although EPA may request additional documentation on a plant-specific basis in the future.

V. Factors That Affect HAP Emission Reductions

Completion of Section V is optional. If you choose to respond, clearly distinguish between pollution reduction and source reduction measures. Pollution reduction measures alter the physical, chemical, or biological characteristics or the volume of a HAP through a process or activity which itself is not integral to and necessary to produce a product or provide a service. The use of "add-on" devices to capture and control (recover or destroy) HAP emissions are considered pollution reduction measures. In contrast, source reduction measures reduce the amount of any HAP prior to recycling, treatment, or disposal. Source reduction measures include equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

A. For each unit operation for which pollution reduction or source reduction measures have resulted in a decrease in HAP emissions since 1987, provide the following information.

1. Name of unit operation: _____

2. Type of control or description of process change:

B. If recovery or recycling of feedstocks is used, quantify the effect of the program (e.g., estimated annual purchase of feedstock in the absence of recovery/recycling compared to actual annual purchase):

C. Are you aware of any alternative processes (feedstock substitutions or eliminations) or control devices that could result in fewer impacts between environmental media (water, air, and land) or reduced total release to all environmental media (e.g., reduced wastewater or solid waste)? Discuss whether these processes could be adapted to the **(variable)** source category and any experience you have with them.

VI. Miscellaneous

A. If any control or process change described in Part V was instituted as a result of new source review requirements pursuant to 40 CFR 51.160, Subpart I, Review of New Sources and Modifications, provide the date at which the lowest achievable emission rate (LAER) came into effect:

B. Describe any factors not addressed in the above questions that might serve to distinguish your operation from others in the industry.

TABLE 1. SUMMARY OF PROCESS LINES FOR **(VARIABLE)** SOURCE CATEGORY

Process lines using and/or emitting HAP's	No. of lines	Annual production, pounds per year[a]	Operating cycle		Maximum annual production capacity, lb/yr[a]	Age of process line(s), years	Remaining economic life of process line(s), years
			hr/d	d/yr			

[a]Provide production in appropriate units, e.g.,**(variable)**.

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

CHEMICAL NAME	EMISSION POINTS												
ACETALDEHYDE													
ACETAMIDE													
ACETONITRILE													
ACETOPHENONE													
2-ACETYLAMINOFLUORENE													
ACROLEIN													
ACRYLAMIDE													
ACRYLIC ACID													
ACRYLONITRILE													
ALLYL CHLORIDE													
4-AMINOBIPHENYL													
ANILINE													
o-ANISIDINE													
ASBESTOS													
BENZENE(INCLUDING BENZENE FROM GASOLINE)													
BENZIDINE													
BENZOTRICHLORIDE													
BENZYL CHLORIDE													
BIPHENYL													
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)													
BIS(CHLOROMETHYL)ETHER													
BROMOFORM													
1,3-BUTADIENE													
CALCIUM CYANAMIDE													
CAPROLACTAM													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known not to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
CAPTAN													
CARBARYL													
CARBON DISULFIDE													
CARBON TETRACHLORIDE													
CARBONYL SULFIDE													
CATECHOL													
CHLORAMBEN													
CHLORDANE													
CHLORINE													
CHLOROACETIC ACID													
2-CHLOROACETOPHENONE													
CHLOROBENZENE													
CHLOROBENZILATE													
CHLOROFORM													
CHLOROMETHYL METHYL ETHER													
CHLOROPRENE													
CRESOLS/CRESYLIC ACID (ISOMERS AND MIXTURE)													
o-CRESOL													
m-CRESOL													
p-CRESOL													
CUMENE													
2,4-D, SALTS AND ESTERS													
DDE													
DIAZOMETHANE													
DIBENZOFURANS													
1,2-DIBROMO-3-CHLOROPROPANE													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known <u>not</u> to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
DIBUTYLPHTHALATE													
1,4-DICHLOROBENZENE(P)													
3,3-DICHLOROBENZIDENE													
DICHLOROETHYL ETHER (BIS(2-CHLOROETHYL)ETHER)													
1,3-DICHLOROPROPENE													
DICHLORVOS													
DIETHANOLAMINE													
N,N-DIETHYL ANILINE (N,N-DIMETHYLANILINE)													
DIETHYL SULFATE													
3,3-DIMETHOXYBENZIDINE													
DIMETHYL AMINOAZOBENZENE													
3,3'-DIMETHYL BENZIDINE													
DIMETHYL CARBAMOYL CHLORIDE													
DIMETHYL FORMAMIDE													
1,1-DIMETHYL HYDRAZINE													
DIMETHYL PHTHALATE													
DIMETHYL SULFATE													
4,6-DINITRO-O-CRESOL, AND SALTS													
2,4-DINITROPHENOL													
2,4-DINITROTOLUENE													
1,4-DIOXANE(1,4-DIETHYLENE OXIDE)													
1,2-DIPHENYLHYDRAZINE													
EPICHLOROHYDRIN(1-CHLORO-2,3-EPOXYPROPANE)													
1,2-EPOXYBUTANE													
ETHYL ACRYLATE													
ETHYL BENZENE													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known <u>not</u> to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
ETHYL CARBAMATE (URETHANE)													
ETHYL CHLORIDE (CHLOROETHANE)													
ETHYLENE DIBROMIDE (DIBROMOETHANE)													
ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)													
ETHYLENE GLYCOL													
ETHYLENE IMINE(AZIRIDINE)													
ETHYLENE OXIDE													
ETHYLENE THIOUREA													
ETHYLIDENE DICHLORIDE (1,1-DICHLOROETHANE)													
FORMALDEHYDE													
HEPTACHLOR													
HEXACHLOROBENZENE													
HEXACHLOROBUTADIENE													
HEXACHLOROCYCLOPENTADIENE													
HEXACHLOROETHANE													
HEXAMETHYLENE-1,6-DIISO- CYANATE													
HEXAMETHYLPHOSPHORAMIDE													
HEXANE													
HYDRAZINE													
HYDROCHLORIC ACID													
HYDROGEN FLUORIDE (HYDROFLUORIC ACID)													
HYDROGEN SULFIDE													
HYDROQUINONE													
ISOPHORONE													
LINDANE (ALL ISOMERS)													
MALEIC ANHYDRIDE													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known <u>not</u> to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
METHANOL													
METHOXYCHLOR													
METHYL BROMIDE (BROMOMETHANE)													
METHYL CHLORIDE (CHLOROMETHANE)													
METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE)													
METHYL ETHYL KETONE (2-BUTANONE)													
METHYL HYDRAZINE													
METHYL IODIDE (IODOMETHANE)													
METHYL ISOBUTYL KETONE (HEXONE)													
METHYL ISOCYANATE													
METHYL METHACRYLATE													
METHYL TERT BUTYL ETHER													
4,4-METHYLENE BIS(2-CHLOROANILINE)													
METHYLENE CHLORIDE (DICHLOROMETHANE)													
METHYLENE DIPHENYL DIISOCYANATE (MDI)													
4,4'-METHYLENEDIANILINE													
NAPHTHALENE													
NITROBENZENE													
4-NITROBIPHENYL													
4-NITROPHENOL													
2-NITROPROPANE													
N-NITROSO-N-METHYLUREA													
N-NITROSODIMETHYLAMINE													
N-NITROSOMORPHOLINE													
PARATHION													
PENTACHLORONITROBENZENE (QUINTOBENZENE)													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known not to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
PENTACHLOROPHENOL													
PHENOL													
p-PHENYLENEDIAMINE													
PHOSGENE													
PHOSPHINE													
PHOSPHOROUS													
PHTHALIC ANHYDRIDE													
POLYCHLORINATED BIPHENYLS (AROCHLORS)													
1,3-PROPANE SULTONE													
BETA-PROPIOLACTONE													
PROPIONALDEHYDE													
PROPOXUR (BAYGON)													
PROPYLENE DICHLORIDE (1,2-DICHLOROPROPANE)													
PROPYLENE OXIDE													
1,2-PROPYLENIMINE (2-METHYL AZIRIDINE)													
QUINOLINE													
QUINONE													
STYRENE													
STYRENE OXIDE													
2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN													
1,1,2,2-TETRACHLOROETHANE													
TETRACHLOROETHYLENE (PERCHLOROETHYLENE)													
TITANIUM TETRACHLORIDE													
TOLUENE													
2,4-TOLUENE DIAMINE													
2,4-TOLUENE DIISOCYANATE													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known not to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
o-TOLUIDINE													
TOXAPHENE (CHLORINATED CAMPHENE)													
1,2,4-TRICHLOROBENZENE													
1,1,2-TRICHLOROETHANE													
TRICHLOROETHYLENE													
2,4,5-TRICHLOROPHENOL													
2,4,6-TRICHLOROPHENOL													
TRIETHYLAMINE													
TRIFLURALIN													
2,2,4-TRIMETHYLPENTANE													
VINYL ACETATE													
VINYL BROMIDE													
VINYL CHLORIDE													
VINYLIDENE CHLORIDE (1,1-DICHLOROETHYLENE)													
XYLENES (ISOMERS AND MIXTURE)													
o-XYLENES													
m-XYLENES													
p-XYLENES													
ANTIMONY COMPOUNDS													
ARSENIC COMPOUNDS (INORGANIC INCLUDING ARSINE)													
BERYLLIUM COMPOUNDS													
CADMIUM COMPOUNDS													
CHROMIUM COMPOUNDS													
COBALT COMPOUNDS													
COKE OVEN EMISSIONS													
CYANIDE COMPOUNDS													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known not to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 2. PRESENCE OF HAZARDOUS AIR POLLUTANTS IN EMISSION POINTS[a]

Process name (as defined on process flow diagram): _____

	EMISSION POINTS												
GLYCOL ETHERS													
LEAD COMPOUNDS													
MANGANESE COMPOUNDS													
MERCURY COMPOUNDS													
FINE MINERAL FIBERS													
NICKEL COMPOUNDS													
POLYCYCLIC ORGANIC MATTER													
RADIONUCLIDES (INCLUDING RADON)													
SELENIUM COMPOUNDS													

[a]For each HAP emission point defined in the process flow diagram, write in the applicable letter code defined below:

A - Specific HAP is known to be emitted.
B - Specific HAP is known not to be emitted.
C - No reason or data to assume that this HAP is emitted.

All blank cells assumed to be "C's."

TABLE 3-A. INFORMATION ON HAZARDOUS AIR POLLUTANTS-- PREAIR POLLUTION CONTROL DEVICE STREAMS

Process line: _____

1	2	3	4	5	6	7	8	9	10
Unit operation	Type of equipment/emission points	Name of HAP	Capture system/device	Capture efficiency, percent	Basis for reported efficiency[a]	HAP concentrations in captured stream, ppmv	Vent stream composition, volume percent	Flow rate of captured stream, scfm	Uncontrolled HAP emissions, tons/yr[b,c]

[a]Provide copies of estimation worksheets and any other relevant documentation.
[b]Provide speciated data.
[c]Emissions not captured plus those in the uncontrolled capture stream.

TABLE 3-B. INFORMATION ON HAZARDOUS AIR POLLUTANTS--CONTROLLED STREAMS

Unit operation	Type of equipment/emission points	Name of HAP	Control device/method	Control efficiency, percent	Basis for reported efficiency[a]	Control device outlet stream composition, volume percent[b]	Control device outlet stream HAP emissions tons/yr[b,c]

[a]Provide copies of estimation worksheets and other relevant documentation.
[b]Include composition information for HAP's that are generated by the control device, if applicable.
[c]Provide speciated data.

TABLE 4. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS[b]

CAPTURE SYSTEMS	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
GENERAL OR BUILDING VENTILATION			
Ventilation system used Natural with gravity ventilator Roof fans Other (specify)			
Airflow control system Drop curtain baffling Other (describe)			
Number of air changes per hour			
UNIT OR LOCAL VENTILATION			
Enclosure or hood design Complete enclosure Closed hood Canopy hood Slot hood Suspended hood Other (describe)			
Volume of enclosure or canopy hood Capture velocity (if applicable), ft/sec Distance between hood and emission source, ft			

[a] The systems presented in this table are examples. This table will be customized to include parameters for those control and capture systems that are applicable to the source category in question.

[b] Indicate whether information provided represents design values, average operating values, or some other values.

TABLE 4. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS

CONTROL DEVICE: SCRUBBER	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Type of scrubber: venturi packed bed impingement other (specify)			
Gas inlet temperature, °F			
Pressure drop, in H_2O			
Liquid-to-gas ratio, gal/10^3 acfm			
Inlet scrubbing liquor pH percent solids type of alkali added, if any rate (lbs/gal)			
Wastewater generation rate, gal/min HAP composition of wastewater, mg/ℓ			

CONTROL DEVICE: HEAT EXCHANGER	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Inlet temperature, °F			
Outlet temperature, °F			

TABLE 4. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS

CONTROL DEVICE: INCINERATION	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Type: thermal catalytic			
Combustion chamber temperature, °F (please note if temperature measurement is not in chamber)			
Excess air, %			
Nominal residence time, s			
Heat recovery: recuperative, percent heat recovery regenerative, percent heat recovery			

CONTROL DEVICE: FLARE	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Type of flare: no assist steam assist air assist pressure assist			
Location: ground elevated			
Heat content of vented stream, BTU/scf			
Flare gas exit velocity, ft/s			
Flare tip diameter, in.			
Flare height, ft			
Supplementary fuel for pilot, scfm combustion purposes, scfm			
Steam requirement, lb/hr			

TABLE 4. AIR POLLUTION CAPTURE SYSTEM AND CONTROL EQUIPMENT PARAMETERS

CONTROL DEVICE: CARBON ADSORPTION	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Type of carbon bed and number: fixed fluidized			
How many pounds of carbon per bed:			
Configuration: parallel serial			
Number of beds on-line			
Number of beds desorbing			
Pressure drop, in. H_2O			
Gas inlet temperature, °F			
Type of regeneration			
Regeneration time			
Adsorption time			

CONTROL DEVICE: CONDENSER	EMISSION POINT __	EMISSION POINT __	EMISSION POINT __
Type of condenser: surface contact [if contact, see scrubber]			
Gas inlet temperature, °F			
Gas outlet temperature, °F			

Attachment A

BACKGROUND FOR MACT STANDARDS DEVELOPMENT SURVEY

I. Introduction

The purpose of this attachment is to provide the respondent with additional detail on the relevant requirements of the Clean Air Act and to provide an explanation, where appropriate, for the purpose and objectives of individual survey sections or questions. Finally, a list of relevant guidance documents and definitions of key terms used in the survey is provided.

II. Summary of Clean Air Act Requirements

The maximum achievable control technology (MACT) standards development survey was developed by the U. S. Environmental Protection Agency's (EPA's) Office of Air Quality Planning and Standards Emission Standards Division (OAQPS/ESD) to help EPA meet its obligations under the Clean Air Act Amendments of 1990. Specifically, the Clean Air Act Amendments require EPA to develop regulations under Section

112(d) to limit emissions of hazardous air pollutants (HAP's) from major and area sources of emissions. Section 112(a) defines a major source as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." Based on the Administrator's determination, EPA may lower the major source cutoff for individual HAP's. An area source is "any stationary source of hazardous air pollutants that is not a major source."

The Clean Air Act Amendments of 1990 prescribe an analytical framework that EPA is to apply in developing national emission standards for hazardous air pollutants (NESHAP) for major sources. A key concept in this framework is the establishment of the MACT floor. The amendments specify that NESHAP for existing sources are to be no less stringent (but may be more stringent) than the average emission limitation achieved by the best performing 12 percent of the existing sources in each category or subcategory of sources. In categories or subcategories with less than 30 sources, the floor is to be based on the average emission limitation achieved by the best performing 5 sources. The MACT floor for new sources is the emission

control that is achieved in practice by the best controlled similar source.

A second key feature of the NESHAP development process is that of determining subcategories. For each of the categories or subcategories, a separate MACT floor determination is required. In addition, the Clean Air Act Amendments allow the EPA Administrator to "distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards" (Section 112(d)). The effect of this provision is that for each category or subcategory for which EPA is developing NESHAP, the resulting standards could be tailored to account for significant differences in classes, types, and sizes of sources.

III. Explanation of Key Survey Sections and Questions

Part I, Instructions, defines the source category operations that are to be addressed in completing the survey. The respondent is instructed that no additional emission testing or monitoring is required to respond to the survey. However, the respondent is asked to supply engineering calculations where appropriate. The instructions provide an EPA contact for any questions on the part of the respondent as well as the address to which the completed survey should be mailed. Finally, the instructions direct the respondent to this attachment.

Part II, General Information, is where the respondent, plant, and company are identified. Because of the complex relationships between and among corporations, the respondent is asked to distinguish between the legal owner and the legal operator. In some cases, one owner may sell a specific operation to another company, but continue to operate the facility. In this case, the legal owner information may be used in the EPA's economic analysis to distinguish small businesses.

Question D on number of employees is asked so that EPA may identify small businesses. The Regulatory Flexibility Act (Public Law 96-354, September 19, 1980) requires consideration of the impacts of regulations on small businesses. The major purpose of the Act is to keep regulatory requirements from getting out of proportion to the scale of the businesses being regulated, without compromising the objectives of, in this case, the Clean Air Act. If a regulation is likely to have a significant economic impact on a substantial number of small businesses, EPA may give special consideration to those small businesses when analyzing regulatory alternatives and drafting a regulation. For producers and users of HAP's, the Small Business Administration uses employment ranges to separate businesses into "large" and "small" categories. These employment ranges are substantially as given in

Question D. (In any given situation, the actual cutoff between large and small will depend on the Standard Industrial Classification of the establishments in question. Furthermore, EPA sometimes finds that different employment ranges or even other criteria are more suitable for the process of defining which businesses are large and which are small.)

Information on the legal operator, plant name, and technical contact is used by EPA to ensure that the plant is properly identified and that the appropriate contacts are available to answer any questions EPA might have on the completed survey.

The respondent is also asked to provide the latitudinal and longitudinal coordinates of the facility. Some facilities may already have this information from sources such as permits (e.g. NPDES permits), county property records, facility blueprints, and site plans. Otherwise, facilities may use the information in Appendix A to develop their coordinates. This information is required so that relevant, nonconfidential plant data can be entered into existing EPA emissions data bases.

Part III, Plant Operations. The purpose of Question A is to obtain a list of processes within the source category

and information on the relative magnitude of each operation in terms of production amounts, production capacity, and operating schedule. The processes listed in Table 1 will define the scope of the rest of the survey and ensure that consistent terminology is used throughout the survey. Information on production and operating schedules may be used in making subcategory decisions. The information on age of the line and its remaining economic life is used in the economic analysis to determine the potential impacts of equipment retrofit.

The respondent is also asked to provide a process flow diagram for each process (or, depending on the source category, group of like processes) identified in Table 1. The process flow diagram includes all activities that generate HAP emissions, including the storage, transfer, handling, and processing of materials and wastewater and solid waste handling. Generating the flow diagrams is a necessary step in completing Table 3 in Part IV. The process flow diagram is an essential tool for EPA to use in understanding how the emissions data relate to plant-specific processes.

Question B is designed to allow EPA to project price increases due to regulation by identifying each process that will be affected directly or indirectly. The name and

quantity of each input chemical and the name and quantity of each output chemical, producer-by-producer, provide the basis for tracing potential price increases through chemical trees and sometimes beyond the trees to consumer products. For exmaple, there are several commercial processes for producing benzene. Typically, a portion of benzene production at a plant is used on site for the production of derivative chemicals, and the remainder is shipped off site for similar or other use. If a respondent were to omit captively-consumed benzene from process unit data, perhaps on the grounds that the benzene is not sold in the traditional meaning of the term, EPA's ability to model and project price increases would be hindered.

Part IV, HAP's Usage and Emissions, provides the bulk of the information needed by EPA to set the MACT floor and will also help in identifying potential subcategories. In Question A, the respondent is asked to cross-reference the list of HAP's with each emission point identified in the process flow diagram(s). The information on this table will allow EPA to determine the variability in HAP emissions and their sources within the source category.

In Question B, the respondent is asked to complete Table 3, which requests information on levels of HAP emissions and the presence and effectiveness of capture and control

systems. These two items are the key parameters in making a MACT floor determination. Information is also requested on the flow rate and HAP concentration of the captured emission stream, which may be used to distinguish subcategories based on control options and costs. It is particularly important that EPA be able to determine when certain control technologies may prove infeasible for some sources.

Question C requires the respondent to provide additional information on key design and operating parameters of emission capture and control equipment. This information is used to allow EPA to understand the basis of the efficiency estimates provided in Table 3 and to establish the MACT floor in terms of technological options.

Question D provides instructions to the respondent regarding the means and level of detail required to support the data requested in Part IV. The information is critical in understanding the data provided by the respondents.

Part V, Factors that Affect HAP Emission Reductions, requests information that will help ensure that EPA considers source reduction measures, which reduce the amount of any HAP prior to recycling, treatment, or disposal, in establishing the MACT floor. Completing this

section is voluntary. It is important to obtain information on source reductions measures because both the Clean Air Act and the Pollution Prevention Act of 1990 urge emission sources to adopt source reduction measures whenever possible. As a result, in order to determine MACT, EPA must obtain the data necessary to consider the viability and impacts of source reduction measures.

Part VI, Miscellaneous, includes a question on whether the controls or process changes on the source are the result of new source review (NSR) requirements. Sources subject to the lowest achievable emission rate (LAER) requirements of the NSR program must be excluded from the MACT floor calculation under Section 112(d)(3)(A) for existing sources if LAER is achieved 18 months before the emissions standard is proposed or within 30 months before such standard is promulgated, whichever is later. The last question asks the respondent to describe any other factors not addressed in the above questions that might serve to distinguish subcategories.

IV. Guidance Documents.

Following is a list of EPA guidance documents that may be useful to respondents in estimating HAP emissions.

(**Variable**: this list may be refined to reflect source category-specific guidance, if appropriate).

1. Compilation of Air Pollutant Emission Factors: Volume I: Stationary Point and Area Sources. U. S. Environmental Protection Agency. Research Triangle Park, N.C. September 1985. Publication No.: AP-42.

2. Procedures for Establishing Emissions for Early Reduction Compliance Extensions-Draft. U. S. Environmental Protection Agency. Research Triangle Park, N.C. July 1991. Publication No.: EPA-450/3-91-012a.

3. For batch operations: Control of Volatile Organic Emissions from Manufacturer of Synthesized Pharmaceutical Products. U. S. Environmental Protection Agency. December 1978. Publication No.: EPA-450/2-78-029.

4. Organic Chemical Manufacturing Volumes 1-10. U. S. Environmental Protection Agency. December 1980. Publication No.: EPA-450/3-80-023 through 028e.

5. VOC Fugitive Emissions in Synthetic Organic Chemicals Manufacturing Industry--Background Information for

Proposed Standards. November 1980. Publication No.: EPA-450/3-80-033a.

V. Key Term Definitions.

The following definitions are provided for the purpose of the survey only. They are not intended to replace "official" definitions developed elsewhere.

Capture:	The containment or recovery of emissions from a process for direction into a duct, which may be exhausted through a stack or sent to a control device before exiting through a stack.
Capture device:	A hood, enclosed room, floor sweep or other means of collecting pollutants into a duct.
Capture efficiency:	The fraction (usually expressed as a percentage) of the pollutants that are directed to the control device.
Control:	The collection for recovery or destruction of pollutants, which might otherwise be exhausted to the atmosphere.
Control device:	Any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Examples are incinerators, carbon absorbers, condensers, scrubbers, and baghouses.
Control efficiency:	One minus the fraction (usually expressed as a percentage) of the pollutants that are emitted from the control device compared to the pollutants entering the control device.

Feedstock:	Raw material/input to the process line.
Process (process line):	The sum of unit operations (e.g., storage, fugitive dust, transfer operations, process fugitives, stacks, and waste management) that result in the production of individual or groups of products.
Process fugitives:	Air emissions emanating from the process line that are not released through stacks.
Stacks:	Contained air stream (excluding storage tanks), which are points through which emissions exit the facility.
Vent stream:	Air emissions emanating from process line(s) that are released through stacks.
Waste management:	Handling, treatment, storage, and disposal of waste products.