6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2006-0859; FRL-]

RIN 2060-AN85

Risk and Technology Review, Phase II, Group 2

AGENCY: Environmental Protection Agency (EPA).

ACTION: Advance notice of proposed rulemaking (ANPRM).

SUMMARY: This ANPRM asks for public comment on hazardous air pollutant emissions and other model input data that EPA intends to use to assess residual risk from selected industrial major source categories, as required by the Clean Air Act. Specifically, the data are comprised of hazardous air pollutant emission estimates and emission release parameters for 22 industrial source categories subject to 12 national emission standards for hazardous air pollutants for hazardous air pollutants with compliance dates of 2002 and earlier. The source of this information is the February 2006 version of the 2002 National Emissions Inventory, updated with some facility-specific data collected by EPA. We are seeking comment on the emissions and source data found at the Risk and Technology Review website and we are providing the opportunity for the public

to submit technical corrections and updates. Following review of comments received, we will update the data, as appropriate, and assess risk for these source categories. We will use these risk estimates and our evaluation of the availability, cost, and feasibility of emissions reduction options to determine the ample margin of safety for residual risk and to fulfill our obligations to conduct a technology review. We currently anticipate using the results of these risk estimates along with review of control technology as the basis for our decisions on whether to propose additional standards to address residual risk for each source category. There will be opportunity for oral and written comment on any additional standards when we publish our Notice of Proposed Rulemaking (NPRM). We anticipate proposing the results of this risk and technology review for these 22 source categories by fall 2007.

DATES: Comments must be received on or before [INSERT DATE 60 DAYS FROM DATE OF PUBLICATION]. **ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2006-0859 by one of the following methods:

- www.regulations.gov. Follow the on-line instructions for submitting comments.

- E-mail: a-and-r-docket@epamail.epa.gov.
- Fax: (202) 566-1741.
- Mail: U.S. Postal Service, send comments to: Air and Radiation Docket (6102T), Docket ID No. EPA-HQ-OAR-2006-0859, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Please include a total of two copies.
- Hand Delivery: In person or by Courier, deliver comments to: Air and Radiation Docket (6102T), EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OAR-2006-0859. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or

otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by

statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Air and Radiation Docket, EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742.

NOTE: The EPA Docket Center suffered damage due to flooding during the last week of June 2006. The Docket Center is continuing to operate. However, during the cleanup, there will be temporary changes to Docket Center telephone numbers, addresses, and hours of operation for people who wish to make hand deliveries or visit the Public Reading Room to view documents. Consult EPA's Federal Register notice at 71 FR 38147 (July 5, 2006) or the EPA website at www.epa.gov/epahome/dockets.htm for current information on docket operations, locations, and telephone numbers. The Docket Center’s mailing address for U.S. mail and the procedure for submitting comments to

www.regulations.gov are not affected by the flooding and will remain the same.

FOR FURTHER INFORMATION CONTACT: For general information about this ANPRM, contact Ms. Paula Hirtz, Office and Air Quality Planning and Standards, Sector Policies and Programs Division, Coatings and Chemicals Group (E143-01), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2618; fax number: (919) 541-0246; and e-mail address: hirtz.paula@epa.gov.

For information specific to the National Emissions Inventory (NEI), contact Ms. Anne Pope, Air Quality and Assessment Division (Office and Air Quality Planning and Standards), Mail Code C339-02, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5373; fax number: (919) 541-0684; and e-mail address: pope.anne@epa.gov.

SUPPLEMENTARY INFORMATION:

Regulated Entities. Entities potentially affected by this action include facilities containing any one or more of the 22 major source categories subject to the 12 national emission standards for hazardous air pollutants (NESHAP) (or commonly referred to maximum achievable control

technology (MACT) standards) listed in Table 1. This action does not affect area sources, as these NESHAP do not apply to area sources. Industries regulated by these MACT are classified by the North American Industry Classification System (NAICS) codes shown in Table 1. In addition, a classification system of MACT codes has been developed and is used in the 2002 NEI to identify processes included in each MACT source category. The MACT codes for the 22 source categories addressed in this notice are also displayed in Table 1.

Table 1. MACT Standards, Source Categories, and Corresponding NAICS and MACT Codes Addressed by this ANPRM

MACT Standard/Source Category Name		NAICS Codes	MACT Code
Mineral Wool Production		327993	409
Aerospace Manufacturing and Rework Facilities		336411	0701
Marine Tank Vessel Loading Operations		4883	0603
Natural Gas Transmission and Storage		486210	0504
Oil and Natural Gas Production		211	0501
Petroleum Refineries		32411	0503
Pharmaceuticals Production		3254	1201
Group I Polymers and Resins	Epichlorohydrin Elastomers Production	325212	1311
	Hypalon™ Production	325212	1315
	Nitrile Butadiene Rubber Production	325212	1321
	Polybutadiene Rubber Production	325212	1325
	Styrene-Butadiene Rubber and Latex Production	325212	1339
Group IV Polymers and Resins	Acrylic-Butadiene-Styrene Production	325211	1302
	Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production	325211	1317

	Methyl Methacrylate-Butadiene-Styrene Production	325211	1318
	Nitrile Resins Production	325211	1342
	Polyethylene Terephthalate Production	325211	1328
	Polystyrene Production	325211	1331
	Styrene-Acrylonitrile Production	325211	1338
Primary Aluminum Reduction Plants		331312	0201
Printing and Publishing Industry		32311	0714
Shipbuilding and Ship Repair Operations		336611	0715

Submitting Comments/CBI. When submitting comments, remember to identify this ANPRM by docket number and other identifying information (subject heading, Federal Register date, and page number). Also, make sure to submit your comments by the comment period deadline identified. As described further in section VII of this ANPRM, specific data change suggestions need to be accompanied by supporting documentation that includes a description of any assumptions used and any technical information and/or data that you used.

Do not submit CBI to EPA through www.regulations.gov or e-mail. Instead, send or deliver information identified as CBI only to the following address: Mr. Roberto Morales, OAQPS Document Control Officer (C404-02), U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, Attention Docket ID No. EPA-HQ-OAR-2006-0859. Clearly mark the part or all of the information that you claim to be

CBI. For CBI information on a disk or CD ROM that you mail to Mr. Morales, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. If you submit a CD ROM or disc that does not contain CBI, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and EPA's electronic public docket without prior notice.

If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the FOR FURTHER INFORMATION CONTACT section. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's notice is also available on the World Wide Web through the Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of today's notice will be posted on

the TTN's policy and guidance page for newly proposed or promulgated NESHAP at http://www.epa.gov/ttn/oarpg. The TTN provides information and technology exchange in various areas of air pollution control.

As discussed in more detail in section VI of this ANPRM, additional information is available on the Risk and Technology Review Phase II webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. This information includes source category descriptions and detailed emissions and other data that will be used as model inputs.

Outline. The information presented in this preamble is organized as follows:

I. Background
II. What approach is EPA taking for the Risk and Technology Review?
A. What is the approach we are taking to address residual risk for the Group 2 source categories?
B. What data were compiled and reviewed?
C. What are the steps planned before proposing NESHAP to address residual risk?
D. How will we develop proposed NESHAP to address residual risk?
E. When will the NESHAP be proposed and promulgated?
III. What is the purpose of this ANPRM?
IV. What data are in the ANPRM data sets for each source category?
V. What are we specifically seeking comment on?
VI. How may I access the data for a specific source category?
VII. How do I submit suggested data corrections?
VIII. What additional steps are expected after EPA reviews the comments received?

I. Background

Section 112 of the Clean Air Act (CAA) establishes a two-stage regulatory process to address emissions of hazardous air pollutants (HAP) from stationary sources. In the first stage, after EPA has identified categories of sources emitting one or more of the HAP listed in CAA section 112(b), section 112(d) of the CAA calls for promulgation of technology-based emission standards for those sources. For "major sources" that emit or have the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAP, these technology-based standards must reflect the maximum reductions of HAP achievable (after considering cost, energy requirements, and non-air health and environmental impacts). These technology based standards are commonly referred to as MACT standards. Between 1993 and 2004, EPA published 96 MACT standards (or NESHAP) covering 174 source categories. In this first stage, the focus was on ensuring reductions through available technologies. CAA Section 112(d)(6) requires EPA to review these emission standards and to revise them "as necessary (taking into account developments in practices, processes, and control technologies)" no less frequently than every 8 years.

The second stage in standard-setting focuses on reducing any remaining "residual" risk according to CAA section 112(f). This provision requires, first, that EPA prepare a Report to Congress discussing (among other things) methods of calculating risk posed (or potentially posed) by sources after implementation of the MACT standards, the public health significance of those risks, the means and costs of controlling them, actual health effects to persons in proximity of emitting sources, and recommendations as to legislation regarding such remaining risk. EPA prepared and submitted this report (Residual Risk Report to Congress, EPA-453/R-99-001) in March 1999. Congress did not act in response to the report, thereby triggering EPA's obligation under CAA section 112(f)(2) to analyze and address residual risk.

Section 112(f)(2) of the CAA then directs EPA to assess the risk remaining (residual risk) after the application of the MACT standards and promulgate more stringent standards for a category or subcategory of sources subject to MACT standards if promulgation of such standards is necessary to protect public health with an ample margin of safety or to prevent (taking into consideration various factors) adverse environmental

effects. The standards to be promulgated under this subsection must "provide an ample margin of safety to protect public health in accordance with this section (as in effect before the date of enactment of the CAA Amendments of 1990), unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental impact." Section 112(f)(2) of the CAA expressly preserves our use of a two-step process for developing standards to address any residual risk and our interpretation of "ample margin of safety" developed in the "National Emission Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants" (Benzene NESHAP) (54 FR 38044, September 14, 1989).

To date, EPA has conducted CAA 112(d)(6) technology reviews and promulgated residual risk standards for eight (Halogenated Solvents will be promulgated in April 2007) individual NESHAP and their associated source categories. In an effort to streamline this process for the remaining source categories, EPA plans to address residual risk and

perform a technology review for several source categories in one combined effort. While the standard review and development process will be streamlined, each source category will be assessed independently and decisions on the level of any standards will be made individually for each source category. The first set of MACT source categories for which this streamlined process will be undertaken includes the 50 source categories listed in Table 2, all of which have MACT compliance dates of 2002 and earlier. (Except for the Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills source category, which has a compliance date of January 2004, these facilities are believed to be in compliance with MACT as of 2002, so the NEI reflects their post-MACT compliance emissions.) This action is referred to as Phase II of the Risk and Technology Review (RTR) process (where the first eight individual NESHAP comprise Phase I). Other MACT standards will be reviewed in the future. While the initial phases of data compilation and EPA internal review processes have been completed for each of the 50 source categories included in RTR Phase II, the source categories have been divided into smaller groups to ease the burden on public

commenters and EPA's review of public comments and the rulemaking processes. Table 2 shows the source categories EPA anticipates including in each group of the RTR Phase II.

Table 2. Source Categories and Corresponding NAICS and MACT Codes Included in Risk and Technology Review Phase II

RTR Phase II Group	Source Category Name		NAICS Codes	MACT Code
1	Acetal Resins Production		325211	1301
	Hydrogen Fluoride Production		325120	1409
	Group I Polymers and Resins	Butyl Rubber Production	325212	1307
		Ethylene-Propylene Rubber Production	325212	1313
		Polysulfide Rubber Production	325212	1332
		Neoprene Production	325212	1320
	Group II Polymers and Resins	Epoxy Resins Production	325211	1312
		Non-Nylon Polyamides Production	325211	1322
2	Mineral Wool Production		327993	409
	Aerospace Manufacturing and Rework		336411	701
	Marine Tank Vessel Loading		4883	603
	Natural Gas Transmission & Storage		486210	504
	Oil and Natural Gas Production		211	501
	Petroleum Refineries		32411	503
	Pharmaceuticals Production		3254	1201
	Group I Polymers and Resins	Epichlorohydrin Elastomers Production	325212	1311
		Hypalon™ Production	325212	1315
		Nitrile Butadiene Rubber Production	325212	1321

		Polybutadiene Rubber Production	325212	1325
		Styrene-Butadiene Rubber and Latex Production	325212	1339
	Group IV Polymers and Resins	Acrylic-Butadiene-Styrene Production	325211	1302
2	Group IV Polymers and Resins	Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production	325211	1317
		Methyl Methacrylate-Butadiene-Styrene Production	325211	1318
		Nitrile Resins Production	325211	1342
		Polyethylene Terephthalate Production	325211	1328
		Polystyrene Production	325211	1331
		Styrene-Acrylonitrile Production	325211	1338
	Primary Aluminum Reduction Plants		331312	201
	Printing and Publishing Industry		32311	714
	Shipbuilding and Ship Repair		336611	715
Other	Acrylic/Modacrylic Fibers		325222	1001
	Chromium Electroplating	Chromic Acid Anodizing	332813	1607
		Decorative Chromium Electroplating	332813	1610
		Hard Chromium Electroplating	332813	1615
	Ferroalloys Production		331112	304
	Flexible Polyurethane Foam		326150	1314

Other	Kraft, Sulfite, Semi-chemical, Soda Pulping Processes and Mechanical, Secondary Fiber, and Non-wood Pulping Processes and Papermaking Systems	Pulp and Paper Production	3221	1626-1
	Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills	Pulp and Paper Production	3221	1626-2
	Off-site Waste and Recovery		562	806
	Phosphate Fertilizer Production		325312	1410
	Phosphoric Acid Manufacturing		325312	1411
	Polycarbonates Production		325199	1326
	Polyether Polyols Production		325199	1625
	Portland Cement Manufacturing		3273	410
	Primary Lead Smelting		331419	204
	Publicly Owned Treatment Works		221320	803
	Secondary Aluminum Production		331314	202
	Secondary Lead Smelting		331492	205
	Steel Pickling-HCl Process		331111	310
	Wood Furniture Manufacturing		337122	716
	Wool Fiberglass Manufacturing		327993	412

This ANPRM addresses only the 22 source categories included in Group 2. As initial analyses for each source category included in Group 1 of the RTR Phase II indicate

that estimated health risks to the individual most exposed to emissions from a facility in the source category meet levels the Agency considers to be without appreciable health risk and it is improbable that these source categories emit pollutants that would cause adverse environmental effects, we plan to publish a Notice of Proposed Rulemaking (NPRM) in the Federal Register for the 8 source categories in Group 1 without previously issuing an ANPRM. The remaining source categories were split into two groups. Group 2 is generally comprised of source categories with earlier deadlines, fewer multipathway concerns, and categories that the Agency believes will require fewer resources to complete. The source categories in the other group generally have later deadlines and more multipathway concerns. Additional notices will be published addressing the other source categories in the future.

II. What approach is EPA taking for the Risk and Technology Review?

A. What is the approach we are taking to address residual risk for the Group 2 source categories?

We plan to follow the same general process in revising NESHAP to address residual risk for each of Group 2 source

categories listed in the table above. This general approach includes the following primary steps:

1. Compile and review (and update with facility-specific data collected by EPA in some cases) readily available source category emissions data from the 2002 NEI.

2. For each group of source categories, conduct preliminary evaluations to identify key HAP and data anomalies.

3. Make emissions and other modeling input data, along with a list of the identified key HAP and data anomalies, available for public comment through an ANPRM.

4. Reconcile and update emissions and other modeling input data, based on comments received, and conduct a risk assessment for each category.

5. Develop and propose CAA section 112(f)(2) residual risk and CAA section 112(d)(6) technology review standard(s) as appropriate.

6. Address comments from the proposal(s) and promulgate CAA section 112(f)(2) residual risk and CAA 112(d)(6) technology standard(s), where necessary.

An independent scientific peer consultation is currently underway to review the approach for assessing residual risk for the source categories included in the RTR

Phase II. This peer consultation will be conducted by a panel of EPA's Science Advisory Board, and will focus on: (1) the source of emissions and other modeling data and the approach for refining this data, (2) the analytical approach for quantifying and characterizing human and environmental exposures and risks, and (3) the types of results that will be generated and the format for the characterization of assessment results.

The process outlined above for the 22 source categories included in Group 2 of the RTR Phase II is described in more detail in the following discussion.

B. What data were compiled and reviewed?

In the first step of this process, we used the 2002 NEI Final Version 1 (made publicly available on February 26, 2006) as a starting point and compiled emissions information for each source category and performed an internal engineering review of these data (referred to hereafter as "initial NEI data"). The primary data attributes evaluated in this review included: (1) facility representation in each source category (i.e., we ensured that source categories accurately included facilities making the products characteristic of the source categories), and (2) appropriateness of facility emissions,

in both the inclusion of the appropriate HAP, and in the magnitude of those HAP emissions. In cases where better data were known to exist for a particular source category, that information was integrated into the data set for that source category. These reviewed and integrated data sets for each source category are referred to hereafter as the "ANPRM data sets."

C. What are the steps planned before proposing NESHAP to address residual risk?

In this ANPRM, we are seeking public review and comment on the emissions and other model input data included in the ANPRM data sets for the source categories included in Group 2 of the RTR Phase II. These source categories are listed in Table 1. We will evaluate the comments and data corrections received in response to this ANPRM and update the data for the source categories in Group 2, as appropriate. In accordance with the methodologies described in the Residual Risk Report to Congress, we will then use the revised model input data sets for these source categories (referred to as the notice of proposed rulemaking, or NPRM, data sets) in an analysis of the inhalation risks. The Human Exposure Model (Community and Sector HEM-3 version 1.1.0) will be used to

perform this modeling. The HEM-3 model performs three main operations: dispersion modeling, estimation of population exposure, and estimation of human health risks. The dispersion model used by HEM-3 is AERMOD, which is one of EPA's preferred models for assessing pollutant concentrations from industrial facilities[1]. We will also perform a screening assessment of potential adverse environmental effects using these updated data.

We will also evaluate the NPRM data sets for each of the 22 source categories for potential non-inhalation human health risks, specifically through the presence of emissions of any persistent and bioaccumulative (PB) HAP, all of which are listed in Table 3 below[2]. For source categories that also carry a potential for non-inhalation human health risks, in addition to analyses to estimate risks from inhalation of emissions, we will also estimate risks using refined models capable of addressing multi-pathway exposures (i.e., exposures due to ingestion or dermal exposures). The models selected for this exercise

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[1] Environmental Protection Agency. Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions (70 FR 68218, November 9, 2005).

[2] Environmental Protection Agency. Air Toxics Risk Assessment Reference Library, Volume I. EPA-453K-04-001A. http://www.epa.gov/ttn/fera/risk_atra_vol1.html.

(primarily, we will use the EPA's Total Risk Integrated Modeling system, or TRIM, a refined multi-pathway pollutant fate and transport model) will also be used to produce estimates of pollutant concentrations in the surrounding environment, which will be used in the quantitative assessment of environmental risks from these chemicals. The 22 source categories are not expected to have multi-pathway issues.

Table 3. Persistent and Bioaccumulative Hazardous Air Pollutants (PB HAP)

Cadmium compounds	Chlordane	Chlorinated dibenzodioxins and furans
DDE	Heptachlor	Hexachlorocyclohexane (all isomers)
Hexachlorobenzene	Lead compounds	Mercury compounds
Methoxychlor	Polychlorinated biphenyls	Polycyclic Organic Matter (POM)
Toxaphene	Trifluralin	

D. How will we develop proposed NESHAP to address residual risk?

We will provide a more detailed discussion of the residual risk methodology in the Group 2 NPRM. Therefore, after the risk assessments for Group 2 are complete, the results will be examined to determine whether any source category meets certain criteria where the Agency considers the risk to not be a problem ("low risk"). The "low risk" criteria we intend to consider include: lifetime cancer risk to the individual most exposed is less than 1-in-1

million, chronic non-cancer risk to the individual most exposed is less than a target-organ-specific hazard index of 1, air concentrations estimated for acute exposures scenarios are less than health-protective reference levels, and there is no potential for significant and widespread adverse environmental effect.

For Group 2 source categories in which all facilities meet these "low risk" criteria, EPA will not propose further regulation under CAA section 112(f). For source categories that are not determined to be low risk, a two-step standard development process will be applied, consistent with CAA section 112(f) and with our previously articulated approach for developing NESHAP pursuant to CAA section 112(f). This approach was described in the final NESHAP addressing residual risk for coke ovens (58 FR 57898, October 27, 1993).

In the first step of this approach, modeled source category risks will be evaluated to determine if they are "acceptable." The term "acceptable," in reference to residual risks is not specifically defined in the CAA, but CAA section 112(f)(2) refers positively to the interpretation of this term in the Benzene NESHAP (54 FR 38044, September 14, 1989).

The preamble to the Benzene NESHAP (54 FR 38044, September 14, 1989) stated that a lifetime maximum individual excess cancer risk of approximately 100-in-1 million "should ordinarily be the upper-end of the range of acceptability." However, this is not a rigid line of acceptability, and other factors will be considered, such as the number of people exposed at various risk levels, the overall incidence of cancer and other serious health effects, assumptions and uncertainties associated with the risk analysis (including the 70 year exposure assumption), and the weight of evidence for human health effects.

In the second step of this standard development process, we will develop risk-reduction regulatory alternatives and decide upon the level of the standard for each source category, considering the requirements necessary to provide an ample margin of safety to protect human health, as required by CAA section 112(f)(2). To develop the regulatory alternatives, we will conduct various analyses, including an assessment of the impacts of each regulatory alternative. The impacts will include HAP emission reductions, other environmental impacts, costs, economics, small business impacts, reduction in maximum risks to individuals most exposed, reductions in chronic

and acute risks to populations at various risk levels, and reductions in cancer incidence. We will assess these alternatives, decide upon the level of the standard, and publish a NPRM in the Federal Register to propose any regulatory changes for the individual standards codified in 40 CFR part 63 for each source category.

As we undertake these rulemaking proposals, we will also consider developments in pollution control in each source category and the costs of potentially stricter standards reflecting those developments, to fulfill the requirements of CAA section 112(d)(6). Where there have been developments in practices, processes, and control technologies, we will consider relevant factors, such as costs, potential emissions reductions, and health and environmental risk in a determination of what, if any, further controls are necessary. Where appropriate, we will develop regulatory alternatives, assess the impacts of those alternatives, and decide upon the level of the standard(s). We plan to propose any CAA section 112(d)(6) regulatory changes for the individual standards codified in 40 CFR part 63 for each source category in the same Federal Register notice proposing action addressing residual risk.

E. When will the NESHAP be proposed and promulgated?

Our current goal is to propose the decisions resulting from both CAA section 112(f)(residual risk) and CAA section 112(d)(6)(technology review) efforts, including the proposal of any standards for each of the 21 source categories in Group 2, in the Fall of 2007. Proposal of any standards for the petroleum refineries source category will occur by the court-ordered deadline of August 22, 2007. In addition to proposing any new residual risk or technology-based standards, we will announce any decisions not to promulgate residual risk standards for "low risk" source categories or source categories for which the current standards protect public health with an ample margin of safety and any decisions not to promulgate additional technology-based standards.

After the close of the comment period on the proposed standard(s), we will review and perform any analyses and data gathering necessary to address the comments, prepare responses, and make changes to the proposed standards, as necessary. We anticipate the final standards will be published in the Federal Register in the summer of 2008.

III. What is the purpose of this ANPRM?

The primary purpose of today's ANPRM is to request public comments on the emissions and other model input data

included in the ANPRM data sets for the 22 source categories included in Group 2 of the RTR Phase II. These data are provided in an updatable form on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. We provide detail in section VII below on how to submit updates and corrections to this information. Following review of comments received, we will update the data as appropriate, and model to generate estimates of residual risk that we will use as the basis for our proposed decisions on whether to develop standards to address residual risk for each source category.

Section V lists the general items for which we are seeking comment for all source categories. In addition, we note information unique to each source category for which we are requesting technical corrections or updates in the source category specific sections within section IV of this ANPRM. We note that emissions data cannot be withheld from disclosure as CBI pursuant to section 1905 of title 18 of the United States Code. EPA's policy regarding the categories of information that it considers to be "emissions data" is set forth in a Federal Register notice dated February 14, 1991 (56 FR 7042). A copy of that notice has been placed in the docket.

IV. What data are in the ANPRM data sets for each source category?

As mentioned in Section II of this ANPRM, the 2002 NEI is the primary data source used in creating the ANPRM data sets for each source category. The data extracted from the NEI for inclusion in the ANPRM data sets included general facility information, such as company name, plant name, and facility identification codes; emissions data, including speciated HAP emissions data; emissions release characteristics, including stack height, stack diameter, and the emissions stream exit temperature and velocity; and location information, including the latitude/longitude coordinates of emissions release locations. For more information on the 2002 NEI, please visit our 2002 NEI webpage at http://www.epa.gov/ttn/chief/net/2002inventory.html.

For the most part, the emissions values in the ANPRM data set represent actual emission levels. Where actual emissions data is not already included, we request that commenters provide such data.

Due to the high uncertainty of the dioxin/furan emissions information submitted during the inventory development process, dioxin/furan emissions were not

included in the 2002 NEI, and no emissions of these compounds are included in the ANPRM data sets. As we update the ANPRM data set, we will include dioxin/furan emissions, based on the best information available to EPA at that time. These data may include information EPA has gathered on dioxin and dioxin-like compounds. The EPA National Center for Environmental Assessment website, http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=159286, contains links to these data.

In creating the ANPRM data sets for each source category, we started with the February 2006 version of the 2002 NEI. We first conducted a detailed review of the facilities that were included in the NEI and added or removed facilities to make the data as representative of the overall source category as possible. We then reviewed emissions, release characteristics, and other model input data.

We began by retrieving all records in the 2002 NEI based solely on MACT source category designations, which are fields in the NEI that identify the MACT source category that applies to each emission point. This MACT source category is assigned by a variety of methods. In some cases, the State or local agency that provided the

data to EPA identified the MACT category. Since State and local agencies are aware of the regulations that apply to facilities, we have high confidence in MACT category designations provided by a State or local agency. In other cases, EPA staff responsible for developing the MACT standards provided input to populate the MACT source category code fields. As these individuals have knowledge of the source category for which they are accessing and using the NEI data, the confidence in these designations is also high. Most of the MACT source category code designations, however, are assigned based on Standard Industrial Classification (SIC), NAICS, or Source Classification Code (SCC) defaults. There is often considerable uncertainty associated with these designations.

One of the first things we reviewed in the NEI data was the list of facilities included for each source category. For some source categories, we are reasonably confident that we know the names of the facilities and their exact locations. In these cases, we compared the "known" lists of facilities to the facilities in the NEI. We removed the MACT source category designation for facilities not on the known list. If facilities on the

known lists were not in the data for the source categories, we searched the NEI for these facilities. Quite often, they were in the 2002 NEI, but had different, and presumably incorrect, MACT source category designations. These facilities were added to the data set for the category and the MACT source category codes were re-designated accordingly.

For large facilities with multiple processes that represent multiple MACT source categories, it was not always straightforward to separate the processes by source category. In these cases, we used a variety of approaches to separate the processes and emission points into source categories. Examples of the criteria used to separate processes and emissions into source categories include SCC, SIC codes, and pollutants emitted. Situations where such source category separation decisions were made are highlighted in the source-category discussions later in this section and detailed in the files available for download on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. We are asking specifically for comment on how we separated processes and emission points by source category at these large integrated facilities.

For categories with large numbers of facilities for which we do not have complete lists of known facilities, we conducted more general evaluations of the facilities in the data sets. These evaluations included examining the company names, SIC, NAICS, and SCC, and adding or removing facilities based on these criteria.

We will be evaluating residual risk for all facilities and emission sources that are in the 22 source categories included in Group 2 of the RTR Phase II. In some instances, the ANPRM data sets may include emission points that are part of the source category but are not subject to the MACT standard for that source category. Emissions from these sources will be considered in our future regulatory decisions. In addition, the ANPRM data sets, for most source categories, include all major and area sources (facilities) in the 2002 NEI that have processes related to the specific source category.

After finalizing the facility lists for each source category, we conducted a general review of the emissions and other data included in the ANPRM data sets to identify data anomalies that could affect the risk estimates. With a few exceptions, we did not change the data or include additional data. For the following source categories, the

2002 NEI was supplemented with additional data provided by industry to create the ANPRM data sets:

- Petroleum Refineries
- Shipbuilding and Ship Repair
- Source categories regulated by the Group I Polymers and Resins MACT:
  - Epichlorohydrin Elastomers Production
  - Hypalon™ Production
  - Nitrile Butadiene Rubber Production
  - Polybutadiene Rubber Production
  - Styrene-Butadiene Rubber and Latex Production

The addition of these data, as well as other data changes made, are described in the source-category specific sections below. We note that because these changes are included in the ANPRM data sets, these data sets do not exactly match the February 2006 version of the 2002 NEI data available on our NEI website - http://www.epa.gov/ttn/chief/net/2002inventory.html. When comments are received via this ANPRM and incorporated into the source category-specific ANPRM data sets, these revisions will then also be incorporated into the 2002 NEI and made publicly available through the NEI website in Final Version 2.1.

Following are sections discussing the data for individual source categories. These discussions provide an overview of the source category, a brief summary of the ANPRM data sets, and a mention of the types of major anomalies associated with the data. Summary reports for each of the source categories, which contain considerable detail on the information summarized below, including the carcinogenic HAP and HAP with adverse health effects other than cancer, are available on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. We especially encourage you to review the specific anomalies raised in these reports and to provide data to help reduce these anomalies.

1. Mineral Wool Production

The mineral wool production source category includes facilities that produce mineral wool, which is a fibrous, glassy substance made from natural rock (such as basalt), blast furnace slag, or other similar materials and consisting of silicate fibers. In the mineral wool manufacturing process, rock and/or blast furnace slag and other raw materials (e.g., gravel) are melted in a furnace (cupola) using coke as fuel. The molten material is then formed into fiber. Mineral wool is manufactured as either

a “bonded” product that incorporates a binder to increase structural rigidity or a less rigid “nonbonded” product. Emission sources from mineral wool manufacturing facilities include the cupola furnace where the mineral charge is melted; a blow chamber, in which air or a binder is drawn over the fibers, forming them into a screen; a curing oven that bonds the fibers (for bonded products); and a cooling oven. The primary HAP expected to be emitted during the mineral wool manufacturing process are metals, including antimony, arsenic, beryllium, cadmium, chromium, manganese, nickel, lead, and selenium that are emitted from the cupola, and gaseous HAP, including formaldehyde, carbonyl sulfide, and phenol, that result from the vaporization of the binder.

The ANPRM data set for this source category includes information for 12 facilities, 11 of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the mineral wool source category, this data set represents between 75 and 90 percent of the industry. The HAP emitted in largest quantities from these facilities is carbonyl sulfide, which accounts for over 84 percent of the total HAP emissions by mass from the data set. Formaldehyde, triethylamine, and

phenol are also emitted in large quantities. Several PB HAP are reported in the data set for the mineral wool manufacturing source category, including lead, cadmium, and mercury compounds.

The major anomalies associated with the data set for this source category include the HAP emitted and the speciation of chromium and mercury emissions. Some HAP expected (e.g., lead, manganese, cadmium, chromium, nickel, etc.) are not included for all the facilities in the data set, and some that are not expected (e.g., benzene and triethylamine) are reported from a few facilities.

2. Aerospace Manufacturing and Rework Facilities

The aerospace manufacturing and rework source category includes all facilities that manufacture aerospace vehicles and/or vehicle components and all facilities that rework or repair these items. An aerospace vehicle or component is any fabricated, processed, or assembled set of parts or complete unit of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles. Organic and inorganic HAP emissions in aerospace facilities originate from cleaning, primer application, topcoat application, paint stripping, chemical milling maskant application, and waste handling and storage. The

HAP expected to be emitted by aerospace facilities include chromium, cadmium, methylene chloride, toluene, xylene, ethylene glycol, and glycol ethers. For emissions reported generically as "chromium" or "chromium and compounds," emissions are speciated for this source category as 75 percent "chromium (III) compounds" and 25 percent "chromium (VI) compounds." This speciation is based on source category-specific information provided by the aerospace industry. (Typically, a 66 percent "chromium (III) compounds" and 34 percent "chromium (VI) compounds" is used as a default speciation profile based on the approach adopted by the 1996 National-Scale Air Toxics Assessment, or NATA.) We encourage commenters to review this assumption and provide site-specific chromium (VI) and chromium (III) data where possible.

The ANPRM data set for the Aerospace Manufacturing and Rework source category includes information for 301 facilities, 169 of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the aerospace source category, the ANPRM data set includes data for about 10 percent of the industry. Methyl chloroform, tetrachloroethylene, toluene, trichloroethylene, and methylene chloride account for

approximately 80 percent of the mass of HAP emitted across the 301 facilities in the ANPRM dataset.

The major anomalies associated with the data set for this source category include the number of facilities in the source category, the HAP emitted, and the speciation of chromium. Some HAP expected to be reported (chromium, nickel, and hexamethylene diisocyanate) are not included for all the facilities in the data set.

3. Marine Tank Vessel Loading Operations

Marine tank vessel loading operations are facilities that load and unload liquid commodities in bulk, such as crude oil, gasoline and other fuels, and some chemicals and solvent mixtures. The cargo is pumped from the terminal's large, above-ground storage tanks through a network of pipes and into a storage compartment (tank) on the vessel. Most marine tank vessel loading operations are associated with petroleum refineries, synthetic organic chemical manufacturers, or are independent terminals. The major HAP emission points for marine vessel loading operations include open tank hatches and overhead vent systems. Other possible emission points are hatch covers or domes, pressure-vacuum relief valves, seals, and vents. Emissions may also occur during ballasting (i.e., the process of

drawing ballast as water into a cargo hold). The primary HAP expected to be emitted from marine vessel loading operations depend on the material being loaded, but are generally expected to be benzene, hexane, toluene, xylene compounds, ethyl benzene, and cumene.

The ANPRM data set for the marine tank vessel loading operations source category includes information for 126 facilities, all of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in this source category, the ANPRM data set includes data for more than were expected to be subject to the MACT (which was estimated to be 40 at time of the MACT promulgation) and less than the estimated number of existing facilities based on Army Corps of Engineers estimates (700). In the ANPRM data set, the HAP emitted in largest quantities from these 126 sources are hexane, methanol, toluene, xylene compounds, and benzene, which collectively accounts for nearly 75 percent of the total HAP emitted.

The major anomalies associated with the data set for this source category include the number of facilities in the source category and the emission release parameters (of which nearly all are NEI default values).

4. Natural Gas Transmission and Storage

The natural gas transmission and storage source category comprises the pipelines, facilities, and equipment used to transport and store natural gas products (hydrocarbon liquids and gases). Pipeline transport of natural gas products is covered by this category to either the point of custody transfer for the oil and natural gas production source category or the point of delivery to the local distribution company or final end user of the natural gas if no local distribution company is present. Emissions of HAP from the natural gas transmission and storage category come from glycol dehydration unit reboiler vents, other process vents, storage vessels with flash emissions, pipeline pigging and storage of pipeline pigging wastes, combustion sources, and equipment leaks. The major HAP expected to be emitted by the natural gas transmission and storage source category are hexane, toluene, benzene, mixed xylenes, formaldehyde, and glycol ethers.

Our previous estimates identified seven natural gas transmission and storage facilities that were major sources. The ANPRM data set for the natural gas transmission and storage source category includes information for 123 facilities, 78 of which are classified

as major sources in the NEI. In the ANPRM data set, the HAP emitted in largest quantities from natural gas transmission and storage facilities are hexane, toluene, benzene, and mixed xylenes and these emissions collectively account for over 75 percent of the total HAP emissions from this source category.

One major anomaly associated with the data set for this source category is the number of facilities identified in the ANPRM data set compared to the number of facilities previously identified for this source category (i.e., there appear to be more facilities identified as natural gas transmission and storage facilities in the ANPRM data set than previously identified).

5. Oil and Natural Gas Production

The Oil and Natural Gas Production source category includes facilities involved in the recovery and treatment of hydrocarbon liquids and gases from oil and natural gas production wells. Components of these facilities include glycol dehydration units, condensate tank batteries, and other tanks and equipment present at natural gas processing plants. The primary HAP emissions from oil and natural gas production facilities occur via the glycol dehydration reboiler vents, other process vents, storage vessels, and

equipment leaks. The major HAP expected to be emitted by the oil and natural gas production source category are xylenes, toluene, hexane, and ethyl benzene.

The ANPRM data set for the oil and natural gas production source category includes information for 2,824 facilities, of which 909 facilities are classified as major sources in the NEI. Our previous estimates identified 440 major sources and 2,200 area sources. In the ANPRM data set, the HAP emitted in the greatest amounts are carbonyl sulfide, hexane, toluene, benzene, and xylenes formaldehyde, ethyl benzene, ethylene glycol, and methanol. These HAP collectively account for over 99 percent of the total HAP emissions for this source category. There are twelve PB HAP reported in the data set for the Oil and Natural Gas Production source category, including polycyclic aromatic hydrocarbons (PAH), lead, dibenzofuran, and cadmium.

For reported emissions of POM chemicals, emissions are grouped into one of seven POM categories - POM 71002 (16-PAH, PAH total, POM); POM 72002 (2-Chloronaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Benzo(c)phenanthrene, Benzo[e]Pyrene, Benzo[g,h,i,]Perylene, Fluoranthene, Fluorene, Perylene,

Phenanthrene, Pyrene); POM 73002 (7,12-Dimethylbenz[a]Anthracene); POM 74002 (3-Methylcholanthrene); POM 75002 (5-Methylchrysene, Benzo[a]Pyrene, Dibenzo[a,h]Anthracene); POM 76002 (B[j]Fluoranthen, Benz[a]Anthracene, Benzo[b]Fluoranthene, Benzo[k]Fluoranthene, Indeno[1,2,3-c,d]Pyrene); and POM 77002 (Chrysene). We encourage commenters to provide data on the individual chemical(s) that make up the POM.

The major anomalies associated with the data set for this source category include the number of facilities in the source category, the specific HAP emitted by individual facilities, and default plant coordinates. The ANPRM data set contains over 2,800 facilities and this number is more than expected. The ANPRM data set also contains emissions of some HAP that are expected to be emitted from all facilities in the category (e.g., xylenes, hexane, toluene, and ethyl benzene), but are only emitted from a small percentage of facilities. Conversely, the HAP with the largest quantity of emissions in the ANPRM data set, carbonyl sulfide, is not expected to be emitted from facilities in this source category. In addition, a significant percentage (40 percent) of the coordinates in the ANPRM data set are default coordinates.

6. Petroleum Refineries

Petroleum refineries are facilities engaged in refining and producing products made from crude oil or unfinished petroleum derivatives. EPA listed two separate Petroleum Refinery source categories, both of which include any facility engaged in producing gasoline, naphtha, kerosene, jet fuels, distillate fuel oils, residual fuel oils, lubricants, or other products from crude oil or unfinished petroleum derivatives. The Petroleum Refineries - Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units source category includes the following process units: catalytic cracking (fluid and other) units, catalytic reforming units, and sulfur plant units (MACT II). The second source category, Petroleum Refineries - Other Sources Not Distinctly Listed, includes the process units not listed in the first category including, but not limited to, thermal cracking, vacuum distillation, crude distillation, hydrotreating, hydrorefining, isomerization, polymerization, lube oil processing, and hydrogen production (MACT I).

Because the MACT standard for the "Other Sources Not Distinctly Listed" source category (40 CFR part 63, subpart UU) was promulgated first (60 FR 43244, August 18, 1995),

it is commonly referred to as Petroleum Refineries MACT I. Only the units in the "Other Sources Not Distinctly Listed" category, and regulated by the MACT 1 standards, are being addressed in RTR Phase II. These units include emissions sources classified under SIC 2911 located at petroleum refineries, including: petroleum refinery process units, storage vessels, transfer racks, wastewater streams, and equipment leaks. The units and emissions associated with catalytic cracking, catalytic reforming, and sulfur plants, which are all regulated by MACT 2 standards, will be investigated in future RTR efforts.

The specific HAP emitted by petroleum refineries varies by facility and process operations but can include a variety of organic and inorganic compounds and metals. Emissions originate from various process vents, storage vessels, wastewater streams, loading racks, marine tank vessel loading operations, and equipment leaks associated with refining facilities. Process vents, wastewater streams, and storage vessels generally emit organic HAP. The primary HAP expected to be emitted from the MACT 1 petroleum refining sources include benzene, toluene, and ethyl benzene, but can also include acetaldehyde, formaldehyde, hexane, phenol, xylene, carbonyl sulfide,

carbon disulfide, hydrogen chloride, chlorine and other HAP.

The ANPRM dataset for this source category contains 175 refineries, of which 124 are classified as major sources. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date benzene emissions data for 23 refineries. The industry and EPA consider these data to be the most accurate benzene emissions data available for petroleum refineries. For these 23 refineries, EPA replaced all benzene emissions data in the NEI with these updated industry data. The emissions of other HAP that were in the NEI for these 23 refineries were not removed. For the purpose of these analyses, the ANPRM data set for these 23 facilities was kept separate from the ANPRM data set for the remaining 152 refineries.

Organic chemicals account for the majority of the total mass of HAP emitted by petroleum refinery sources, with toluene, hexane, mixed and individual isomers of xylenes, benzene, methanol, methyl tert-butyl ether, and ethyl benzene accounting for about 90 percent of the HAP mass emitted across the both data sets. Of the 152 refineries for which industry did not supply benzene

emissions data, benzene emissions were reported for 137 refineries. A range of PB HAP emissions are reported in the ANPRM datasets, including various PAH and several metals (including lead and lead compounds, cadmium and cadmium compounds, mercury and mercury compounds).

For reported emissions of POM chemicals, emissions are grouped into one of seven POM categories. We encourage commenters to provide the individual chemical(s) that make up the POM.

The major anomalies associated with the data sets for this source category include specific HAP emitted by individual facilities, along with release characteristics and coordinates for those refineries for which industry did not provide updated data. The data sets contain emissions of several metal HAP, which are expected to be more likely to be emitted from MACT 2 sources, not MACT 1. Also, it appears that the benzene emissions for the 23 facilities for which the industry supplied new data are significantly higher than the benzene emissions in the NEI for the other refineries.

Nearly all of the emissions release parameters (71 percent of stack height, 96 percent of stack diameter, 97 percent of emissions exit temperature, and 97 percent of

emissions exit velocity values) for the refineries for which no new data were provided are default values in the NEI and the ANPRM data set. Finally, a significant percentage (40 percent) of the coordinates in the data set for which new data were not provided are defaulted, some based on county or zip code centroids.

7. Pharmaceutical Manufacturing

The pharmaceutical manufacturing process consists of chemical production operations that produce drugs and medication. These operations include chemical synthesis (deriving a drug's active ingredient) and chemical formulation (producing a drug in its final form). During pharmaceutical manufacturing operations, HAP emissions can occur from breathing and withdrawal losses from chemical storage tanks, venting of process vessels, leaks from piping and equipment used to transfer HAP compounds (equipment leaks), and volatilization of HAP from wastewater streams. While a wide variety of HAP can be emitted from pharmaceutical manufacturing processes, expected HAP include methylene chloride, methanol, N,N-dimethylformamide, toluene and hydrochloric acid. When the NESHAP for this category was finalized in 1998, EPA

estimated that there were approximately 101 pharmaceutical manufacturing operations subject to the MACT regulations.

The ANPRM data set for pharmaceutical manufacturing includes 222 facilities, 107 of which are classified as major sources in the NEI. The HAP emitted in largest quantities from these sources are methanol, methylene chloride, and toluene. Emissions of these three HAP account for over 80 percent of the mass of all HAP emitted across all 222 facilities. PB HAP emissions in the ANPRM data set for the Pharmaceutical Manufacturing source category include lead, mercury, and cadmium compounds as well as a range of PAH.

For reported emissions of POM chemicals, emissions are grouped into of one of seven POM categories. We encourage commenters to provide the individual chemical(s) that make up the POM.

For emissions reported generically as "chromium" or "chromium and compounds," emissions are speciated for this source category as 66 percent "chromium (III) compounds" and 34 percent "chromium (VI) compounds." We encourage commenters to review this assumption and provide specific chromium (VI) and chromium (III) data where possible.

The major anomalies associated with the data set for this source category are related to the HAP emitted. While methylene chloride, NN-dimethylformamide, toluene, and hydrochloric acid are expected to be emitted by facilities in this source category, these emissions were not reported for many of the facilities. Also, HAP not expected to be emitted from this source category (e.g., ethylene oxide, p-dioxane, naphthalene, ethylene dichloride, arsenic, hydrazine, POM, and chromium (IV) compounds) are reported for eight or fewer facilities.

8. Epichlorohydrin Elastomers Production

Epichlorohydrin elastomers are widely used in the automotive industry. The main epichlorohydrin elastomers are polyepichlorohydrin, epi-ethylene oxide (EO) copolymer, epi-allyl glycidyl ether (AGE) copolymer, and epi-EO-AGE terpolymer. Sources of HAP emissions for the Epichlorohydrin Elastomer source category include raw material storage vessels, front-end process vents, back-end process operations, wastewater operations, and equipment leaks. The majority of the emissions come from equipment leaks. The process "front-end" includes pre-polymerization, reaction, stripping, and material recovery operations; and the process "back-end" includes all

operations after stripping (predominately drying and finishing). The primary HAP emitted during production are epichlorohydrin and toluene.

The ANPRM data set for the Epichlorohydrin source category includes information for one facility, which is classified as a major source in the NEI. Our previous estimate of the number of facilities in the Epichlorohydrin source category was also one, therefore we believe the ANPRM data set includes data for the entire industry. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date emissions and emissions release characteristic data for this facility. The industry and EPA consider these data to be the most accurate emissions and emissions release characteristic data available for the epichlorohydrin elastomers production processes at this facility. EPA replaced all epichlorohydrin elastomers production emissions and emissions release characteristic data in the NEI with the updated industry data for this facility. In the ANPRM data set, toluene is emitted in the greatest quantity and accounts for about 99 percent of the total emissions.

9. Hypalon™ Production

Hypalon™, or chlorosulfonated polyethylene, is a synthetic rubber produced by reacting polyethylene with chloric and sulfur dioxide, transforming the thermoplastic polyethylene into a vulcanized elastomer. The reaction is conducted in a solvent reaction medium containing carbon tetrachloride. Sources of HAP emissions include raw material storage vessels, front-end process vents, back-end process operations, and equipment leaks. The majority of the emissions come from front-end process vents. The process "front-end" includes pre-polymerization, reaction, stripping, and material recovery operations; and the process "back-end" includes all operations after stripping (predominately drying and finishing). The primary HAP emitted during production are carbon tetrachloride and chloroform.

The ANPRM data set for the Hypalon™ resins source category includes information for one facility, which is classified as a major source in the NEI. Our previous estimate of the number of facilities in the Hypalon™ source category was also one, therefore we believe the ANPRM data set includes data for the entire industry. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date emissions

and emissions release characteristic data for this facility. The industry and EPA consider these data to be the most accurate emissions and emissions release characteristic data available for the Hypalon™ production processes at this facility. EPA replaced all Hypalon™ production emissions and emissions release characteristic data in the NEI with the updated industry data for this facility.

In the ANPRM data set, carbon tetrachloride and chloroform are emitted in the greatest amounts and account for nearly all of the emissions.

10. Nitrile Butadiene Rubber Production

Nitrile butadiene rubber is a copolymer of 1,3-butadiene and acrylonitrile, and the Nitrile Butadiene Rubber Production source category includes any facility that polymerizes 1,3-butadiene and acrylonitrile. Depending on its specific composition, nitrile butadiene rubber can be resistant to oil and chemicals, a property that facilitates its use in disposable gloves, hoses, seals, and a variety of automotive applications. The drying and finishing steps that make up the back-end processes are significant sources of HAP emissions. Other sources of HAP emissions include raw material storage

vessels, front-end process vents, wastewater operations, and equipment leaks. The primary HAP emitted during production are acrylonitrile, 1,3-butadiene, and styrene.

The ANPRM data set for the Nitrile Butadiene Rubber Production source category includes five facilities, two of which are classified as major sources. Based on our previous estimates of the number of facilities in the source category, the ANPRM data set includes data for the entire industry. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date emissions and emissions release characteristic data for three of these five facilities. The industry and EPA consider these data to be the most accurate emissions and emissions release characteristic data available for the nitrile butadiene rubber production processes at these facilities. For these three facilities, EPA replaced all nitrile butadiene rubber production emissions and emissions release characteristic data in the NEI with these updated industry data.

In the ANPRM data set, styrene, 1,3-butadiene, and acrylonitrile are emitted in the largest quantities, accounting for 42 percent, 21 percent, and 33 percent of the total source category emissions, respectively.

A major anomaly associated with the data set for this source category is that one HAP expected to be reported by each facility (1,3-butadiene) is not included in the data for all the facilities.

11. Polybutadiene Rubber Production

Polybutadiene rubber is a homopolymer of 1,3-butadiene, and the Polybutadiene Rubber Production source category includes any facility that polymerizes 1,3-butadiene. Most of the polybutadiene rubber manufactured in the United States is used in the production of tires in the construction of the tread and sidewalls. Sources of HAP emissions include raw material storage vessels, front-end process vents, back-end process operations, wastewater operations, and equipment leaks. The majority of the emissions come from back-end process operations, which are predominately drying and finishing. The primary HAP emitted during production include hexane, 1,3-butadiene, styrene, and toluene.

The ANPRM data set for the Polybutadiene Rubber Production source category includes information for five facilities, each of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Polybutadiene Rubber Production source

category, the ANPRM data set includes data for the entire industry. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date emissions and emissions release characteristic data for each of these five facilities. The industry and EPA consider these data to be the most accurate emissions and emissions release characteristic data available for the polybutadiene rubber production processes at these facilities. For these five facilities, EPA replaced all polybutadiene rubber production emissions and emissions release characteristic data in the NEI with these updated industry data.

In the ANPRM data set, hexane and toluene are emitted in the greatest amounts and account for about 74 and 19 percent of the total emissions, respectively.

12. Styrene-Butadiene Rubber and Latex Production

The Styrene-Butadiene Rubber and Latex Production source category includes any facility that manufactures copolymers consisting of styrene and butadiene monomer units. This source category is divided into three subcategories due to technical process and HAP emission differences: (1) the production of styrene-butadiene rubber by emulsion, (2) the production of styrene-butadiene

rubber by solution, and (3) the production of latex. Styrene-butadiene rubber is coagulated and dried, while latex is not. For both styrene-butadiene rubber processes, the monomers used are styrene and butadiene; either process can be conducted as a batch or a continuous process. Sources of HAP emissions for the emulsion subcategory include raw material storage vessels, front-end process vents, back-end process operations, wastewater operations, and equipment leaks. Most of the emissions come from back-end process operations, which are predominately drying and finishing. The primary HAP emitted by emulsion styrene-butadiene rubber production are styrene and 1-3,butadiene. Sources of HAP emissions for the solution subcategory include raw material storage vessels, front-end process vents, back-end process operations, wastewater operations, and equipment leaks. Most of the emissions come from back-end process operations. The primary HAP emitted by production of solution styrene butadiene rubber are hexane, butadiene, styrene, and toluene. Sources of HAP emissions from the latex production subcategory include raw material storage vessels, front-end process vents, wastewater operations, and equipment leaks. The primary HAP emitted are styrene and butadiene.

The ANPRM data set for the Styrene-Butadiene Rubber and Latex Production source category includes information for 15 facilities, seven of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Styrene-Butadiene Rubber and Latex Production source category, the ANPRM data set includes data for the entire industry. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date emissions and emissions release characteristic data for eight of these 15 facilities. The industry and EPA consider these data to be the most accurate emissions and emissions release characteristic data available for the styrene butadiene rubber and latex production processes at these facilities. For these eight facilities, EPA replaced all styrene butadiene rubber and latex production emissions and emissions release characteristic data in the NEI with these updated industry data.

In the ANPRM data set, styrene and 1,3-butadiene are emitted in the greatest amounts and account for about 88 and 8 percent of the total emissions, respectively.

13. Acrylonitrile-Butadiene-Styrene Production

Acrylonitrile-butadiene-styrene resins consist of a terpolymer of acrylonitrile, butadiene, and styrene and can be synthesized by emulsion, suspension, and continuous mass polymerization. The majority of acrylonitrile-butadiene-styrene resin production is by batch emulsion. The primary HAP emissions during the acrylonitrile-butadiene-styrene production process occur via equipment leaks and process vents. Other emission points include storage vessels, wastewater operations, and heat exchange systems. Typical products made from acrylonitrile-butadiene-styrene resins are piping, refrigerator door liners and food compartments, automotive components, telephones, luggage and cases, toys, mobile homes, and margarine tubs. The major HAP expected to be emitted by the Acrylonitrile-Butadiene-Styrene Production source category are acrylonitrile, butadiene, and styrene.

The ANPRM data set for the Acrylonitrile-Butadiene-Styrene Production source category includes information for seven facilities, six of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Acrylonitrile-Butadiene-Styrene Production source category, the ANPRM data set includes data for about half of the industry. In the ANPRM data

set, styrene and acrylonitrile are emitted in the greatest amounts and account for about 65 percent of the total emissions.

The major anomalies associated with the data set for this source category include the number of facilities in the source category (i.e., only about half of the facilities in the category appear to be included in the inventory) and the specific HAP emitted by individual facilities. Some HAP expected to be reported (styrene and 1,3-butadiene) are not included for all the plants in the data set and other unexpected HAP (e.g., ethylene dichloride and ethylene oxide) are reported to be emitted by at least one facility.

14. Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Resin Production

Methyl methacrylate-acrylonitrile-butadiene-styrene is an acrylic graft copolymer. Chemically, graft copolymers are prepared by attaching a polymer as a branch to the chain of another polymer of a different composition. Typical products made from methyl methacrylate-acrylonitrile-butadiene-styrene resins are piping, refrigerator door liners and food compartments, automotive components, telephones, luggage and cases, toys, mobile

homes, and margarine tubs. Major HAP expected to be emitted by the Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene source category are acrylonitrile, butadiene, and styrene.

The ANPRM data set for the Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene source category includes information for one facility, which is classified as a major source in the NEI. Based on our previous estimates of the number of facilities in the Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene source category, the ANPRM data set includes data for the whole industry. In the ANPRM data set, the six HAP reported to be emitted include styrene, acrylonitrile, 1,3-butadiene, methyl methacrylate, cumene, and ethyl benzene. Styrene accounts for almost 83 percent of the mass emitted.

One major anomaly associated with the data set for this source category is that nearly all of the emissions points are reported to be fugitive sources, but the data includes only NEI default "virtual stack" emissions parameters for these sources.

15. Methyl Methacrylate-Butadiene-Styrene Production

Methyl methacrylate-butadiene-styrene polymers are prepared by grafting methyl methacrylate and styrene onto a

styrene-butadiene rubber in an emulsion process. The product is a two-phase polymer used as an impact modifier for rigid polyvinyl chloride products. These products are used for applications in packaging, building, and construction. Emission points for methyl methacrylate-butadiene-styrene resin production include process vents, equipment leaks, storage vessels, and wastewater operations. Major HAP expected to be emitted by the Methyl Methacrylate-Butadiene-Styrene Production source category include butadiene, styrene, acrylonitrile, and methyl methacrylate.

The ANPRM data set for the Methyl Methacrylate-Butadiene-Styrene Resin Production source category includes information for three facilities, each of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Methyl Methacrylate-Butadiene-Styrene Production source category, the ANPRM data set includes data for each facility in the industry. In the ANPRM data set, toluene, methyl methacrylate, styrene, and 1,3-butadiene account for nearly all of the emissions.

The major anomalies associated with the data set for this source category include the HAP emitted. Some HAP are

emitted by one facility and possibly should be emitted by the other facilities in the source category. In addition, nearly all of the emission release parameters are NEI default values.

16. Nitrile Resins Production

Nitrile resins are synthesized through the polymerization of acrylonitrile, methyl acrylate, and butadiene latex using an emulsion process. Nitrile resin products are commonly used in packaging applications (e.g., food packaging). Emissions points for nitrile resin manufacturing processes are process vents and equipment leaks. Emissions from storage tanks, such as those used to store acrylonitrile, are also possible. The major HAP expected to be emitted by the nitrile resins production source category is acrylonitrile.

The ANPRM data set for the Nitrile Resins source category includes information for one facility, which is classified as a major source in the NEI. Based on our previous estimates of the number of facilities in the Nitrile Resins source category, the ANPRM data set includes data for the whole industry. Acrylonitrile is the HAP emitted in the largest quantity, accounting for over 55 percent of the total HAP mass emitted.

One major anomaly associated with the data set for this source category is that 100 percent of the emission release parameters are NEI default values.

17. Polyethylene Terephthalate Production

Three different types of resins are made by sources covered by the Polyethylene Terephthalate Production source category: solid-state resins (polyethylene terephthalate bottle grade resins); polyester film; and engineering resins. They are all thermoplastic linear condensation polymers based on dimethyl terephthalate or terephthalic acid. Polyethylene terephthalate melt-phase polymer is used in the production of all three of these resins. Polyethylene terephthalate production can occur via either a batch or continuous process. The most common use of polyethylene terephthalate solid-state resins is in soft drink bottles, and some industrial fiber-graded polyester (e.g., for tire cord) is also produced from polyethylene terephthalate solid-state resins. The most common uses of polyethylene terephthalate film are photographic film and magnetic media. Polyethylene terephthalate is used extensively in the manufacture of synthetic fibers (i.e., polyester fibers), which compose the largest segment of the synthetic fiber industry. The most common uses of

polyester fibers are apparel, home furnishings, carpets, fiberfill, and other industrial processes. Emissions sources present at polyethylene terephthalate production processes include raw material storage tanks, mix tanks, prepolymerization and polymerization reaction vents and process tanks, cooling towers, and methanol recovery systems. Major HAP emissions expected from the Polyethylene Terephthalate Production source category are ethylene glycol, methanol, acetaldehyde, and dioxane.

The ANPRM data set for the Polyethylene Terephthalate source category includes information for 22 facilities, 21 of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Polyethylene Terephthalate Production source category, the ANPRM data set includes data for about two-thirds of the facilities in the industry. In the ANPRM data set, volatile organic HAP dominate the total mass emissions, with methanol, ethylene glycol, acetaldehyde, methylene chloride, and mixed xylenes accounting for over three-fourths of the total emissions.

The major anomalies associated with the data set for this source category include the number of facilities in the source category and the HAP emitted. Some HAP expected

to be reported (methanol, acetaldehyde, and dioxane) are not included for all the plants in the data set.

18. Polystyrene Production

Polystyrene resins are those produced by the polymerization of styrene monomer. This type of resin can be produced by three methods: (1) suspension polymerization (operated in batch mode); (2) mass (operated in a continuous mode); and (3) emulsion process (operated in a continuous mode). The mass and suspension methods are the most commercially significant, whereas use of the emulsion process has decreased significantly since the mid-1940s. The uses for polystyrene resin include packaging and one-time use, expandable polystyrene beads, electronics, resellers and compounding, consumer and institutional products, and furniture, building, or construction uses. A wide variety of consumer and construction products are made from polystyrene resins, including disposable dinnerware, shower doors, light diffusers, soap dishes, insulation board, food containers, drain pipes, audio and video tape, picnic coolers, loose fill packaging, and tubing. The major HAP expected to be emitted by the polystyrene source category is styrene.

The ANPRM data set for the polystyrene resins source category includes information for 23 facilities, 14 of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Polystyrene Production source category, the ANPRM data set is missing data for 5 facilities in the industry. In the ANPRM data set, styrene is emitted in the greatest amounts and accounts for about 65 percent of the total emissions.

The major anomalies associated with the data set for this source category include facility representation of the source category and the HAP emitted. Some unexpected HAP, including tetrachloroethylene, naphthalene, ethyl chloride, and several metals, are reported to be emitted by some facilities.

19. Styrene-Acrylonitrile Production

Styrene-acrylonitrile resins are copolymers of styrene and acrylonitrile. Styrene-acrylonitrile resins may be synthesized by emulsion, suspension, and continuous mass polymerization; however, the majority of production is by batch emulsion. Typical uses include automobile instrument panels and interior trim and housewares. Emission points along the styrene-acrylonitrile resin production process include equipment leaks, process vents, storage vessels,

and wastewater operations. Major HAP expected to be emitted by the Styrene-Acrylonitrile Production source category are acrylonitrile and styrene.

The ANPRM data set for the Styrene-Acrylonitrile Production source category includes information for three facilities, all of which are classified as major sources in the NEI. Based on our previous estimates of the number of facilities in the Styrene-Acrylonitrile Production source category, the ANPRM data set is missing data for 3 facilities in the industry. Many facilities that produce acrylonitrile-butadiene-styrene resins also produce styrene-acrylonitrile, because much of the styrene-acrylonitrile resins that are produced are used as feedstock in the production of acrylonitrile-butadiene-styrene. Therefore, for two of these plant sites, we could not distinguish whether certain emissions units belonged to the Acrylonitrile-Butadiene-Styrene or the Styrene-Acrylonitrile Production source categories. For these two plant sites, the emissions units in question were assigned to the Acrylonitrile-Butadiene-Styrene Production source category and no emissions units were assigned to the Styrene-Acrylonitrile Production source category. For the third plant site, EPA assigned the Styrene-Acrylonitrile

Production MACT code to all the processes that emitted styrene or acrylonitrile and included these units in the ANPRM data set for the Styrene-Acrylonitrile Production source category. For this facility, styrene is the HAP emitted in the largest quantity accounting for over 55 percent of total HAP mass emitted. Ethyl benzene, 1,3-butadiene, and toluene are also reported in relatively large quantities and collectively account for about 35 percent of the total emissions.

The major anomalies associated with the data set for this source category include the number of facilities in the source category, the use of county centroid locations as default emissions release locations, and the use of NEI default values for 100 percent of the emissions release parameters. In addition, one HAP (acrylonitrile) is expected to be emitted in larger quantities than reported in the NEI.

20. Primary Aluminum Reduction Plants

Primary aluminum plants produce aluminum metal from alumina ore through the electrolytic reduction of aluminum oxide (alumina) by direct current voltage in an electrolyte (called "cryolite") of sodium aluminum fluoride. All primary aluminum facilities have potlines that produce

aluminum metal, and also have a paste production operation. In addition, some facilities have anode bake furnaces that are used in the production of aluminum anodes. Potlines are categorized based primarily on differences in the process operation, equipment, and the applicability of control devices. HAP expected to be emitted by primary aluminum production sources include hydrogen fluoride and POM, including PAH (e.g., anthracene, benzo(a) pyrene, and naphthalene) that are part of the POM HAP category.

The ANPRM data set for the primary aluminum reduction source category includes information for 20 primary aluminum facilities. Of these 20 facilities, 19 are classified as major sources in the NEI. Based on our previous estimates of the number of primary aluminum reduction facilities, this includes over 85 percent of the industry. Although a wide range of compounds are reported as emissions from these facilities in the ANPRM data set, carbonyl sulfide, hydrogen fluoride, and hydrochloric acid make up over 96 percent of the total emissions by mass. Hydrogen fluoride is the most common HAP reported as an emission (reported for 18 facilities); carbonyl sulfide and hydrochloric acid are reported as emissions by 11 and 7 facilities, respectively. A wide variety of PB HAP are

reported, including numerous PAH and the metals lead, cadmium, and mercury and their associated compounds. For reported emissions of POM chemicals, emissions are grouped into one of seven POM categories. We encourage commenters to provide the individual chemical(s) that make up the POM.

The major anomalies associated with the data set for this source category include the specific HAP emitted by individual facilities and the speciation of POM. Certain HAP (e.g., chlorine, hydrogen chloride, POM) are not included for all the facilities in the data set.

21. Printing and Publishing

The printing and publishing source category includes facilities that use lithography, rotogravure, and other methods to print a variety of substrates, including paper, plastic, metal foil, wood, vinyl, metal, and glass. The MACT standards focused on those facilities that perform publication rotogravure printing, product and package rotogravure printing, and wide-web flexographic printing. Publication rotogravure printing refers to printing using a rotogravure press of various paper products, including catalogs, magazines, direct mail advertisements, display advertisements, miscellaneous brochures and other advertisements, newspaper sections and inserts,

periodicals, and telephone directories. Product and packaging rotogravure printing entails the production, on a rotogravure press, of any printed substrate not otherwise defined as publication rotogravure printing. This includes (but is not limited to) folding cartons, flexible packaging, labels and wrappers, gift wraps, wall and floor coverings, upholstery, decorative laminates, and tissue products. Wide-web flexographic printing is a technique for printing substrates of 18 inches or wider in which the applied pattern is raised above the printing plate and the image carrier is made of rubber or other elastomeric materials. The wide-web flexographic presses are used to print flexible and rigid packaging; newspapers, magazines, and directories; paper towels, tissues, and similar products; and printed vinyl shower curtains and wallpaper. Research and laboratory facilities are not subject to the provisions of the MACT standards unless they are collocated with production lines. The NESHAP applies to HAP present in the inks, ink extenders, solvents, coatings, varnishes, primers, adhesives, and other materials applied with rotogravure and flexographic plates.

The primary HAP expected to be emitted from printing and publishing operations are toluene, xylene,

ethylbenzene, methanol, methyl isobutyl ketone, ethylene glycol, and certain glycol ethers.

At the time of MACT promulgation in 1995, EPA estimated that there were approximately 200 publication rotogravure, product and packaging rotogravure, and wide-web flexographic printing facilities nationwide that would be subject to these MACT regulations.

The ANPRM dataset for the printing and publishing source category contains 463 facilities, of which 216 are classified as major sources in the NEI. The HAP emitted in largest quantities from these sources are toluene, glycol ethers, methyl isobutyl ketone, and xylene (mixture of o-, m-, and p- isomers). Emissions from these HAP account for nearly 94 percent of the mass emitted across all 463 facilities. POM is the only PB HAP reported in the ANPRM data set for this source category.

For reported emissions of POM chemicals, emissions are grouped into one of seven POM categories. We encourage commenters to provide the individual chemical(s) that make up the POM.

The major anomalies associated with the data set for this source category are related to the HAP emitted. Emissions of several HAP, including trichloroethylene,

tetrachloroethylene, p-dioxane, benzene, and naphthalene, are reported to be emitted by a small percentage of sources in this category. These HAP may be emitted from other on-site processes. We are requesting data on these HAP emissions.

22. Shipbuilding and Ship Repair

The shipbuilding and ship repair industry consists of establishments that build, repair, repaint, convert, and alter ships. In general, activities and processes involved in ship repair and new ship construction are relatively similar. Operations include fabrication of basic components from raw materials, welding components and parts together, painting and repainting, overhauls, ship conversions, and other alterations. Nearly all shipyards that construct new ships also perform major ship repairs. Marine coatings used on offshore oil and gas well drilling and production platforms are not included in this source category.

Emissions of HAP from shipbuilding and ship repair facilities result from painting, cleaning solvents, welding, metal forming and cutting, and abrasive blasting performed during ship repair and shipbuilding operations. HAP expected to be emitted include a range of organic

compounds used as solvents, including toluene, xylene, ethylbenzene, methanol, methyl isobutyl ketone, ethylene glycol, and glycol ethers. In addition to the organic HAP, relatively small amounts of inorganic HAP such as chromium, hexavalent chromium, manganese, nickel, and lead are expected to be emitted from painting, welding, metal forming and cutting, and abrasive blasting performed during ship repair and shipbuilding operations.

At the time of NESHAP promulgation in 1995, EPA estimated that there were approximately 437 facilities of varying capabilities involved in the construction and repair of ships in the United States; approximately 35 of these facilities qualified as major sources of HAP emissions.

The ANPRM data set for the shipbuilding and ship repair source category contains 88 facilities, of which 71 facilities are classified as major sources. In conjunction with previous efforts for this source category, the industry had collected and submitted up-to-date welding and blasting emissions data for 13 facilities. The industry and EPA consider these data to be the accurate welding and blasting emissions data for these facilities. For 12 of these 13 facilities, the 2002 NEI did not include any

emissions from these welding and blasting processes. The newly collected data was added to the ANPRM data set for these facilities. The data was not added for the 13th facility, which did have detailed state-submitted welding and blasting emissions data already included in the NEI. As no welding and blasting emissions data were available for the other facilities in the source category, no data was added to the ANPRM data set for these facilities. The HAP emitted in largest quantities in total from these sources are xylenes and ethylbenzene. Total emissions from these two HAP account for 63 percent of the mass emitted across all 88 facilities. PB HAP emissions reported in the ANPRM data set for the shipbuilding and ship repair source category include cadmium, lead compounds, POM, and mercury.

For emissions reported generically as "chromium" or "chromium and compounds," emissions are speciated for this source category as 66 percent "chromium (III) compounds" and 34 percent "chromium (VI) compounds." We encourage commenters to review this assumption and provide specific chromium (VI) and chromium (III) data where possible.

For reported emissions of POM chemicals, emissions are grouped into one of seven POM categories. We encourage

commenters to provide the individual chemical(s) that make up the POM.

The major anomalies associated with the data set for this source category are related to the HAP emitted. Some metal HAP expected to be reported from welding, blasting, and other metalworking processes are not included for all the facilities in the data set. We have been working with the industry to improve these anomalies, and will continue these efforts. However, we also welcome additional data on these emissions.

V. What Are We Specifically Seeking Comment On?

The primary purpose of this ANPRM is to solicit comments on the source-category specific data included in the ANPRM data sets. Therefore, we are asking you to carefully review the facility-specific data available for download on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html and provide corrections to these data. These data include information for each emissions release point at each facility in each of the 22 source categories included in Group 2 of the RTR Phase II. For large integrated facilities with multiple processes representing multiple source categories, it is often difficult to clearly distinguish the source category

to which each emission point belongs. For this reason, the data available for download include not only the data for each facility in the specific source category, but also the data for each entire facility.

In addition to the ANPRM data sets for each source category, we are providing a downloadable file which describes each source category and summarizes the major data anomalies. These files are being made available to focus the review of emissions data on the emission points and pollutants which are expected to contribute the most to significant inhalation exposures and health risks. More information on how to download the data and how to submit data corrections is provided in Sections VI and VII of this ANPRM, respectively.

In reviewing the data, we are requesting both general comments about how well the data represent the source categories and more specific comments regarding the emission-point specific information included in the ANPRM data set for each facility in the 22 source categories. We also ask that you examine situations in which we made changes or additions to the NEI data and provide comments and data that will help us improve or clarify the information in order to minimize any anomalies. We are

particularly interested in the following information regarding source category representation in the data:

- Names and addresses for any facilities with processes which should be, but are not included in the data set for a specific source category.
    - If known, whether data for these facilities are included in the NEI.
- Facilities whose data should not be included in the data set for a specific source category - please provide a brief description of the facilities and an explanation of why they do not belong in the data set for that source category.
- Facilities in the data set for a source category that are not major sources for HAP - please provide documentation verifying the area source status.

We would also like comment on the facility-specific and emission-point specific data, as well as our assumptions about certain data characteristics. As discussed further below, the areas in which further information and/or correction or clarification is requested, include the following:

- Facility location and identification
    - Facility name

- Facility address
- Facility category code (i.e., major or area source)

- Emission point data
  - SCC and MACT codes
  - Emissions (tons per year (TPY)) of each HAP
  - Emission release point type (i.e., fugitive, vertical, horizontal, gooseneck, vertical with raincap, or downward facing vent)
  - Emissions release characteristics: stack height and diameter, exit gas temperature, velocity, and flow rate
  - Emission point latitude and longitude coordinates
- Data characteristics
  - Acute emissions factors
  - Speciation of metal HAP and POM
  - HAP emissions performance level (e.g., actual, allowable, maximum)

At the facility level, we are asking for input on the name and address of the facility, whether the facility is a major or area source for HAP, and facility identification codes. The facility name should include at least the company name and may also include facility identification information, such as “Plant A” or “Ohio River Works.” The

address should include the street address of the plant location, as well as the city, county, State, and zip code for that location. We are also requesting verification of the area/major source status of each facility.

For each individual emission point, we are asking for comments on the SCC and MACT code to which each emission point is assigned, the HAP emitted, the mass of emissions reported for each HAP, and the release characteristics. For large facilities with multiple processes representing more than one source category, we ask that you pay particular attention to the MACT and SCC codes, so that emission points and emissions are assigned to the appropriate source category. We also ask that you provide comments on all HAP emitted from a process, even if you know the emission levels are very low. The high toxicity of some HAP means that even emission levels one might otherwise consider insignificant (in terms of mass) can have a significant risk impact. This is particularly true for PB HAP. These compounds have high toxicities and may be emitted by some of the source categories being reviewed. It is critical that we obtain the most accurate, speciated emission estimates possible to be used in the multi-pathway

assessments that will be conducted prior to proposal of regulatory actions.

If you consider the data in the ANPRM data sets unrepresentative of the emissions from a facility, explain why these data are not representative and submit better data where available. When submitting emissions data, we ask that you provide documentation of the basis for the revised values. We will need appropriate documentation to support any suggested changes. Data corrections are discussed more in section VII.

In addition to the emissions data, we also request comments and revisions on the release characteristics for individual emission points. First, you should check the emission release point type description. Most of the emission points in the NEI are either classified as vertical or fugitive, although the options also include horizontal, goose neck, vertical with rain cap, and downward facing vent. Then you should check the release parameters, which include stack height, exit gas temperature, stack diameter, exit gas velocity, and exit gas flow rate. Quite often the NEI contains default release parameters, so providing actual parameters will improve the quality of the data and the modeling results.

Emission point location is a parameter that can have a significant effect on the modeling results. Ideally, we would like a specific set of coordinates for every emission point. In many instances, a single set of coordinates is used for all emission points at a facility. In these situations, we request information on emission-point specific coordinates. If such detailed coordinates are already in the ANPRM data sets, we would like you to review them carefully and provide any updates or corrections needed.

To model fugitive sources, the release parameters used include the height, length, width, and angle of the area where the fugitive emissions sources are located, along with the temperature. The NEI contains fields for these parameters, but they are rarely populated. Instead, the NEI contains a set of default vertical stack parameters for fugitive sources, which have been designed to provide the same dispersion as a low-lying point source with minimal plume rise. These are a temperature of 72° Fahrenheit, a diameter of 0.003 feet, a velocity of 0.0003 feet per second, and a flow rate of 0 cubic feet per second. We request comment on the use of these release characteristics

to effectively model fugitive emission sources as pseudo-point sources.

We are also requesting comments concerning certain data characteristics. This includes the speciation of several metal HAP, including mercury and chromium, and polycyclic organic material. These HAP were separated into their various forms, such as hexavalent and trivalent chromium, within NEI using the procedures established by the National Air Toxics Assessment. We are requesting comment on whether the speciation factors used are appropriate and ask that any suggested alternative approaches be accompanied by documentation supporting that alternative.

Also, to screen for potentially-significant short-term exposures, maximum short-term (one-hour) emission rates will be developed by multiplying the average annual hourly emission rates by ten. We would like comments on whether this factor represents a reasonable approximation for each emission point in order to estimate acute exposures and risks. If you believe that any particular emission point does not represent a reasonable approximation, please provide your rationale and a suggestion for a more

appropriate ratio. This will assist us in our assessment of short-term impacts and risks.

As noted in section IV, the emissions values in the ANPRM data set generally represent actual emission levels. Where actual emissions data is not already included, we request that commenters provide such data.

In addition to comments on the data included in the data sets for each source category, we will accept other comments related to this ANPRM. As described in section VII of this ANPRM, all comments and supporting data must be submitted to the docket for this action.

VI. How may I access the data for a specific source category?

Source category descriptions and the ANPRM data sets are available on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. Information is available to be downloaded from this webpage for each source category in two separate files. One file contains a description of the source category, and a separate file includes the detailed ANPRM data set for the source category. These files must be downloaded from the website to be viewed.

The file containing the source category description is available in an Adobe® PDF format (this file format is viewable with Adobe® Reader, which may be downloaded at http://www.adobe.com/products/acrobat/readermain.html) and contains the following information:

- A description of the processes and major products
- The estimated number of facilities in the source category
- A summary of emission points types and HAP emissions from the source category
- A summary of the anomalies associated with the data for that source category

The ANPRM data set for each source category is included in a separate file, which must be downloaded from the RTR webpage - http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. These are Microsoft® Access files, which require Microsoft® Access to be viewed (if you do not have Microsoft® Access, contact Anne Pope by telephone ((919) 541-5373) or by e-mail (pope.anne@epa.gov) for other data viewing options). Each file contains the following information from the NEI for each facility in the source category:

Facility Data	**Emissions Data**

Facility Data	Emissions Data
EPA Region	Pollutant Code
Tribal Code	Pollutant Code Description
Tribe Name	Emissions (TPY)
State Abbreviation	MACT Code
County Name	MACT Flag
State County FIPS	SCC Code
NEI Site ID	SCC Code Description
Facility Name	Emission Unit ID
Location Address	Process ID
City Name	Emission Release Point ID
State Name	Emission Release Point Type
Zip Code	Stack Default Flag
Facility Registry	Stack height
State Facility Identifier	Exit Gas Temperature
SIC Code	Stack Diameter
SIC Code Description	Exit Gas Velocity
NAICS Code	Exit Gas Flow Rate
Facility Category Code	Longitude
Facility Category	Latitude
	Location Default Flag
	Data Source Code
	Data Source Description
	HAP Emissions Performance Level
	Start Date
	End Date

More information on these NEI data fields can be found in the NEI documentation at http://www.epa.gov/ttn/chief/net/2002inventory.html#documentation.

VII. How do I submit suggested data corrections?

The source category-specific ANPRM data sets are available for download on the RTR webpage at http://www.epa.gov/ttn/atw/rrisk/rtrpg.html. To suggest revisions to this information, we request that you complete the following steps:

1. Download the Microsoft® Access file containing the ANPRM data set for a source category.

2. Within this downloaded file, enter suggested revisions in the data fields appropriate for that information. The data fields that may be revised include the following:

Facility Data	**Emissions Data**
REVISED Tribal Code	REVISED Emissions (TPY)
REVISED County Name	REVISED MACT Code
REVISED Facility Name	REVISED SCC Code
REVISED Location Address	REVISED Emission Release Point
REVISED City Name	REVISED Stack height
REVISED State Name	REVISED Exit Gas Temperature
REVISED Zip Code	REVISED Stack Diameter
REVISED Facility Registry	REVISED Exit Gas Velocity
REVISED State Facility	REVISED Exit Gas Flow Rate
REVISED Facility Category	REVISED Longitude
	REVISED Latitude
	REVISED HAP Emissions

3. Fill in the following commenter information fields for each suggested revision:

- Commenter Name

- Commenter E-Mail Address
- Commenter Phone Number
- Revision Comments

4. Gather documentation for any suggested emissions revisions (e.g., performance test reports, material balance calculations, etc.).

5. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to the docket for this ANPRM (through one of the methods described in the "Addresses" section of this ANPRM). To help speed review of the revisions, it would also be helpful to submit the suggestions to EPA directly at RTR@epa.gov.

6. If you are providing comments on a facility with multiple source categories, you need only submit one file for that facility, which should contain all suggested changes for all source categories at that facility.

We strongly urge that all data revision comments be submitted in the form of updated Microsoft® Access files, which are provided on the http://www.epa.gov/ttn/atw/rrisk/rtrpg.html webpage. Data in the form of written descriptions or other electronic file formats will be difficult for EPA to translate into

the necessary format in a timely manner. Additionally, placing the burden on EPA to interpret data submitted in other formats increases the possibility of misinterpretation or errors.

VIII. What additional steps are expected after EPA reviews the comments received?

Once EPA receives comments on the Group 2 emissions and emissions release data, we plan to revise the ANPRM

data sets based upon public comment and supporting documentation, model with the new data, and proceed with proposing and promulgating residual risk and technology review standards as appropriate. More detail of this process is provided in sections C, D, and E of section II of this ANPRM.

List of Subjects in 40 CFR part 63

Environmental Protection, Air pollution control, Hazardous substances.

_____
Dated:

_____
Stephen L. Johnson,
Administrator.