

**Source Category  
Schedule for Standards:  
Summary of Public Comments  
and Responses**

**Emission Standards Division**

**Office of Air Quality Planning and Standards  
United States Environmental Protection Agency  
Research Triangle Park, North Carolina 27711**

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## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	iv
1.0 SUMMARY . . . . .	2-1
2.0 SUMMARY OF PUBLIC COMMENTS . . . . .	2-1
2.1 SOURCE CATEGORY DEFINITIONS . . . . .	2-1
2.2 SECTION 112(g) . . . . .	2-8
2.3 SOURCE CATEGORY LIST . . . . .	2-9
2.3.1 SOCM I Source Category . . . . .	2-9
2.3.2 Lead Acid Battery Manufacturing Source Category . . . . .	2-11
2.3.3 Asbestos Processing Source Category . . . . .	2-12
2.3.4 Stationary Internal Combustion Engines and Stationary Turbines . . . . .	2-14
2.4 SOURCE CATEGORY RANKING SYSTEM METHODOLOGY OR APPROACH . . . . .	2-15
2.4.1 General . . . . .	2-15
2.4.2 Exposure Score . . . . .	2-16
2.4.3 Health Effects Score . . . . .	2-18
2.4.4 Environmental Effects . . . . .	2-22
2.5 SCHEDULE AND RANKING FOR SPECIFIC SOURCE CATEGORIES . . . . .	2-24
2.6 FLEXIBILITY . . . . .	2-26
2.7 EFFICIENCY OF GROUPING . . . . .	2-30
2.8 OTHER SCHEDULING CONSIDERATIONS . . . . .	2-33

## LIST OF TABLES

	Page
2-1 LIST OF WRITTEN COMMENTERS ON THE PROPOSED SCHEDULE FOR THE PROMULGATION OF EMISSION STANDARDS . . . . .	2-2

## 1.0 SUMMARY

A draft source category schedule for emission standards was published in the Federal Register on September 24, 1992 (57 FR 44147). The schedule provided promulgation dates for source categories to be regulated by the national emission standards for hazardous air pollutants (NESHAP). The publication was followed by a public comment period, which concluded on October 26, 1992.

## 2.0 SUMMARY OF PUBLIC COMMENTS

A total of 18 letters commenting on the draft schedule for the promulgation of emission standards were received. Comments were provided by industry representatives and government agencies.

These comments have been recorded and placed in the docket for this schedule action (Docket No. A-91-14, Category IV-D). Table 2-1 presents a listing of all persons submitting written comments, their affiliation, and the EPA docket item number assigned to their correspondence.

### 2.1 SOURCE CATEGORY DEFINITIONS

Comment: Five commenters (IV-D-1, IV-D-5, IV-D-8, IV-D-9, IV-D-15) requested that the EPA provide additional information with the source category schedule to assist sources in determining into which source category their sources might fall. These commenters contended that the sources and hazardous air pollutants (HAP's) which will be controlled in each of the categories were not well-defined in

TABLE 2-1. LIST OF WRITTEN COMMENTERS ON THE PROPOSED  
SCHEDULE FOR THE PROMULGATION OF EMISSION  
STANDARDS

Docket item number <sup>a</sup>	Commenter and affiliation
IV-D-1	Mr. M. L. Mullins Vice President, Regulatory Affairs Chemical Manufacturers Association 2501 M Street, NW Washington, D.C. 20037
IV-D-2	Mr. David J. Hayes Ms. Julia A. Hatcher Counsel for the Semiconductor Industry Association Latham and Watkins 1001 Pennsylvania Avenue, NW Washington, D.C. 20004
IV-D-3	Mr. J. Paige Straley Corporate Environmental Manager Sandoz Chemicals Corporation Post Office Box 669246 Charlotte, North Carolina 28266
IV-D-4	Mr. Nicholas Anastas Office of Research and Standards Department of Environmental Protection Commonwealth of Massachusetts One Winter Street Boston, Massachusetts 02108
IV-D-5	Mr. J. C. Hovious Assistant Director Environmental Affairs Union Carbide Corporation 39 Old Ridgebury Road Danbury, Connecticut 06817-0001
IV-D-6	Mr. J. A. Dege CAA Issue Manager Dupont Chemicals Wilmington, Delaware 19898

TABLE 2-1. LIST OF WRITTEN COMMENTERS ON THE PROPOSED  
SCHEDULE FOR THE PROMULGATION OF EMISSION  
STANDARDS (CONTINUED)

Docket item number <sup>a</sup>	Commenter and affiliation
IV-D-7	Mr. Richard A. Bausell Manager, Environmental Legislative and Regulatory Affairs Natural Gas Pipeline Company of America 701 East 22nd Street Lombard, Illinois 60148-5072
IV-D-8	Ms. Elizabeth Fisher Manager, Air and EPCRA Programs Rohm and Haas Company Independence Mall West Philadelphia, Pennsylvania 19105
IV-D-9	Mr. Robert F. Brothers Director, Federal Government Relations Eastman Kodak Company 343 State Street Rochester, New York 14650
IV-D-10	Ms. Cindy H. Evans Associate Environmental Counsel American Paper Institute, NFPA 1250 Connecticut Avenue, NW Washington, D.C. 20036
IV-D-11	Mr. Kurt J. Olson Counsel for the Battery Council International Weinberg, Bergeson and Neuman 1300 Eye Street, NW, Suite 1000 West Washington, D.C. 20005
IV-D-12	Mr. John F. Welch President Safe Buildings Alliance Suite 1200, Metropolitan Square 655 Fifteenth Street, NW Washington, D.C. 20005

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SCHEDULE FOR THE PROMULGATION OF EMISSION  
STANDARDS (CONCLUDED)

Docket item number <sup>a</sup>	Commenter and affiliation
IV-D-13	Mr. B. J. Pigg President Asbestos Information Association 1745 Jefferson Davis Highway Crystal Square 4, Suite 509 Arlington, Virginia 22202
IV-D-14	Mr. Paul C. Bailey, Jr. Director of Environmental Health Affairs Department American Petroleum Institute 1220 L Street, NW Washington, D.C. 20005
IV-D-15	Mr. Charles D. Malloch Director, Regulatory Management Monsanto Company 800 N. Lindbergh Boulevard St. Louis, Missouri 63167
IV-D-16	Mr. Gary E. Mosher Director of Environmental Affairs American Foundrymen's Society, Inc. 505 State Street Des Plaines, Illinois 60016-8399
IV-D-17	Mr. Michael J. Bradley Executive Director Northeast States for Coordinated Air Use Management 129 Portland Street Boston, Massachusetts 02114
IV-D-18	Mr. James E. Gilchrist Vice President for Environmental Affairs American Mining Congress 1920 N Street, NW, Suite 300 Washington, D.C. 20036-1662

<sup>a</sup>The docket number for this project is A-91-14. Dockets are on file at the EPA's Air Docket in Washington, D.C.



the source category schedule for standards, or the source category list Federal Register notice (57 FR 31576; July 16, 1992). The commenters asserted that the EPA should publish a description of each source category and its associated HAP's along with the schedule. One of the commenters (IV-D-8) suggested that the EPA develop a decision tree for determining regulatory applicability, similar to the one being developed for the synthetic organic chemical manufacturing industry (SOCMI) source category. Another one of the commenters (IV-D-15) recommended a hotline be established so facilities can obtain assistance in determining within which category a process falls. The commenter (IV-D-15) noted that some form of written communication would be needed and that the determination would need to be binding.

Several commenters (IV-D-1, IV-D-5, IV-D-15) suggested that a list of major products from each source category be included in the schedule notice. One of the commenters (IV-D-5) suggested that a list of relevant Standard Industrial Classification (SIC) codes also be included. The commenter (IV-D-5) asserted that such additional information would assist operators in identifying the source categories to which they belong, and in planning and allocating resources for compliance.

Four commenters (IV-D-1, IV-D-5, IV-D-8, IV-D-15) suggested the EPA include table 3.1 of the December 14, 1990 document "Draft Documentation for Developing the Source Category List" in the schedule notice because this table provides the corresponding speciation profiles used to associate HAP's with source categories and thus helps clarify the sources and HAP's intended to be regulated under each source category.

Two commenters (IV-D-5, IV-D-15) stated that it was essential that a mechanism be developed for determining under which source category a production unit is included on the list of source categories in section 112(c) of the Clean Air Act, in order to make decisions concerning the equivalent

emission limitation by permit under section 112(j), and in order to file enforceable commitments under the section 112(i)(5) early reduction program.

Response: Much of the information the commenters requested is provided in the EPA report for the initial list, "Documentation for Developing the Initial Source Category List - Final Report" (EPA-450/3-91-030; July 1992. Docket No. A-90-49, Item No. IV-A-55). Appendix A of this source category list report contains descriptions of each listed category of major sources. The information provided includes the types of operations, processes, and equipment included within each category of sources.

Table 3.1 of the source category list report contains a listing of each category of major sources and the HAP's currently associated with each category by industry group. A listing of categories of area sources and associated HAP's can be found in table 4.1. Tables 3.1 and 4.1 together serve as a revised version of table 3.1 of the 1990 draft source category list document. These tables are too lengthy to incorporate into a Federal Register notice, but may be accessed by viewing the source category list report contained in the docket under Docket No. A-90-49, Item No. IV-A-55, or by contacting the National Technology Information Service (NTIS) at 5285 Port Royal Road, Springfield, Virginia 22161, Phone Number (703) 487-4650, Order Number PB92-218429. Because of current data limitations, a more comprehensive discussion of processes and equipment, and all associated HAP's for each source category is not presently available. However, during the course of regulatory development, each source category will be further examined to determine specifics about its processes, equipment, products, HAP emissions, and applicability. During this process, relevant SIC codes might be identified on a source category specific basis where good correlations can be determined. This information will be available from the EPA standard development project teams, who will be communicating with interested trade and industry groups, and other

interested parties, starting early in the development process of emission standards. As stated in the initial source category list Federal Register notice:

The Agency recognizes that these descriptions (of what each listed source category comprises), like the list itself, may be revised from time to time as better information becomes available. The Agency intends to revise these descriptions as part of the process of establishing standards for each category. Ultimately, a definition of each listed category, or subsequently listed subcategories, will be incorporated in each rule establishing a NESHAP for a category. (57 FR 31576; July 16, 1992).

Therefore, the EPA cannot make such preliminary descriptions binding. The EPA encourages interested parties to communicate with the appropriate EPA standard development teams early in the regulatory process.

In response to the comments relating to section 112(j), the EPA intends to make information available regarding source category definitions, applicability, and controls before the section 112(j) provisions would take effect for a source category. The EPA encourages interested parties to communicate with the appropriate EPA project teams well in advance of the time that section 112(j) provisions might apply for a source category. Readers are referred to the proposed Equivalent Emission Limitations by Permit Rule, which was published in the Federal Register on July 13, 1993 (58 FR 37778).

The comments relevant to section 112(i)(5) of the 1990 Amendments have been submitted to the EPA project team implementing this program. The early reductions project team is aware of the commenter's concerns about applicability. Again, the EPA encourages the interested parties to communicate with the appropriate project teams to discuss these concerns.

Regarding the commenter's suggestion to develop decision trees to assist with determining regulatory applicability, the EPA believes that the commenter is referring to the applicability decision figures included in section VI.A of the proposed emission standard for the SO<sub>2</sub>MI, the hazardous

organic NESHAP (HON) (57 FR 62608; December 31, 1992). Similar decision trees, if developed, would be developed under individual standard development activities after more information about each source category is gathered.

The EPA does not plan to establish a hotline for source category determinations. However, the EPA encourages industry to provide any available data that may be useful in the development of emission standards. Project status updates on standards and other rule makings are typically presented through such forums as the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) and the National Air Toxics Inventory Clearinghouse (NATICH) newsletter. In addition, a Regulatory Agenda is published in the Federal Register approximately twice per year which provides descriptions of various regulatory projects and the EPA personnel to contact for more information. The EPA will provide interested parties additional information upon request, on a source category specific basis, as it becomes available.

## 2.2 SECTION 112(g)

Comment: One commenter (IV-D-2) was concerned about the impact of case-by-case maximum achievable control technology (MACT) determinations, under section 112(g) of the 1990 Amendments, as a facility undergoes changes or expansions (i.e., modifications). The commenter (IV-D-2) was concerned that a broad and complex section 112(g) approach may subject routine activities to section 112(g) review. The commenter (IV-D-2) also questioned the interplay between section 112(g) and the Title V operating permit program. The commenter (IV-D-2) expressed concern that case-by-case MACT requirements under section 112(g) would slow down the progress of research and development and manufacturing advancement, and reduce technical flexibility and innovation. The commenter (IV-D-2) was also concerned about the potential for inconsistency among case-by-case MACT determinations by State permitting authorities, and requested early interaction with the EPA in order to develop acceptable MACT requirements.

Response: These comments pertain to the development of the 112(g) program. The EPA has submitted these comments to the EPA project team developing the section 112(g) program. The EPA is aware of these concerns regarding section 112(g), and is striving to minimize negative impacts while meeting the statutory requirements of the 1990 Amendments.

### 2.3 SOURCE CATEGORY LIST

Several commenters discussed issues related to determinations made during the development of the initial source category list, which was published in the Federal Register on July 16, 1992 (57 FR 31576). These comments are summarized and responded to in this section by individual source category, although the decisions to list source categories, and potential revisions to the source category list, are not being addressed under the source category schedule for standards action. During the course of regulatory development, the EPA will study individual source categories in greater detail. Listing determinations and potential source category list revisions will be explored during this process.

#### 2.3.1 SOCMI Source Category

Comment: One commenter (IV-D-3) argued that SOCMI should not be regulated as one category, but should be divided into subcategories. The commenter (IV-D-3) stated that the NESHAP for SOCMI, if developed for one category, would under-regulate some plants while over-regulating others. The commenter (IV-D-3) stated that the EPA should "divide the SOCMI into appropriate subcategories so that the regulations could be carefully tailored to the sources." Moreover, the commenter (IV-D-3) stated that the only reason provided for regulating SOCMI as one source category is to meet the schedule that was established by Congress. Additionally, the commenter (IV-D-3) noted that the proposed regulatory schedule applies to both continuous and batch SOCMI processes. The commenter (IV-D-3) indicated that the EPA is currently involved in drafting

regulations that address differences between continuous and batch processes, and for that reason, these different process types should not be required to meet the same schedule.

Response: The EPA has the authority to subdivide currently listed source categories as new information becomes available during the regulatory development process. As previously stated, the HON is the NESHAP that was proposed for the SOCMCI source category on December 31, 1992 (57 FR 62603). These comments, although responded to as part of this action, have also been forwarded to the EPA's HON project team for consideration. The SOCMCI source category was previously listed as more than 400 separate source categories on the draft source category list (56 FR 28548; June 21, 1991). These separate source categories were subsequently aggregated into one category for the initial source category list (57 FR 31576; July 16, 1992) based on considerations and discussions among the EPA and the regulated community. Aggregating the separate SOCMCI categories into one category allows emissions averaging among various process lines and units at any one SOCMCI source. A more thorough discussion of emissions averaging may be found in the proposed HON (57 FR 62608; December 31, 1992). The scheduling requirements established by Congress were not the reason SOCMCI is considered one source category.

The proposed HON covers both batch and continuous processes for four of the five emission points (i.e., transfer operations, storage tanks, wastewater operations, and equipment leaks). The EPA agrees that different regulatory approaches are appropriate for vents from batch processes versus vents from continuous processes. However, for storage tanks, transfer operations, wastewater operations, and equipment leaks, there are no technical reasons to treat continuous and batch processes differently regarding appropriate control technologies. Regardless of whether the process is batch or continuous, the control technology is typically the same for these four emission points.

On the other hand, some control devices may not be appropriate for control of batch process vents, which have only episodic emissions. Instead, other control technologies not considered in the HON may be better suited for batch process vents. For this reason, the EPA decided not to include batch process vents in the proposed HON. However, this does not prohibit additional emission standards for batch process vents for SOCMI, or any other source category, from being developed in the future. Readers are referred to the HON proposal (57 FR 62608; December 31, 1992) for more information.

#### 2.3.2 Lead Acid Battery Manufacturing Source Category

Comment: One commenter (IV-D-11) maintained that inadequate and outdated emissions data taken from a November 1979 study "Lead Acid Battery Manufacture--Background Information for Proposed Standards," Draft Environmental Impact Statement (EIS), (EPA 450-/3-79-028a; November 1979) were used as the basis in the EPA's determination to list lead acid battery manufacturing as a category of major sources. The commenter (IV-D-11) noted that the EPA's source category list background document (i.e., "Documentation for Developing the Initial Source Category List - Final Report") reveals that the EPA decided to remove categories from the draft source category list modeled as area sources in September 1991, including lead acid battery manufacturing, unless they were identified as likely containing a major source. The commenter (IV-D-11) stated that the lead acid battery manufacturing source category does not contain a major source, and therefore should be removed from the source category list.

Response: The EPA maintains that during the process of developing the source category list, under section 112(c), available information indicated that the lead acid battery manufacturing source category contained a major source. The reader is referred to the "Documentation for Developing the Initial Source Category List - Final Report" (Docket No. A-90-49, Item No. IV-A-55). Therefore, the lead acid battery manufacturing source category was included on the

initial source category list (57 FR 31576; July 16, 1992). The decisions to list source categories, and potential revisions to the source category list, are not being addressed under today's schedule action. As stated in the draft schedule for standards Federal Register publication on September 24, 1992 (57 FR 44147), under section 112(e), comments were solicited regarding scheduling of source categories. The draft source category list, under section 112(c), providing opportunity for public comment on the listing determinations, was published in the Federal Register on June 21, 1991 (56 FR 28548). During the course of regulatory development, the EPA will study individual source categories in greater detail. Listing determinations and potential source category list revisions will be explored during this process. The source category list will likely be revised sometime in the future under a separate action. Since the lead acid battery manufacturing category is scheduled in the 10-year group and is not currently an active project, these comments have been submitted to the EPA's Industrial Studies Branch, which will likely be involved in developing the regulation for this source category.

#### 2.3.3 Asbestos Processing Source Category

Comment: One commenter (IV-D-13) asserted that the asbestos processing source category should be removed entirely from the source category list and schedule, citing low emissions, declining consumption and production, and high costs as reasons why additional control of the industry is not needed. The commenter (IV-D-13) objected to the EPA's listing of asbestos processing as a category of area sources. Further, the commenter (IV-D-13) stated that asbestos processing could not afford or achieve any additional requirements that the EPA could impose, and that a rulemaking effort would be a waste of EPA resources.

Another commenter (IV-D-12) asserted that the goals of section 112 of the 1990 Amendments are met for asbestos processing or augmented by existing or proposed rules under various other statutes. The commenter (IV-D-12) asserted that



the 1990 Amendments goal of public health protection has been achieved through the various asbestos regulations already in place, and that the January 10, 1989 proposed rule revisions for the asbestos NESHAP (54 FR 912) stated that the Asbestos NESHAP is effective in reducing emissions and protecting the public health. The commenter (IV-D-12) also referred to the EPA's NAPCTAC meeting notes for the January 1991 meeting, stating that possible NESHAP revisions may result in small emissions reductions and high costs. The commenter (IV-D-12) discussed other EPA asbestos regulations and guidance and the areas that they regulate.

Response: Asbestos processing is currently the only asbestos-related source category on the initial source category list, and it is included only as a category of area sources. The asbestos processing was listed as a category of area sources after the EPA found that the category presented a threat of adverse effects to human health. The health effects associated with exposure to asbestos are well documented. Numerous occupational exposure studies, supported by animal studies, clearly indicate that asbestos is a human carcinogen. A more thorough discussion of the emissions and risk associated with asbestos processing, and the listing decision, is explained in section IV of the Federal Register publication entitled "Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990" (57 FR 31576; July 16, 1992). The comments have been forwarded to the EPA project team developing emissions standards for the asbestos processing source category so that the project team is aware of the industry's concerns. The asbestos processing source category will be studied more thoroughly during regulatory development. Readers are referred to section 2.3 of this document for further discussion of source category list determinations. Interested parties are encouraged to contact the project team directly to discuss these concerns. For more information, contact the EPA at the addresses in the schedule for standards Federal Register notice.

#### 2.3.4 Stationary Internal Combustion Engines and Stationary Turbines

Comment: One commenter (IV-D-7) asserted that the stationary internal combustion engines and stationary turbines categories incorrectly included natural gas-fired engines and turbines in the same promulgation schedule with other engines and turbines. The commenter (IV-D-7) argued that if natural gas-fired engines and turbines were separated in the source category ranking system (SCRS), their rankings would have been considerably reduced, because: (1) natural gas is 90 percent methane; (2) ground level concentration estimates are low; and (3) in the gas transmission industry, these engines and turbines are primarily positioned in remote locations away from populated areas, thus reducing potential exposure. The commenter (IV-D-7) suggested establishing a category for natural gas-fired engines and turbines in the 10-year timeframe, in order to allow time to determine if there are any HAP emissions of concern from these engines and turbines. Alternatively, the commenter (IV-D-7) suggested separating natural gas-fired engines and turbines from the larger category and establishing special provisions for them within the broader standard.

Response: The stationary internal combustion engines and stationary turbines source categories are scheduled in the 10-year timeframe and are not currently active projects. Therefore, the comments addressing these source categories have been submitted to the EPA's Industrial Studies Branch, who will most likely be involved in developing the regulations.

Subcategorizing listed source categories is not part of the action being taken under the schedule for standards Federal Register notice. During the course of regulatory development, the EPA will study individual source categories in greater detail. Listing determinations and potential source category list revisions will be explored during this process.

## 2.4 SOURCE CATEGORY RANKING SYSTEM METHODOLOGY OR APPROACH

### 2.4.1 General

Comment: Five commenters (IV-D-1, IV-D-4, IV-D-5, IV-D-15, IV-D-17) approved the EPA's use of the SCRS in prioritizing source categories. One commenter (IV-D-17) considered the SCRS approach to be consistent with section 112(e) criteria for determining the schedule. Two commenters (IV-D-4, IV-D-17) were pleased that SCRS scores are derived by combining health effects scores with exposure scores for each pollutant. However, many commenters also stressed that the SCRS has limited or no applicability elsewhere. Some of these commenters (IV-D-1, IV-D-5, IV-D-15) agreed with the EPA's position that a higher SCRS score does not necessarily mean a greater risk than a lower SCRS score. One commenter (IV-D-18) wanted the EPA to confirm in the Federal Register notice supporting the schedule that: (1) the SCRS was used only for this preliminary screening and is not to be used for either risk assessment or any other regulatory purpose; (2) more accurate and realistic information shall be used in developing the section 112 regulations for the scheduled categories; and (3) the commenter may submit additional information in the future that may be relevant to schedule adjustments.

One commenter (IV-D-5) asserted that the SCRS process must be validated to assure that the ranking it produces has some basis to justify using it for developing the schedule. The commenter (IV-D-5) suggested doing an in-depth study on a few of the categories to confirm the results from the SCRS process, noting that this could demonstrate whether or not the results are consistent with results that would be expected from a more complete review.

Response: The SCRS addresses two of the section 112(e)(2) criteria (i.e., adverse effects of the HAP's on public health; and the quantity and location of emissions of HAP's) by generating a relative ranking score for each source category based on emission estimates, toxicity data, and to a

lesser degree, the location of emitting facilities. However, the SCRS does not estimate absolute or relative risk, population exposure, or impacts.

Several factors were considered when developing the schedule for standards including: the SCRS ranking scores; the EPA's capability to meet the numerical and temporal requirements of section 112(e); and the efficiency of grouping categories in the same timeframe. Admittedly, the SCRS methodology and data input have limitations. However, for its limited use, the SCRS and its present results are adequate for assisting with the development of the schedule for standards. It was the only tool reasonably available that could address the criteria of section 112(e)(2) for a large number of source categories in the short time available. The EPA does not plan to revise and rerun the SCRS with new data. Currently, the EPA does not intend to use the SCRS for any other regulatory purpose. The EPA realizes the restricted use of the SCRS and encourages the public and government agencies not to use incorrectly, or misinterpret, the results.

The SCRS methodology includes several assumptions and utilizes simplified algorithms. In order to evaluate thoroughly the SCRS ranking, more facility-specific data would be needed, along with other data such as EPA-verified health effects benchmarks. Currently, this information is not available for many of the categories or pollutants. The EPA considers the current SCRS results to be adequate for assisting with the development of the schedule for standards.

#### 2.4.2 Exposure Score

Comment: One commenter (IV-D-17) was concerned with the use of average county population density in a 50-kilometer (km) radius of the facility for the long-term aggregate exposure score because the resulting score may underestimate the risk to individuals that live closer to the facility and, therefore, would likely be exposed to higher HAP concentrations. Another commenter (IV-D-14) also objected to the use of an average county population density because this method gives unwarranted priority to facilities located in

unpopulated parts of a heavily populated county. The second commenter (IV-D-14) suggested that the EPA incorporate the census-based population exposure capabilities of the Human Exposure Model (HEM) into the SCRS. One commenter (IV-D-17) was concerned that several assumptions made in the SCRS might underestimate the impact of emissions from source categories, such as the use of: (1) nationwide estimates; (2) uniform population exposure; and (3) constant average dispersion parameters for all pollutants and sources.

Response: For detailed information on the SCRS methodology, see the draft schedule Federal Register notice (57 FR 44147; September 24, 1992) and the SCRS methodology document entitled "Schedule for Standards: Methodology for the Source Category Ranking System" (Docket No. A-91-14, Item No. IV-A-1). In summary, the SCRS calculated four separate exposure scores: the long-term aggregate, the long-term maximum, short-term aggregate, and the short-term maximum exposure scores. Emissions estimates were the most sensitive factors in the calculation of each of the four source category exposure scores. Population information, although limited, was factored into one of the four exposure scores, the long-term aggregate. Since the SCRS contains many assumptions, and uses generic algorithms and readily available data of varying quality, the exposure scores are not to be considered exposure estimates.

In response to the comment on use of a 50-km radius, the long-term aggregate exposure score theoretically represents a population-based exposure score and is not intended to represent the maximally exposed individual. A 50-km radius was incorporated into the long term aggregate exposure score algorithm because it is the maximum downwind distance to which meteorological dispersion conditions are considered to be reliable using the EPA's dispersion models. A second long-term score, the long-term maximum exposure score, is used to represent a theoretical maximally exposed individual. In this algorithm, it is assumed that the highest concentration is typically 200 meters (m) downwind. However, since these

values are constants incorporated into generic algorithms by which all source categories are scored, and since the SCRS does not estimate exposure or risk, it is arbitrary what radii and distances are used in the SCRS exposure scores. The exposure scores are normalized (given a value between 0 and 1), and then multiplied by a normalized health effects score that results in unitless overall source category scores which are used to produce a relative ranking. If other constant values for radii or distance were to be used (e.g., 20 km and 100 m, respectively) in the generic algorithms, the SCRS relative ranking results would change very little, if at all.

Exposure modeling using detailed census data (e.g., such as the HEM model) was not used in the SCRS because the EPA did not have adequate facility-specific data for many of the source categories. Also, performing exposure modeling for all facilities in each of the listed source categories could require an enormous level of effort and is beyond the scope of work necessary to support the schedule for standards. Average population density, and other assumptions such as constant dispersion parameters for all pollutants, are appropriate for the SCRS given its limited use and data availability.

#### 2.4.3 Health Effects Score

Comment: One commenter (IV-D-17) recommended that the EPA use acute health effects endpoints rather than the lethal dose to 50 percent of the exposed population (LD<sub>50</sub>) currently used in the SCRS. The commenter (IV-D-17) was also concerned about the combination of health effects data on acute lethality, reproduction effects, and other noncancer effects that may underestimate public health impacts.

In addition, the commenter (IV-D-17) argued that the nationwide emissions estimates and national population density do not accurately show the public health impact from exposure to area source emissions. The commenter (IV-D-17) recommended incorporating uncertainty factors and environmental effects in the SCRS.

One commenter (IV-D-4) expressed concern over the use of data from the Registry of Toxic Effects of Chemical Substances (RTECS), since it is not a peer-reviewed journal, and recommended using well-supported toxicity data for individual chemicals, if available, to develop the health effects score.

Another commenter (IV-D-5) mentioned that the data used in the SCRS are very limited and frequently out-of-date. As an example, the commenter (IV-D-5) noted that the RTECS data base is 6 years old. The commenter (IV-D-5) cautioned that the SCRS mathematical scoring, on several levels, crosses such a diverse stratum of health effects and agents that any scientific relevance is distorted. The commenter (IV-D-5) protested that the SCRS approach does not address whether the health effects only occur when a threshold limit is exceeded for a certain HAP.

Another commenter (IV-D-15) noted that the SCRS is too ill-defined for the assignment of potential health effects for a particular source category, and, therefore, contended that the term "source category risk score" is not correctly used. The commenter also claimed that the health effects score, particularly the use of RTECS data, should be scientifically based. The commenter (IV-D-15) stated that RTECS contains a number of inaccurate values, missing data, and misinterpretations on severity. Also, the commenter (IV-D-15) stated that the EPA used surface area corrections for route-to-route differences when the current EPA method is body weight to the  $3/4$  power.

Response: The health effects score for each pollutant was based on four health effects endpoints (i.e., cancer, reproductive/developmental effects, acute lethality, and "other toxicity"). The "other toxicity" endpoint was based on acute or chronic health effects data other than cancer (i.e., noncancer effects), that were not included in the reproductive/developmental or acute lethality endpoints. The LD<sub>50</sub> and lethal concentration to 50 percent of exposed population (LC<sub>50</sub>) were used to calculate the score for acute lethality. These values were a useful measure of relative

toxicity since the data were readily available and the endpoint (i.e., 50 percent death) is consistent across pollutants. Other acute benchmarks, such as levels of concern (LOC's) and doses immediately dangerous to life and health (IDLH's) are based on LD<sub>50</sub> and LC<sub>50</sub> data, and therefore, would have yielded similar relative results. The LD<sub>50</sub> and LC<sub>50</sub> data were useful for scoring the pollutants in one of the four health effects endpoints. The lowest oral dose reported to cause a health effect (TD<sub>LO</sub>), or lowest concentration when the substance is in air (TC<sub>LO</sub>), from the RTECS database were used to derive the reproductive/developmental health effects score, and the "other toxicity" score for most pollutants in the SCRS.

The primary source of information for noncancer health effects was RTECS, which is a data base developed and maintained by the National Institute of Occupational Safety and Health. The RTECS data base is widely used by both industry and regulatory agencies as a source of toxicity data. The RTECS represents one of the most readily available and comprehensive sources of information on noncancer toxicological endpoints. When the health effects data were being compiled for the SCRS, the most current RTECS data were used (see Docket No. A-91-14, Item No. II-A-1). It would have been desirable to obtain peer-reviewed, noncancer health data, and verified health effects benchmarks such as the EPA's inhalation reference concentrations (RfC's). However, RfC's are not available for a significant number of the HAP's, and therefore, RfC's were not used in the SCRS. Since LD<sub>50</sub>'s, LC<sub>50</sub>'s, TD<sub>LO</sub>'s, and TC<sub>LO</sub>'s were available for most of the HAP's, these values were used in the SCRS. Although the RTECS data base itself is not formally peer reviewed, the data are from the scientific literature. The EPA recognizes the limitations associated with the lack of peer review; however, for compiling health effects information for the 189 HAP's for incorporating into a screening tool such as the SCRS, RTECS was a valuable source.



Threshold limits were not considered in the SCRS. For many pollutants, data are inadequate to determine threshold limits, if they exist. More importantly, since the SCRS does not estimate exposure or risk, it cannot determine if a threshold effect level might be exceeded. The pollutants were scored based on relative potency. The SCRS generates a relative ranking based on emissions and toxicity data, but does not attempt to determine if public health impacts actually exist. Therefore, threshold levels were not considered.

The terminology "source category risk score" was used in some earlier docket items. After further review, the EPA recognized that this terminology could be misleading since the SCRS does not estimate risk. Therefore, in the draft schedule Federal Register notice (57 FR 44147; September 24, 1992), and in the more recent docket items, including the "Schedule for Standards: Methodology for the Source Category Ranking System" (Docket No. A-91-14, Item No. IV-A-1), this terminology has been changed to "source category score." The draft schedule notice, the source category schedule for standards Federal Register notice, and the methodology document, clearly indicate that the SCRS does not estimate risk. The EPA encourages the public not to misinterpret, or use incorrectly, the SCRS results.

As mentioned above, the health effects score was derived from four endpoints. This approach was used so that the SCRS would cover a wide range of health concerns. There are other possible methods for combining various toxicity and emissions data to rank source categories. However, given the limitations on time and data availability, the EPA considers the methodology used in the SCRS to be adequate for its limited purpose.

In response to the comment regarding route-to-route dose conversions, in the SCRS, dose data were all converted to common units of mg/kg/day, so that health effects data from the various routes of exposure could be compared. The method used is explained in the "Schedule for Standards: Methodology

for the Source Category Ranking System." Since the SCRS produces a relative ranking based on readily available data, and because of the limited application of results, the EPA considers the method described in the methodology document to be adequate for the SCRS given it's limited use.

In response to the commenter who suggested that the EPA incorporate uncertainties in the SCRS, the EPA recognizes that uncertainty factors are a very important concern when conducting risk assessments, and that defensible risk assessments should contain some degree of uncertainty analyses. For estimating risk or impacts, it is important to consider both quantitative and qualitative uncertainty. However, uncertainty analyses would have limited utility for producing a relative ranking. Since the SCRS generates a relative ranking, and does not estimate risk or impacts, and since the SCRS was only a tool used in conjunction with the efficiency of grouping and other considerations in developing the regulatory schedule, uncertainty factors were not incorporated into the SCRS.

#### 2.4.4 Environmental Effects

Comment: Two commenters (IV-D-14, IV-D-17) suggested that potential adverse effects to the environment also be considered in developing the schedule. Specifically, one of these commenters (IV-D-14) recommended that aquatic toxicity, bioaccumulation, effects on terrestrial wildlife, and the effects of metals on plants be considered. This commenter (IV-D-14) did, however, recognize that the availability of toxicity data for effects on humans and the environment are limited.

Response: Section 112(e) of the 1990 Amendments states, "In determining priorities for promulgating standards . . . the Administrator shall consider . . . adverse effects to public health and the environment." In response to these comments on environmental effects, and after further EPA review, the EPA has conducted a limited technical analysis to address ecological concerns. The analysis consists of two relative rankings of the source categories. One ranking is

based on emissions estimates, aquatic toxicity, and bioconcentration. The other ranking is based on the same three parameters plus environmental partitioning, which is the tendency of a chemical to be distributed among media (i.e., air, water, soils and sediments, biota). The ecological data (i.e., aquatic toxicity, bioconcentration, and environmental partitioning) were primarily obtained from the draft "Focus Chemicals for the Clean Air Act Amendments Great Waters Study" report (Attachment A of Docket No. A-91-14, Item No. IV-A-2). The emissions estimates were gathered from the SCRS data base (Docket No. A-91-14, Item No. II-B-5). The resulting relative rankings are called the Aquatic Toxicity/Bioconcentration (ATB) rankings in the remainder of this document. Persistence of the HAP's was not directly incorporated into the ATB relative rankings because of the limited available data. Persistence data (from the "Focus Chemicals" report) were only available for about 50 percent of the HAP's. Although the persistence data were not directly incorporated into the ATB relative rankings, source categories were identified if they emit HAP's which were considered persistent in the "Focus Chemicals" report. Terrestrial and wildlife effects were not considered because of the limitations in readily available data, and the limited time and resources available to the EPA for publishing the schedule for standards by the deadlines imposed by the 1990 Amendments. The ATB ranks are not ecological risk assessments, but rather relative rankings based on some readily available environmental data. A thorough discussion of the methodology, issues, and results are contained in Docket No. A-91-14, Category II-B.

After analyzing the ATB relative rankings along with the separate effort to identify source categories that emit persistent HAP's, and after re-addressing all the other considerations that factored into the development of the schedule, such as the SCRS, efficiency of grouping, EPA resources, time needed to develop emission standards, and ability to meet the numerical and temporal requirements of

section 112(e), some changes have been made to the schedule for standards. These changes are discussed in the schedule for standards Federal Register notice (section IV, "Changes to the Draft Schedule").

## 2.5 SCHEDULE AND RANKING FOR SPECIFIC SOURCE CATEGORIES

Comment: Two commenters (IV-D-2, IV-D-6) affirmed the placement of their particular source categories on the schedule. One of the commenters (IV-D-2), reported, however, that the public docket for the draft schedule did not provide information regarding the specific application of the source category ranking criteria to individual source categories.

One commenter (IV-D-14) asserted that the oil and natural gas production category should not be regulated in the 7-year timeframe because a methodological flaw in the SCRS has probably overstated the risk from this category. The commenter (IV-D-14) argued that this category should have a lower priority because it has low emission rates, and because the remote location of most operations results in lower exposure potential than predicted.

This commenter (IV-D-14) was also concerned about the division of petroleum refinery operations into two separate source categories on the initial list, and the different timeframes to which they were assigned within the draft schedule. The commenter (IV-D-14) was concerned that there might be insufficient time to develop MACT standards for the category "petroleum refineries - other sources not distinctly listed" before the 1994 deadline. Additionally, the commenter (IV-D-14) stated that this separation would preclude emissions trading between these two source categories, even when collocated.

One commenter (IV-D-7) suggested that the EPA establish a separate subcategory for natural gas fired engines and turbines, instead of including these processes in the more broadly defined source categories called stationary turbines and stationary internal combustion engines. The commenter

(IV-D-7) suggested that this subcategory for natural gas fired engines and turbines should be scheduled in the 10-year instead of the 7-year timeframe.

Another commenter (IV-D-16) argued that the pollutant and emissions information used to list and to develop the SCRS score for the iron foundries and steel foundries source categories was incorrect and ultimately skewed the SCRS rank upon which the regulatory schedules for the iron foundries and steel foundries source categories are based. The commenter (IV-D-16) suggested that these source categories should be scheduled in the 10-year timeframe.

Two commenters (IV-D-12, IV-D-13) asserted that, given the current asbestos NESHAP's efficacy and the reduction in asbestos use, the EPA should not schedule the asbestos processing source category for rulemaking anytime in the near future. Another commenter (IV-D-8) suggested that the November 15, 1994 deadline may not be reasonable to the following three source categories: methyl methacrylate-butadiene-styrene terpolymers production, styrene-butadiene rubber and latex production, and polystyrene production.

A fourth commenter (IV-D-10) requested a 60-day extension to the comment period, in order to further review SCRS ranking information.

Response: As discussed under section 2.3 of this document, the decisions to list a category and how to subdivide or aggregate categories, such as petroleum refinery operations, are not a part of this action. As discussed previously, the source category list will likely be revised sometime in the future under a separate action. The scheduling decision for each source category was made after reviewing all the considerations and criteria discussed in the schedule for standards Federal Register notice. The SCRS is considered an adequate tool for assisting in the development of the schedule. The commenters did not submit new data on emissions, health effects, or specific facility parameters.

After further EPA review and evaluation of all the considerations and criteria discussed in the draft schedule for standards Federal Register notice, and after review of public comments received on the draft schedule for standards Federal Register notice, the EPA did make some changes to the schedule. These changes, which are discussed in the schedule for standards Federal Register notice, included moving the iron and steel foundries source categories, and moving the stationary turbines and internal combustion engines source categories to the 10-year timeframe. However, the EPA does not have sufficient information indicating that these other specific suggested changes should be made. Therefore, none of these other suggested changes have been made.

After further review, the EPA decided not to extend the comment period as one commenter requested. The EPA realizes that a 30-day comment period challenges the public to review and respond quickly. However, the 1990 Amendments imposed an extremely ambitious schedule, and to lengthen the comment period may have resulted in additional delays beyond those which this project has already encountered. The EPA has, however, contacted the commenter directly to clarify some confusion about the SCRS ranking, and to provide assistance in locating the items in the docket related to that particular source category.

## 2.6 FLEXIBILITY

Comment: Many commenters (IV-D-1, IV-D-3, IV-D-5, IV-D-6, IV-D-9, IV-D-15, IV-D-17, IV-D-18) discussed the need for some degree of flexibility within the schedule. The commenters (IV-D-1, IV-D-5, IV-D-6, IV-D-9, IV-D-15, IV-D-17, IV-D-18) said that the EPA should have the flexibility to adjust the original schedule for regulating source categories after the schedule for standards is published. The commenters noted that the present rankings should be subject to change in the event that new information becomes available and prompts the EPA to recalculate a source category score which might alter the relative rank. The commenters indicated that a revised source category ranking should result in a change to

the regulatory promulgation deadline. Furthermore, many of these commenters asserted that as data quality and availability improve, a new SCRS analysis changing the relative ranking of source categories may prove that greater risk reduction may be achieved in a shorter timeframe by amending the schedule.

One commenter (IV-D-6) stated that flexibility was needed if new source categories are added to the source category list and schedule. A second commenter (IV-D-17) acknowledged that the strength of the SCRS is its capacity to combine information from multiple databases that can be updated as needed. The commenter (IV-D-17) stressed the importance of revising the methodology used to develop the SCRS as new information becomes available. For example, the commenter (IV-D-17) noted that both the Industrial Source Complex Short Term and Long Term models (ISCST and ISCLT) have recently been updated. The commenter (IV-D-17) recommended that the EPA have the authority to change the schedule in the future, if necessary, after periodic review and updates in methodology.

Another commenter (IV-D-3) stated that the EPA needs flexibility in order to allow time for proper attention to the technical details of writing the scheduled emission standards. The commenter (IV-D-13) suggested the EPA work with Congress to obtain flexibility in the regulatory timetable. Several commenters (IV-D-1, IV-D-5, IV-D-15) asserted that the EPA must be able to modify the schedule out of administrative necessity in order to better meet the goals of the statute.

Two commenters (IV-D-6, IV-D-18) asserted that since section 112(c) of the 1990 Amendments allows the EPA to amend the list as appropriate, the EPA should also have the flexibility to alter regulatory promulgation deadlines. One of these commenters (IV-D-18) proposed that such revisions are appropriate because section 112(b) instructs the EPA to add or delete HAP's when specific conditions are satisfied, and that the 1990 Amendments allow for the removal of source categories

if the pollutants they emit have been delisted, or if the projected risk from those pollutants drops below a certain level.

Six commenters (IV-D-1, IV-D-5, IV-D-6, IV-D-9, IV-D-15, IV-D-18) alleged that section 112(e) contains no prohibitions against the EPA changing the schedule for standards. One of the commenters (IV-D-18) interpreted the absence of such prohibition to mean that the decision has been left to the EPA's discretion. This commenter (IV-D-18) argued that Congress would have firmly indicated that the EPA would not have the authority to adjust the regulatory schedule if Congress had so intended. Finally, the commenter (IV-D-18) asserted that if the EPA was deprived of its authority to adjust the schedule, the revision authority described in section 112(b) and 112(c) would lose much of its value. Three commenters (IV-D-1, IV-D-5, IV-D-15) added that since section 112(e) is not considered a rulemaking subject to judicial review, the EPA should not be pressured regarding revisions to the schedule by possible lawsuits or the requirements of the Administrative Procedures Act, 5 U.S.C 7551 (1992). However, another commenter (IV-D-9) maintained that the schedule should not be altered unless a significant change in the ranking of source categories occurs based on the changing state of knowledge supporting the three criteria used in establishing the schedule.

Response: The EPA interprets section 112 of the 1990 Amendments as permitting some flexibility concerning amendment of the schedule. The comments received on the proposed regulatory schedule regarding this issue support the interpretation that the EPA has the authority to amend the schedule and retain some regulatory flexibility after publication of the schedule for standards. The EPA considers it impractical to have a strictly rigid schedule for the reasons discussed in section I.B of the schedule for standards Federal Register notice. To reiterate some of these reasons, as new data becomes available, the EPA may identify changes to the schedule that would facilitate a greater achievement of



the prioritizing criteria of section 112(e). As pointed out by some commenters, there may be situations where significant new information is obtained (e.g., data indicating that a source category presents much less of a hazard to public health than previously thought, or the discovery that a source category is posing a significant threat to the environment) that warrants limited changes to the schedule. In addition, amendment of the schedule may also be necessary if categories on the initial source category list are delisted under the authority of section 112(c)(9). Hence, the EPA anticipates that it may, from time to time, amend the schedule for standards.

The EPA does not anticipate frequent amendment of the schedule for some important reasons. First, because of the long lead time and significant resources required to promulgate an emissions standard, the EPA will not have the technical ability or resources to reschedule many standards, particularly to move significant numbers of source categories into earlier timeframes. Second, because of the section 112(e) numerical and temporal requirements regarding scheduling of standards (i.e., regulate 40 source categories by November 15, 1992; 25 percent of all listed source categories by November 15, 1994; 50 percent by November 1997; and 100 percent by November 2000), the EPA is limited in its ability to defer categories into later timeframes without moving a commensurate number of standards to earlier timeframes.

Therefore, the schedule will not be changing frequently, but rather, may undergo some minor modifications as significant new information becomes available. Of course, any entirely newly listed categories will not affect the schedule, as they have their own schedule under section 112(e)(5). Source categories subsequently added to the 112(c) list shall be scheduled for regulation by November 2000, or 2 years after they are listed, whichever is later.

## 2.7 EFFICIENCY OF GROUPING

Comment: Four commenters (IV-D-1, IV-D-5, IV-D-8, IV-D-15) cautioned the EPA to refrain from arbitrarily grouping source categories for the sole purpose of making the regulatory process easier and more convenient. Three of the commenters (IV-D-1, IV-D-5, IV-D-15) were concerned that arbitrary groupings could lead to implementation bottlenecks and could complicate the residual risk determinations that will be made under section 112(f). The commenters recommended that, if the EPA determines a single standard applies to more than one source category, the standard should be promulgated separately for each source category.

The fourth commenter (IV-D-8) stressed that it is incorrect to hasten the regulatory schedule for categories for which information is more readily available just because they are easier to regulate in a given timeframe, notwithstanding the impact of their emissions on public health.

Another commenter (IV-D-6) suggested that the source category list be reviewed for inconsistencies. Specifically, the commenter (IV-D-6) referred to polyester resins production, which has a scheduled promulgation date of November 15, 1997 on the draft schedule, and polyethylene terephthalate production, which had a scheduled promulgation date of November 15, 1994. The commenter (IV-D-6) contended that the two processes are essentially the same category and, therefore, should both be scheduled under the November 15, 1997, timeframe.

Another commenter (IV-D-15) reiterated previously expressed concerns on the preliminary draft list of categories (56 FR 28548; June 21, 1991) regarding the approach the EPA used to identify which sources fell under which categories and their respective schedules. The commenter (IV-D-15) questioned why butyl benzyl phthalate, a phthalate plasticizer, is included in the draft list of SOCM processes (scheduled for MACT promulgation by November 15, 1992). This would result in butyl benzyl phthalate production being regulated before the phthalate plasticizers production source category listed under

miscellaneous processes. The commenter (IV-D-15) questioned the logic of requiring regulation of one phthalate plasticizer 8 years before the others. The commenter (IV-D-15) also indicated that the EPA had not specified which category the formaldehyde resins group would fall under, stating that it could fit under either the acetal resins production, amino resins production, or phenolic resins production categories.

Another commenter (IV-D-16) reiterated comments to the preliminary draft list, and alleged that little reliable quantitative data on emissions of HAP's from iron or steel foundries were presented. The commenter (IV-D-16) stated that due to different emissions, process, and technology characteristics, iron foundries and steel foundries should not be assigned the same regulatory schedule as other sources grouped in the ferrous metal processing industry group. The commenter (IV-D-16) requested a November 15, 2000 regulatory schedule assignment.

Response: Section 112(e)(2)(C) of the 1990 Amendments allows the EPA to prioritize regulations for source categories based on "the efficiency of grouping categories or subcategories according to the pollutants emitted, or the processes or technologies used." This criterion enables the EPA to utilize its technical resources for developing regulations more effectively, and helps prevent the EPA from duplicating regulatory efforts for two similar categories. The EPA has considered in the past and will consider in the future such characteristic as end products, processing steps, raw materials, emitted pollutants, emission controls, economic factors, and efficiency of using EPA resources in grouping source categories into single regulatory projects. Of course, without extensively studying each source category, it is often difficult for the EPA to predict whether a particular emission standard will closely resemble a standard for another source category. The EPA understands that if it is later discovered that initially grouped categories may not be effectively regulated by one standard, the EPA will promulgate separate standards for the source categories as necessary. However, to

follow the commenter's suggestion of continuing to have project groupings for similar categories, but then to promulgate each emission standard at different times based on the SCRS ranking would defeat the purpose of the efficiency of grouping criteria and could have a substantial impact on the EPA in meeting other goals of section 112.

The EPA investigated the commenter's allegation that the polyester resins production is identical to polyethylene terephthalate production. This review revealed that these categories are in fact distinct from one another, and should remain as separate source categories. In particular, polyethylene terephthalate is an ethylene glycol-based polymer which is spun into fibers for clothing, blow-molded into plastic bottles, or quenched and stretched to form specialty films. Polyester resins, on the other hand, are styrene-based resins that are used primarily in the manufacture of fiberglass. Because of these differences, there is no technical reason to schedule the two source categories in the same timeframe. The polyester resins production source category has been moved to the 10-year timeframe. The polyethylene terephthalate production source category remains scheduled in the 4-year timeframe. The reader is referred to the Federal Register notice to the schedule for standards for more discussion of the changes to the schedule.

In response to the comments regarding the formaldehyde resins group, this is merely a title that has been adopted by the EPA to refer to the NESHAP project intended to regulate the acetal, amino, and phenolic resins production source categories. By researching the individual categories, the EPA discovered that each of these resin producers used formaldehyde as a principal reactant in the polymerization reaction. Consequently, the EPA decided to minimize its regulatory resource efforts by grouping these three source categories into one project. Although the same regulatory project focuses on all three categories, this does not necessarily suggest that the emission standards will be equivalent. However, it means that information will be

gathered simultaneously, that EPA work group membership will presumably be similar (if not identical), and that the emission standard(s) will most likely be proposed and promulgated on the same schedules.

In response to a commenter's concerns regarding butyl benzyl phthalate, the production of butyl benzyl phthalate is included in the list of SOCMCI processes which are proposed for regulation under the HON (57 FR 62608; December 31, 1992). It is included in the list of SOCMCI processes because butyl benzyl phthalate fits the definition delineated in the proposed HON. The other phthalate plasticizers do not meet the HON definition. Therefore, the other phthalate plasticizers productions are grouped into a separate category of major sources and were ranked separately in the SCRS. They ranked relatively low in the SCRS and were scheduled in the 10-year timeframe. The list of SOCMCI processes is not an item for review under this action. However, the comment has been forwarded to the EPA staff responsible for the proposed HON.

The iron foundries and steel foundries source categories were scheduled independently of the other categories within the ferrous metals processing industry group. However, after further review by the EPA, the iron foundries and steel foundries source categories have been moved to the 10-year timeframe. In consideration of regulatory efficiency, individual source categories within the ferrous metals industry group may subsequently be grouped with one or more other similar categories within or outside of the industry group.

## 2.8 OTHER SCHEDULING CONSIDERATIONS

Comment: One commenter (IV-D-1) urged the EPA to avoid setting schedule dates for source categories that are clearly unattainable. The commenter (IV-D-1) mentioned the difficult challenge imposed on the EPA to meet the statutory deadlines, and stated that it is important that section 112(d) standards be of the highest quality possible. Therefore, the commenter (IV-D-1) recommended and encouraged the EPA to focus on the practical considerations of setting and meeting the source

category schedule. The commenter (IV-D-1) stated that the EPA should consider data availability and resource needs when determining where to place certain source categories in the schedule, recognizing that writing standards for certain categories will be extremely resource-intensive compared to other categories.

Response: The EPA agrees with the above recommendations. The EPA considered data availability and resource needs, and the ability to meet the scheduled deadlines, when developing the schedule for standards. Some of the changes made to the draft schedule for standards were partly based on these considerations. The changes to the draft schedule are discussed in the schedule for standards Federal Register notice.

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16. ABSTRACT <p>The EPA is publishing the source category schedule for emission standards as required under section 112(e) of the Clean Air Act. The draft source category schedule for standards appeared in the <u>Federal Register</u> on September 24, 1992 (57 FR 44147). The EPA received 16 written comment letters from the public. This report summarizes all public comments and presents the Agency's responses.</p>		
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