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National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins; Pesticide Active Ingredient Production; and Polyether Polyols Production; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2011–0435; FRL–9507–8]

RIN 2060–AR02

National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins; Pesticide Active Ingredient Production; and Polyether Polyols Production

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA is proposing amendments to three national emission standards for hazardous air pollutants (NESHAP): National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins; NESHAP for Pesticide Active Ingredient Production; and NESHAP for Polyether Polyols Production. For all three of these NESHAP rules, the EPA is proposing decisions concerning the following: residual risk reviews; technology reviews; emissions during periods of startup, shutdown and malfunction; standards for previously unregulated hazardous air pollutant emissions; and electronic reporting of performance test results.

DATES: *Comments.* Comments must be received on or before March 9, 2012. Under the Paperwork Reduction Act, comments on the information collection provisions are best assured of having full effect if the Office of Management and Budget (OMB) receives a copy of your comments on or before February 8, 2012.

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by January 19, 2012, a public hearing will be held on February 8, 2012.

ADDRESSES: *Comments.* Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2011–0435, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email: a-and-r-docket@epa.gov.* Attention Docket ID No. EPA–HQ–OAR–2011–0435.
- *Fax:* (202) 566–9744. Attention Docket ID No. EPA–HQ–OAR–2011–0435.
- *Mail:* U.S. Postal Service, send comments to: EPA Docket Center, EPA West (Air Docket), Attention Docket ID No. EPA–HQ–OAR–2011–0435, U.S. Environmental Protection Agency, Mailcode: 2822T, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Please include a total of two copies. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for EPA, 725 17th Street NW., Washington, DC 20503.
- *Hand Delivery:* U.S. Environmental Protection Agency, EPA West (Air Docket), Room 3334, 1301 Constitution Ave. NW., Washington, DC 20004. Attention Docket ID No. EPA–HQ–OAR–2011–0435. 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–2011–0435. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://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 *http://www.regulations.gov* or email. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *http://www.regulations.gov*, your email 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, the 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 the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the 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 the EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA–HQ–OAR–2011–0435. All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.*, CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave. 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 EPA Docket Center is (202) 566–1742.

Public Hearing. If a public hearing is held, it will begin at 10 a.m. on February 8, 2012 and will be held at the EPA's campus in Research Triangle Park, North Carolina, or at an alternate facility nearby. Persons interested in presenting oral testimony or inquiring as to whether a public hearing is to be held should contact Ms. Mary Tom Kissell, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone number: (919) 541–4516. If a public hearing will be held, a notification will be posted on the following Web site: *http://www.epa.gov/ttn/oarpg/t3main.html.*

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Mr. Nick Parsons, Sector Policies and Programs Division (E143–01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–5372; fax number: (919) 541–0246; email address: *parsons.nick@epa.gov.* For specific information regarding the risk modeling methodology, contact Ms. Elaine Manning, Health and Environmental Impacts Division (C159–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–5499; fax number: (919) 541–0840; email address: *manning.elaine@epa.gov.* For information about the applicability of these three national emission standards for hazardous air pollutants (NESHAP) to a particular entity, contact the appropriate person listed in Table 1 to this preamble.

TABLE 1—LIST OF THE EPA CONTACTS FOR THE RULES ADDRESSED IN THIS PROPOSED ACTION

NESHAP	OECA contact [1]	OAQPS contact [2]
NESHAP for Group IV Polymers and Resins	Tavara Culpepper, (202) 564–0902, *culpepper.tavara@epa.gov.*	Nick Parsons, (919) 541–5372, *parsons.nick@epa.gov.*
NESHAP for Pesticide Active Ingredient Production.	Tavara Culpepper, (202) 564–0902, *culpepper.tavara@epa.gov.*	Andrea Siefers, (919) 541–1185, *siefers.andrea@epa.gov.*
NESHAP for Polyether Polyols	Tavara Culpepper, (202) 564–0902, *culpepper.tavara@epa.gov.*	Andrea Siefers, (919) 541–1185, *siefers.andrea@epa.gov.*

[1] OECA stands for the EPA's Office of Enforcement and Compliance Assurance.
[2] OAQPS stands for the EPA's Office of Air Quality Planning and Standards.

SUPPLEMENTARY INFORMATION:

Preamble Acronyms and Abbreviations

Several acronyms and terms used to describe industrial processes, data inventories and risk modeling are included in this preamble. While this may not be an exhaustive list, to ease the reading of this preamble and for reference purposes, the following terms and acronyms are defined here:

ABS—Acrylonitrile Butadiene Styrene Resin
ADAF—Age-Dependent Adjustment Factors
AERMOD—Air Dispersion Model used by the HEM–3 Model
AEGL—Acute Exposure Guideline Levels
ASA/AMSAN—Acrylonitrile Styrene Resin/Alpha Methyl Styrene Acrylonitrile Resin
BACT—Best Available Control Technology
CalEPA—California Environmental Protection Agency
CAA—Clean Air Act
CBI—Confidential Business Information
CDX—Central Data Exchange
CEDRI—Compliance and Emissions Data Reporting Interface
CFR—Code of Federal Regulations
EPA—Environmental Protection Agency
ERPG—Emergency Response Planning Guidelines
ERT—Electronic Reporting Tool
HAP—Hazardous Air Pollutants
HCl—Hydrochloric Acid
HI—Hazard Index
HEM–3—Human Exposure Model, Version 3
HON—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry
HQ—Hazard Quotient
ICR—Information Collection Request
IRIS—Integrated Risk Information System
km—Kilometer
LAER—Lowest Achievable Emission Rate
LDAR—Leak Detection and Repair
MACT—Maximum Achievable Control Technology
MACT Code—Code within the NEI used to Identify Processes Included in a Source Category
MBS—Methyl Methacrylate Butadiene Styrene
MIR—Maximum Individual Risk
NAAQS—National Ambient Air Quality Standards
NAICS—North American Industry Classification System
NAS—National Academy of Sciences
NATA—National Air Toxics Assessment
NESHAP—National Emissions Standards for Hazardous Air Pollutants
NEI—National Emissions Inventory
NRC—National Research Council
NTTAA—National Technology Transfer and Advancement Act
OECA—Office of Enforcement and Compliance Assurance
OMB—Office of Management and Budget
P&R IV—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins
PAI—Pesticide Active Ingredient
PB–HAP—Hazardous Air Pollutants known to be Persistent and Bio-Accumulative in the Environment
PCB—Polychlorinated Biphenyls
PCCT—Process Contact Cooling Tower
PEPO—Polyether Polyols
PET—Poly (Ethylene Terephthalate) Resin
PM—Particulate Matter
POM—Polycyclic Organic Matter
PRD—Pressure Relief Device
RACT—Reasonably Available Control Technology
RBLC—RACT/BACT/LAER Clearinghouse
REL—CalEPA Chronic Reference Exposure Level
RFA—Regulatory Flexibility Act
RfC—Reference Concentration
RfD—Reference Dose
RTR—Residual Risk and Technology Review
SAB—Science Advisory Board
SAN—Styrene Acrylonitrile Resin
SCC—Source Classification Codes
SOCMI—Synthetic Organic Chemical Manufacturing Industry
SOP—Standard Operating Procedures
SSM—Startup, Shutdown and Malfunction
THF—Tetrahydrofuran
TOSHI—Target Organ-Specific Hazard Index
TPA—Terephthalic Acid
tpy—Tons Per Year
TRIM—Total Risk Integrated Modeling System
TRIM.FaTE—EPA's Total Risk Integrated Methodology Fate, Transport and Ecological Exposure Model
TTN—Technology Transfer Network
UF—Uncertainty Factor
UMRA—Unfunded Mandates Reform Act
URE—Unit Risk Estimate
VOC—Volatile Organic Compounds
WWW—World Wide Web

Organization of this Document. The information in this preamble is organized as follows:

A red-line version of the regulatory language that incorporates the proposed changes in this action is available in the docket.

I. General Information

A. What is the statutory authority for this action?

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 the EPA has identified categories of sources emitting one or more of the HAP listed in CAA section 112(b), CAA section 112(d) calls for us to promulgate technology-based NESHAP for those sources. ''Major sources'' are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. For major sources, these technology-based standards must reflect the maximum degree of emissions reductions of HAP achievable (after considering cost, energy requirements and non-air quality health and environmental impacts) and are commonly referred to as maximum achievable control technology (MACT) standards.

MACT standards must require the maximum degree of emissions reduction achievable through the application of measures, processes, methods, systems or techniques, including, but not limited to, measures that: (1) Reduce the volume of or eliminate pollutants through process changes, substitution of materials or other modifications; (2) enclose systems or processes to eliminate emissions; (3) capture or treat pollutants when released from a process, stack, storage or fugitive emissions point; (4) are design, equipment, work practice or operational standards (including requirements for operator training or certification); or (5) are a combination of the above. CAA section 112(d)(2)(A)–(E). The MACT standards may take the form of design, equipment, work practice or operational standards where the EPA first determines either that: (1) A pollutant cannot be emitted through a conveyance designed and constructed to emit or capture the pollutants or that any requirement for, or use of, such a conveyance would be inconsistent with law; or (2) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations. CAA sections 112(h)(1)–(2).

The MACT ''floor'' is the minimum control level allowed for MACT standards promulgated under CAA section 112(d)(3) and may not be based on cost considerations. For new sources, the MACT floor cannot be less stringent than the emissions control that is achieved in practice by the best-controlled similar source. The MACT floors for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emissions limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT standards, we must also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on considerations of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts and energy requirements.

The EPA is then required to review these technology-based standards and revise them ''as necessary (taking into account developments in practices, processes, and control technologies)'' no less frequently than every 8 years, under CAA section 112(d)(6). In conducting this review, the EPA is not obliged to completely recalculate the prior MACT determination. *NRDC* v. *EPA,* 529 F.3d 1077, 1084 (DC Cir. 2008).

The second stage in standard-setting focuses on reducing any remaining (*i.e.,* ''residual'') risk according to CAA section 112(f). This provision requires, first, that the EPA prepare a *Report to Congress* discussing (among other things) methods of calculating the risks posed (or potentially posed) by sources after implementation of the MACT standards, the public health significance of those risks and the EPA's recommendations as to legislation regarding such remaining risk. The 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 the EPA's obligation under CAA section 112(f)(2) to analyze and address residual risk.

CAA section 112(f)(2) requires the EPA to determine, for source categories subject to certain MACT standards, whether those emissions standards provide an ample margin of safety to protect public health. If the MACT standards for HAP ''classified as a known, probable, or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million,'' the EPA must promulgate residual risk standards for the source category (or subcategory), as necessary to provide an ample margin of safety to protect public health. In doing so, the EPA may adopt standards equal to existing MACT standards if the EPA determines that the existing standards are sufficiently protective. *NRDC* v. *EPA,* 529 F.3d at 1083 (''If EPA determines that the existing technology-based standards provide an 'ample margin of safety,' then the agency is free to readopt those standards during the residual risk rulemaking.''). The EPA must also adopt more stringent standards, if necessary, to prevent an adverse environmental effect [1] but must consider cost, energy, safety and other relevant factors in doing so.

Section 112(f)(2) of the CAA expressly preserves our use of the two-step process for developing standards to address any residual risk and our interpretation of ''ample margin of safety'' developed in the *National Emissions 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). The first step in this process is the determination of acceptable risk. The second step provides for an ample margin of safety to protect public health, which is the level at which the standards are to be set (unless an even more stringent standard is necessary to prevent, taking into consideration costs,

[1] ''Adverse environmental effect'' is defined in CAA section 112(a)(7) as any significant and widespread adverse effect, which may be reasonably anticipated to wildlife, aquatic life or natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental qualities over broad areas.

energy, safety and other relevant factors, an adverse environmental effect).

The terms ''individual most exposed,'' ''acceptable level'' and ''ample margin of safety'' are not specifically defined in the CAA. However, CAA section 112(f)(2)(B) preserves the EPA's interpretation set out in the Benzene NESHAP, and the United States Court of Appeals for the District of Columbia Circuit in *NRDC* v. *EPA,* 529 F.3d 1077, concluded that the EPA's interpretation of subsection 112(f)(2) is a reasonable one. See *NRDC* v. *EPA,* 529 F.3d at 1083 (''[S]ubsection 112(f)(2)(B) expressly incorporates EPA's interpretation of the Clean Air Act from the *Benzene* standard, complete with a citation to the **Federal Register**.''). See also, *A Legislative History of the Clean Air Act Amendments of 1990,* volume 1, p. 877 (*Senate debate on Conference Report*). We also notified Congress in the *Residual Risk Report to Congress* that we intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA–453/R–99–001, p. ES–11).

In the Benzene NESHAP, we stated as an overall objective:

> * * * in protecting public health with an ample margin of safety, we strive to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately 1-in-1 million; and (2) limiting to no higher than approximately 1-in-10 thousand [*i.e.,* 100-in-1 million] the estimated risk that a person living near a facility would have if he or she were exposed to the maximum pollutant concentrations for 70 years.

The agency also stated that, ''The EPA also considers incidence (the number of persons estimated to suffer cancer or other serious health effects as a result of exposure to a pollutant) to be an important measure of the health risk to the exposed population. Incidence measures the extent of health risks to the exposed population as a whole, by providing an estimate of the occurrence of cancer or other serious health effects in the exposed population.'' The agency went on to conclude that ''estimated incidence would be weighed along with other health risk information in judging acceptability.'' As explained more fully in our *Residual Risk Report to Congress,* the EPA does not define ''rigid line[s] of acceptability,'' but rather considers broad objectives to be weighed with a series of other health measures and factors (EPA–453/R–99–001, p. ES–11). The determination of what represents an ''acceptable'' risk is based on a judgment of ''what risks are acceptable in the world in which we live,'' (*Residual Risk Report to Congress,* p. 178, quoting *NRDC* v. *EPA,* 824 F.2d 1146, 1165 (DC Cir. 1987) (Vinyl Chloride Decision)) recognizing that our world is not risk-free.

In the Benzene NESHAP, we stated that the ''EPA will generally presume that if the risk to [the maximum exposed] individual is no higher than approximately one in 10 thousand, that risk level is considered acceptable.'' 54 FR 38045. We discussed the maximum individual lifetime cancer risk (or maximum individual risk (MIR)) as being ''the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.'' *Id.* We explained that this measure of risk ''is an estimate of the upper bound of risk based on conservative assumptions, such as continuous exposure for 24 hours per day for 70 years.'' *Id.* We acknowledge that maximum individual lifetime cancer risk ''does not necessarily reflect the true risk, but displays a conservative risk level which is an upper-bound that is unlikely to be exceeded.'' *Id.*

Understanding that there are both benefits and limitations to using maximum individual lifetime cancer risk as a metric for determining acceptability, we acknowledged in the 1989 Benzene NESHAP that ''consideration of maximum individual risk * * * must take into account the strengths and weaknesses of this measure of risk.'' *Id.* Consequently, the presumptive risk level of 100 in one million (one in 10 thousand) ''provides a benchmark for judging the acceptability of maximum individual lifetime cancer risk (MIR), but does not constitute a rigid line for making that determination.'' *Id.* Further, in the Benzene NESHAP, we noted that, ''Particular attention will also be accorded to the weight of evidence presented in the risk assessment of potential carcinogenicity or other health effects of a pollutant. While the same numerical risk may be estimated for an exposure to a pollutant judged to be a known human carcinogen, and to a pollutant considered a possible human carcinogen based on limited animal test data, the same weight cannot be accorded to both estimates. In considering the potential public health effects of the two pollutants, the Agency's judgment on acceptability, including the MIR, will be influenced by the greater weight of evidence for the known human carcinogen.'' *Id.* at 38046.

The agency also explained in the 1989 Benzene NESHAP the following: ''In establishing a presumption for MIR, rather than a rigid line for acceptability, the Agency intends to weigh it with a series of other health measures and factors. These include the overall incidence of cancer or other serious health effects within the exposed population, the numbers of persons exposed within each individual lifetime risk range and associated incidence within, typically, a 50-kilometer (km) exposure radius around facilities, the science policy assumptions and estimation uncertainties associated with the risk measures, weight of the scientific evidence for human health effects, other quantified or unquantified health effects, effects due to co-location of facilities, and co-emissions of pollutants.'' *Id.*

In some cases, these health measures and factors taken together may provide a more realistic description of the magnitude of risk in the exposed population than that provided by maximum individual lifetime cancer risk alone. As explained in the Benzene NESHAP, ''[e]ven though the risks judged 'acceptable' by EPA in the first step of the Vinyl Chloride inquiry are already low, the second step of the inquiry, determining an 'ample margin of safety,' again includes consideration of all of the health factors, and whether to reduce the risks even further. [* * *] Beyond that information, additional factors relating to the appropriate level of control will also be considered, including costs and economic impacts of controls, technological feasibility, uncertainties and any other relevant factors. Considering all of these factors, the agency will establish the standard at a level that provides an ample margin of safety to protect the public health as required by CAA section 112.''

In *NRDC* v. *EPA,* 529 F.3d 1077, 1082 (DC Cir. 2008), the Court of Appeals held that CAA section 112(f)(2) ''incorporates EPA's 'interpretation' of the Clean Air Act from the Benzene Standard, and the text of this provision draws no distinction between carcinogens and non-carcinogens.'' Additionally, the Court held there is nothing on the face of the statute that limits the Agency's section 112(f) assessment of risk to carcinogens. *Id.* at 1081–82. In the NRDC case, the petitioners argued, among other things, that CAA section 112(f)(2)(B) applied only to non-carcinogens. The DC Circuit rejected this position, holding that the text of that provision ''draws no distinction between carcinogens and non-carcinogens,'' *Id.,* and that Congress' incorporation of the Benzene standard applies equally to carcinogens and non-carcinogens.

In the ample margin of safety decision process, the agency again considers all of the health risks and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including costs and economic impacts of controls, technological feasibility, uncertainties and any other relevant factors. Considering all of these factors, the agency will establish the standard at a level that provides an ample margin of safety to protect the public health, as required by CAA section 112(f). 54 FR 38046.

B. Does this action apply to me?

The NESHAP and associated regulated industrial source categories that are the subject of this proposal are listed in Table 2 to this preamble. Table 2 is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by the proposed action for the industrial source categories listed. These standards, and any changes considered in this rulemaking, would be directly applicable to sources as a Federal program. Thus, Federal, state, local and tribal government entities are not affected by this proposed action. The regulated categories affected by this proposed action include:

TABLE 2—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS PROPOSED ACTION

NESHAP and source category	NAICS Code [1]	MACT Code [2]
Group IV Polymers and Resins		
Acrylic-Butadiene-Styrene Production	325211	1302
Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production [3]	325211	1317
Methyl Methacrylate-Butadiene-Styrene Production	325211	1318
Nitrile Resins Production [3]	325211	1342
Polyethylene Terephthalate Production	325211	1328
Polystyrene Production	325211	1331
Styrene-Acrylonitrile Production	325211	1338
Pesticide Active Ingredient Production	325199, 325320	0911
Polyether Polyols Production	325199	1625

[1] North American Industry Classification System.
[2] Maximum Achievable Control Technology.
[3] There are no longer any operating facilities in either the Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production or Nitrile Resins Production source categories, and none are anticipated to begin operation in the future. Therefore, this proposal does not address these source categories.

C. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this proposal will also be available on the World Wide Web (WWW) through the Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of this proposed action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html.* The TTN provides information and technology exchange in various areas of air pollution control.

Additional information is available on the residual risk and technology review (RTR) web page at *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html.* This information includes source category descriptions and detailed emissions and other data that were used as inputs to the risk assessments.

D. What should I consider as I prepare my comments for the EPA?

Submitting CBI. Do not submit information containing CBI to the EPA through *http://www.regulations.gov* or email. 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 the EPA, 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 disk 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 the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as CBI only to the following address: Nick Parsons, c/o OAQPS Document Control Officer (C404–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, Attn: Docket ID No. EPA–HQ–OAR–2011–0435.

II. Background

A. What are the source categories addressed by this action?

1. Group IV Polymers and Resins Production Source Categories

The National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins were promulgated on September 12, 1996 (61 FR 48208), and codified at 40 CFR part 63, subpart JJJ. The Group IV Polymers and Resins MACT standards apply to major sources and regulate HAP emissions from seven source categories: acrylonitrile butadiene styrene resin (ABS), styrene acrylonitrile resin (SAN), methyl methacrylate acrylonitrile butadiene styrene resin (MABS), methyl methacrylate butadiene styrene resin (MBS), polystyrene resin, poly (ethylene terephthalate) resin (PET) and nitrile resin.

The Group IV Polymers and Resins MACT standards regulate HAP emissions resulting from the production of thermoplastics. A thermoplastic is a resin that softens with heat and rehardens to a rigid material upon cooling, without generally showing any change in the physical properties of the thermoplastic, even with repeated heating and cooling. Thermoplastics are composed of high-molecular-weight polymers which are synthesized from monomers; the thermoplastics covered

in these seven source categories, with one exception, use styrene monomer as the basic feedstock. The thermoplastics included in these source categories are produced via a polymerization/copolymerization process, in which monomers undergo intermolecular chemical bond formation to form a very large polymer molecule. Generally, the production of these polymers entails four processes: (1) Raw material (*i.e.,* solvent) storage and refining; (2) polymer formation in a reactor (either via the solution process, where monomers are dissolved in an organic solvent, or the emulsion process, where monomers are dispersed in water using a soap solution); (3) material recovery; and (4) finishing (*i.e.,* blending, aging, coagulation, washing and drying).

Sources of HAP emissions from thermoplastics production include raw material storage vessels, continuous and batch process vents, wastewater operations, heat exchangers and equipment leaks. The Group IV Polymers and Resins MACT standards include a combination of equipment standards and emission limits for the various emission sources, which vary in stringency in some cases among the source categories.

To meet the requirements of the Group IV Polymers and Resins MACT standards, the typical control devices used to reduce organic HAP emissions from process vents include flares, incinerators, absorbers, carbon adsorbers and condensers. In addition, emissions of hydrochloric acid (HCl) are controlled using scrubbers. Emissions from storage vessels are controlled by fixed roofs with closed vent systems routed to a control device. Emissions from wastewater are controlled by a variety of methods, including equipment modifications (*e.g.,* fixed roofs on storage vessels and oil water separators; covers on surface impoundments, containers and drain systems), treatment to remove the HAP (steam stripping, biological treatment), control devices and work practices. Emissions from equipment leaks and heat exchangers are typically reduced by leak detection and repair (LDAR) work practice programs and, in some cases, by equipment modifications. Each of the five Group IV Polymers and Resins source categories addressed in this proposal are discussed further below. Two of the Group IV Polymers and Resins source categories, MABS and nitrile resins, no longer have any operating facilities in the U.S. and we do not anticipate any will begin to operate in the future. Therefore, this proposal does not address these source categories.[2]

a. Acrylonitrile Butadiene Styrene Resin (ABS)

ABS consist of a terpolymer of acrylonitrile, butadiene and styrene and can be synthesized by emulsion, suspension and continuous mass polymerization. The majority of ABS resin production is by batch emulsion. Typical products made from ABS resins are piping, refrigerator door liners and food compartments, automotive components, telephones, luggage and cases, toys, mobile homes and margarine tubs.

We identified five currently operating ABS facilities subject to the Group IV Polymers and Resins MACT standards. Styrene, acrylonitrile and 1,3-butadiene account for the majority of the HAP emissions from the ABS production processes at these facilities (approximately 156 tpy and 76 percent of the total HAP emissions by mass). These facilities also reported relatively small emissions of 23 other HAP. We estimate that the MACT-allowable emissions (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) from this source category are approximately equal to the reported, actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

b. Styrene Acrylonitrile Resin (SAN)

SAN resins are copolymers of styrene and acrylonitrile, and they 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.

We identified two currently operating SAN facilities subject to the Group IV Polymers and Resins MACT standards. Ethyl benzene and styrene account for the majority of the HAP emissions from the SAN production processes at these facilities (approximately 2 tpy and 82 percent of the total HAP emissions by mass). These facilities also reported relatively small emissions of methylene chloride and acrylonitrile. We estimate that the MACT-allowable emissions (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) from this source category are approximately equal to the reported, actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

c. Methyl Methacrylate Butadiene Styrene Resin (MBS)

MBS resins 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.

We identified two currently operating MBS facilities subject to the Group IV Polymers and Resins MACT standards. Methyl methacrylate and 1,3-butadiene account for the majority of the HAP emissions from the MBS production processes at these facilities (approximately 4 tpy and 75 percent of the total HAP emissions by mass). These facilities also reported relatively small emissions of ethyl acrylate, methanol, styrene and HCl. We estimate that the MACT-allowable emissions (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) from this source category are approximately equal to the reported, actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

d. Polystyrene Resin

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

[2] It is the EPA's practice in these circumstances to not conduct unnecessary risk and technology reviews for source categories that will no longer have sources operating in the U.S. See, *e.g.,* 75 FR 65068, 65075, n.5 (Oct. 21, 2010) and 76 FR 22566, 22575, n.5 (Apr. 21, 2011).

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.

We identified 11 currently operating polystyrene resin facilities subject to the Group IV Polymers and Resins MACT standards. Styrene accounts for the majority of the HAP emissions from the polystyrene resin production processes at these facilities (approximately 85 tpy and 94 percent of the total HAP emissions by mass). These facilities also reported relatively small emissions of eight other HAP. We estimate that the MACT-allowable emissions (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) from this source category are approximately equal to the reported, actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

e. Poly (Ethylene Terephthalate) Resin (PET)

Three different types of resins are made by sources covered by the PET source category: Solid-state resins (PET bottle grade resins), polyester film and engineering resins. They are all thermoplastic linear condensation polymers based on dimethyl terephthalate or terephthalic acid (TPA). PET meltphase polymer is used in the production of all three of these resins. PET production can occur via either a batch or continuous process. The most common use of PET solid-state resins is in soft drink bottles, and some industrial fiber-graded polyester (*e.g.,* for tire cord) is also produced from PET solid-state resins. The most common uses of PET film are photographic film and magnetic media. PET 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.

We identified 15 currently operating PET facilities subject to the Group IV Polymers and Resins MACT standards. Ethylene glycol, acetaldehyde and methanol account for the majority of the HAP emissions from the PET production processes at these facilities (approximately 1,048 tpy and 89 percent of the total HAP emissions by mass). These facilities also reported relatively small emissions of 34 other HAP. We estimate that the MACT-allowable emissions (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) from this source category are approximately equal to the reported, actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

2. Pesticide Active Ingredient Production

The National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production were promulgated on June 23, 1999 (64 FR 33549), and codified at 40 CFR part 63, subpart MMM. The Pesticide Active Ingredient (PAI) MACT standards apply to major sources and regulate HAP emissions resulting from the production of active ingredients in insecticides, herbicides, fungicides and related products. Typically, the active ingredients subject to the PAI MACT standards are subsequently formulated with inert ingredients to create end-product pesticides for application. The MACT standards do not apply to the formulation of end-product pesticides or to other types of active ingredients, such as biocides.

PAI are made from a number of raw materials in a variety of processes. A process often consists of several steps, which may include reaction, crystallization, washing, solvent extraction, distillation and/or drying.

The HAP emission sources at PAI production facilities include storage vessels, process vents, equipment leaks, wastewater systems, heat exchange systems, bag dumps and product dryers. In the production of PAI, HAP are used primarily as reactants or extraction solvents; some of the PAI products are also HAP. The MACT standards for PAI production include a combination of equipment standards and emission limits for the various emission sources.

To meet the requirements of the PAI MACT standards, the typical control devices used to reduce emissions from process vents include flares, incinerators, absorbers, carbon adsorbers and condensers. In addition, emissions of HCl are controlled using scrubbers. Emissions from storage vessels are controlled by fixed roofs with closed vent systems routed to a control device. Emissions from wastewater are controlled by a variety of methods, including equipment modifications (*e.g.,* fixed roofs on storage vessels and oil water separators; covers on surface impoundments, containers and drain systems), treatment to remove the HAP (steam stripping, biological treatment), control devices and work practices. Emissions from equipment leaks and heat exchangers are typically reduced by LDAR work practice programs and, in some cases, by equipment modifications. Fabric filters are used to control particulate matter (PM) emissions from product dryers and bag dumps.

We identified 17 currently operating facilities subject to the PAI MACT standards. Toluene, methanol and methylene chloride account for the majority of the HAP emissions from the PAI production processes at these facilities (approximately 177 tpy and 51 percent of the total HAP emissions by mass). A variety of chemicals are used in the production of PAI, and these facilities also reported emissions of 67 other HAP. We estimate that the actual emissions level is representative of the MACT-allowable level (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) for all emissions sources except process vents. As it is possible that the capture systems and control devices used at some facilities achieve greater emission reductions than what is required by the NESHAP for process vents, the MACT-allowable level for organic HAP emissions could be up to five times the actual emissions and the MACT-allowable level for chlorine and HCl emissions could be up to six times the actual emissions from this source category. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

3. Polyether Polyols Production

The National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production were promulgated on June 1, 1999 (64 FR 29419), and codified at 40 CFR part 63, subpart PPP. The Polyether Polyols (PEPO) MACT standards apply to major sources and regulate HAP emissions resulting from the production of chemical products with repeating ether linkages (*i.e.,* -R–O–R-) formed by the reaction of ethylene oxide, propylene oxide or other cyclic ethers with compounds having one or more reactive hydrogens. (This definition excludes materials regulated as glycols or glycol ethers under the National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry (HON).) PEPO do not have significant uses of their own but are used to make a variety of other products. Urethane grade PEPO (*i.e.,* those that are free of water) are used as raw material in the production of polyurethanes, including slabstock and molded flexible foams, rigid foams and other polyurethanes, including microcellular products, surface coatings, elastomers, fibers, adhesives and sealants. Nonurethane PEPO are used as surfactants, lubricants, degreasing agents, hydraulic fluids, cosmetics and pharmaceuticals.

PEPO can be produced by either polymerization of epoxides (*i.e.,* a three-membered cyclic ether, such as ethylene oxide or propylene oxide) or tetrahydrofuran (THF). The former process is usually conducted as a batch process, while production of polyols using THF is generally a continuous process. Ethylene oxide and propylene oxide are both HAP, but THF is not. For the MACT regulation, two subcategories of PEPO were created based on the use of either epoxides or THF in polymerization.

The HAP emission sources at PEPO production facilities include process vents, storage vessels, equipment leaks and wastewater, and some facilities have cooling towers or other heat exchangers. In the production of PEPO, HAP are used primarily as reactants or extraction solvents; some of the PEPO products are also HAP compounds. The MACT standards for PEPO production include emission limits for process vents, a combination of equipment standards and work practices for storage vessels, wastewater and equipment leaks, and work practice standards for cooling towers.

To meet the requirements of the PEPO MACT standards, the typical control devices used to reduce emissions from storage vessels are fixed roofs with closed vent systems routed to a control device. Emissions from wastewater are controlled by a variety of methods, including equipment modifications (*e.g.,* fixed roofs on storage vessels and oil water separators; covers on surface impoundments, containers and drain systems), treatment to remove the HAP (steam stripping, biological treatment), control devices and work practices. Emissions from equipment leaks and heat exchangers are typically reduced by LDAR work practice programs and, in some cases, by equipment modifications. Controls for process vents for facilities that use THF as a reactant generally use scrubbers. Epoxide emissions from process vents are typically controlled by scrubbers or combustion devices, but some facilities use extended cookout as a pollution prevention technique. Extended cookout reduces the amount of unreacted ethylene oxide and/or propylene oxide (epoxides) in the reactor. This is accomplished by allowing the product to react for a longer time period, thereby having less unreacted epoxides and reducing epoxides emissions that may have otherwise occurred. Emissions from catalyst extraction and other processes are generally vented to the same control device as the epoxide emissions or are minimal if the extended cookout practice is used.

We identified 23 currently operating facilities subject to the PEPO MACT standards. Ethylene glycol, ethylene oxide and propylene oxide account for the majority of the HAP emissions from the PEPO production processes at these facilities (approximately 269 tpy and 61 percent of the total HAP emissions by mass). A variety of chemicals are used in the production of PEPO, and these facilities also reported emissions of 81 other HAP. We estimate that the actual emissions level is representative of the MACT-allowable level (*i.e.,* the maximum emission levels allowed if in compliance with the MACT standards) for all emissions sources except batch process vents and process vents that use organic HAP in catalyst extraction at units producing PEPO products using epoxides. As it is possible that the capture systems and control devices used at some facilities achieve greater emission reductions in the organic non-epoxide HAP than what is required by the NESHAP for these process vents, the MACT-allowable level for organic non-epoxide HAP emissions could be up to five times the actual emissions from this source category. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

B. What data collection activities were conducted to support this proposed action?

To perform the risk assessments for these source categories, we developed data sets for these seven source categories (five Group IV Polymers and Resins categories, PAI and PEPO) based on information in the 2005 National Emissions Inventory (NEI) (available at *http://www.epa.gov/chief/net/2005inventory.html*). The NEI is a database that contains information about sources that emit criteria air pollutants, their precursors and HAP. The database includes estimates of annual air pollutant emissions from point, nonpoint and mobile sources in the 50 states, the District of Columbia, Puerto Rico and the Virgin Islands. The EPA collects this information and releases an updated version of the NEI database every 3 years. We reviewed the NEI data and made changes where necessary to ensure the proper facilities were included and to ensure the proper processes were allocated to each source category. We also reviewed the emissions and other data to identify data anomalies that could affect risk estimates, such as whether a pollutant was expected to be emitted from facilities in a source category or whether an emission point was located within a facility's fenceline. The NEI data were also reviewed by industry trade groups, including the American Chemistry Council and the Society of Chemical Manufacturers and Affiliates. Where the EPA received new information in response to these data review by industry, including updated emissions data and process information, facility closure information and information that some facilities were not subject to the PAI, PEPO or Group IV Polymers and Resins MACT standards, we revised the NEI data where we concluded the comments supported such adjustment. We obtained updated emissions data and process information, found that some facilities had closed and that others were no longer subject to the PAI, PEPO or Group IV Polymers and Resins MACT standards. In general, we found that emissions from these source categories had decreased from the values reported in the 2005 NEI, due to factors such as the installation of additional controls at the facility,

duplication of emissions in the inventory, or emissions misappropriated to the wrong source category. We used this reviewed and revised data set to conduct the risk assessment and other analyses for each source category. Due to the uncertainties in the data (*e.g.,* most emission estimates in the data set are the result of emission factors rather than test data), along with our general finding that emissions were less than those reported in the 2005 NEI, we believe that the data set provides a conservative estimate of the risk from these source categories. Further details on the changes made to the 2005 NEI data can be found in the memorandum, *Emissions Data and Acute Risk Factor Used in Residual Risk Modeling: Pesticide Active Ingredients, Polyether Polyols, and Group IV Polymers and Resins,* which is in the docket for this rulemaking.

To conduct the technology review, we primarily relied on information downloaded from the reasonably available control technology (RACT)/best available control technology (BACT)/lowest achievable emission rate (LAER) Clearinghouse (RBLC) for processes in Agricultural Chemical Manufacturing (for PAI controls), Polymer and Resin Production (for Group IV Polymers and Resins controls) and the Synthetic Organic Chemical Manufacturing Industry (SOCMI) (for PAI, PEPO and Group IV Polymers and Resins controls) with permits dating back to the promulgation dates of each MACT regulation.

To evaluate unregulated emission points in the Group IV Polymers and Resins MACT standards, we relied on existing data submitted to the EPA during development of the MACT, information submitted after proposal of the MACT standards and information submitted with requests for reconsideration of standards.

III. Analyses Performed

A. How did we address unregulated emissions sources?

For the Group IV Polymers and Resins source categories, we identified one subcategory—PET sources using a continuous TPA high viscosity multiple end finisher process—consisting of one facility that was not subject to standards for process contact cooling towers (PCCT) or equipment leaks. While the promulgated rule includes provisions for PCCT for this subcategory, the facility is not required to comply with these provisions due to an indefinite stay in the compliance date provisions issued by the EPA in response to a request to reconsider the emission limits for this equipment. For this facility, we also identified the absence of a standard for equipment leaks, which in the absence of an enforceable standard is a potential significant emissions source for this facility, even though its operators currently voluntarily conduct their own LDAR program. For the one facility in this subcategory, we are proposing to set standards for PCCT and equipment leaks under CAA section 112(d)(2) and (d)(3) in this action. The results and proposed decisions based on the analyses performed pursuant to CAA section 112(d)(2) and 112(d)(3) are presented in section IV.E.1 of this preamble. While we also identified the absence of a standard for wastewater for the acrylonitrile styrene resin/alpha methyl styrene acrylonitrile resin (ASA/AMSAN) subcategory of the SAN source category, the only facility in this subcategory has permanently closed, and no new ASA/AMSAN operations are expected to begin operation in the United States. As stated previously and as established in prior risk and technology review rulemakings, it is not EPA's practice to unnecessarily conduct risk and technology reviews for source categories that will no longer have sources operating in the United States. Therefore, we are not addressing this emission point in this proposed action.

B. How did we estimate risks posed by the source categories?

The EPA conducted risk assessments that provided estimates of the MIR posed by the HAP emissions from each source in each source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause noncancer health effects. The assessments also provided estimates of the distribution of cancer risks within the exposed populations, cancer incidence and an evaluation of the potential for adverse environmental effects for each source category. The risk assessments consisted of seven primary steps, as discussed below. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Draft Residual Risk Assessment for 7 Source Categories.* The methods used to assess risks (as described in the seven primary steps below) are consistent with those peer-reviewed by a panel of the EPA's Science Advisory Board (SAB) in 2009 and described in their peer review report issued in 2010; they are also consistent with the key recommendations contained in that report.

1. Establishing the Nature and Magnitude of Actual Emissions and Identifying the Emissions Release Characteristics

As discussed in section II.B, we created the preliminary data sets for the seven source categories using data in the 2005 NEI, supplemented by data collected from industry or industry trade associations when available.

2. Establishing the Relationship Between Actual Emissions and MACT–Allowable Emissions Levels

The available emissions data in the NEI and from other sources typically represent the mass of HAP actually emitted during the specified annual time period. These ''actual'' emission levels can be lower than the emission levels a facility might be allowed to emit and still comply with the MACT standards. The emissions level allowed to be emitted by the MACT standards is referred to as the ''MACT-allowable'' emissions level. This represents the highest emissions level that could be emitted by facilities without violating the MACT standards.

We discussed the use of both MACT-allowable and actual emissions in the final Coke Oven Batteries residual risk rule (70 FR 19998–19999, April 15, 2005) and in the proposed and final HON residual risk rules (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those previous actions, we noted that assessing the risks at the MACT-allowable level is inherently reasonable because these risks reflect the maximum level sources could emit and still comply with national emission standards. We continue to take this view, for the reasons presented in those discussions. But we also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP. (54 FR 38044, September 14, 1989.) We also continue to take this view, for the reasons explained in those prior discussions.

As described above, the actual emissions data were compiled based on the NEI and information gathered from facilities through industrial trade associations. To estimate emissions at the MACT-allowable level, we developed a ratio of MACT-allowable to actual emissions for each emissions source type in each source category, based on the level of control required by the MACT standards compared to the level of reported actual emissions and

available information on the level of control achieved by the emissions controls in use. For example, if there was information to suggest several facilities in a source category were controlling storage tank emissions by 98 percent, while the MACT standards required only 92-percent control, we would estimate that MACT-allowable emissions from these emission points could be as much as four times higher (8-percent allowable emissions compared with 2 percent actually emitted), and the ratio of MACT-allowable to actual would be 4:1 for this emission point type at the facilities in this source category. After developing these ratios for each emission point type in each source category, we next applied these ratios on a facility-by-facility basis to the maximum chronic risk values from the inhalation risk assessment to obtain facility-specific maximum risk values based on MACT-allowable emissions. Further explanation of this evaluation is provided in the technical document, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* which is available in the docket for this action.

3. Conducting Dispersion Modeling, Determining Inhalation Exposures, and Estimating Individual and Population Inhalation Risks

Both long-term and short-term inhalation exposure concentrations and health risks from each facility in the source categories addressed in this proposal were estimated using the Human Exposure Model (HEM) (Community and Sector HEM–3 version 1.1.0). The HEM–3 performs three of the primary risk assessment activities listed above: (1) Conducting dispersion modeling to estimate the concentrations of HAP in ambient air; (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 km of the modeled sources; and (3) estimating individual and population-level inhalation risks using the exposure estimates and quantitative dose-response information.

The dispersion model used by HEM–3 is AERMOD, which is one of the EPA's preferred models for assessing pollutant concentrations from industrial facilities.[3] To perform the dispersion modeling and to develop the preliminary risk estimates, HEM–3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year (1991) of hourly surface and upper air observations for 189 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block[4] internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2000). In addition, the census library includes the elevation and controlling hill height for each census block, which are also used in dispersion calculations. A third library of pollutant unit risk factors and other health benchmarks is used to estimate health risks. These risk factors and health benchmarks are the latest values recommended by the EPA for HAP and other toxic air pollutants. These values are available at *http://www.epa.gov/ttn/atw/toxsource/summary.html* and are discussed in more detail later in this section.

In developing the risk assessment for chronic exposures, we used the estimated annual average ambient air concentration of each of the HAP emitted by each source for which we have emissions data in the source category. The air concentrations at each nearby census block centroid were used as a surrogate for the chronic inhalation exposure concentration for all people who reside in that census block. We calculated the MIR for each facility as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week and 52 weeks per year for a 70-year period) exposure to the maximum concentration at the centroid of inhabited census blocks. Individual cancer risks were calculated by multiplying the estimated lifetime exposure to the ambient concentration of each of the HAP (in micrograms per cubic meter ($\mu g/m^3$)) by its unit risk estimate (URE), which is an upper bound estimate of an individual's probability of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, we generally use URE values from the EPA's Integrated Risk Information System (IRIS).[5] For carcinogenic pollutants without EPA IRIS values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) URE values, where available. In cases where new, scientifically credible dose response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate.

We note here that several carcinogens have a mutagenic mode of action.[6] Of these compounds, polycyclic organic matter (POM) is emitted by facilities in the PEPO and PET source categories, and vinyl chloride is emitted by facilities in the PEPO and the PAI source categories. For these compounds, the age-dependent adjustment factors (ADAF) described in the EPA's *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*[7] were applied. This adjustment has the effect of increasing the estimated lifetime risks for these pollutants by a factor of 1.6.[8] In addition, the EPA expresses carcinogenic potency for compounds in the POM group in terms of benzo[a]pyrene equivalence, based on evidence that carcinogenic POM have the same mutagenic mechanism of action as does benzo[a]pyrene. For this reason, the EPA's Science Policy Council[9] recommends applying the *Supplemental Guidance* to all carcinogenic polycyclic aromatic hydrocarbons for which risk estimates are based on relative potency. Accordingly, we have applied the ADAF to benzo[a]pyrene equivalent portion of all POM mixtures.

Incremental individual lifetime cancer risks associated with emissions from the source categories were estimated as the sum of the risks for each of the carcinogenic HAP (including those classified as carcinogenic to humans, likely to be carcinogenic to humans, and suggestive evidence of

[3] U.S. EPA. 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).

[4] A census block is generally the smallest geographic area for which census statistics are tabulated.

[5] The IRIS information is available at *http://www.epa.gov/IRIS.*

[6] U.S. EPA, 2006. Performing risk assessments that include carcinogens described in the *Supplemental Guidance* as having a mutagenic mode of action. *Science Policy Council Cancer Guidelines Implementation Workgroup Communication II:* Memorandum from W.H. Farland, dated June 14, 2006. *http://epa.gov/osa/spc/pdfs/CGIWGCommunication_II.pdf.*

[7] U.S. EPA, 2005. *Supplemental Guidance for Assessing Early-Life Exposure to Carcinogens.* EPA/630/R–03/003F. *http://www.epa.gov/ttn/atw/childrens_supplement_final.pdf.*

[8] Only one of these mutagenic compounds, benzo[a]pyrene, is emitted by any of the sources covered by this proposal.

[9] U.S. EPA, 2005. *Science Policy Council Cancer Guidelines Implementation Workgroup Communication I:* Memorandum from W.H. Farland, dated October 4, 2005, to Science Policy Council. *http://www.epa.gov/osa/spc/pdfs/canguid1.pdf.*

carcinogenic potential [10]) emitted by the modeled sources. Cancer incidence and the distribution of individual cancer risks for the population within 50 km of any source were also estimated for the source categories as part of these assessments by summing individual risks. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044) and the limitations of Gaussian dispersion models, including AERMOD.

To assess risk of noncancer health effects from chronic exposures, we summed the HQ for each of the HAP that affects a common target organ system to obtain the HI for that target organ system (or target organ-specific HI, TOSHI). The HQ is the estimated exposure divided by the chronic reference level, which is either the EPA reference concentration (RfC), defined as ''an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime,'' or, in cases where an RfC from the EPA's IRIS database is not available, a value from the following prioritized sources for chronic dose-response values: (1) The Agency for Toxic Substances and Disease Registry Minimum Risk Level, which is defined as ''an estimate of daily human exposure to a substance that is likely to be without an appreciable risk of adverse effects (other than cancer) over a specified duration of exposure''; (2) the CalEPA Chronic Reference Exposure Level (REL), which is defined as ''the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration''; or (3) as noted above, a scientifically credible dose-response value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA, in place of or in concert with other values.

Screening estimates of acute exposures and risks were also evaluated for each of the HAP at the point of highest off-site exposure for each facility (*i.e.,* not just the census block centroids), assuming that a person is located at this spot at a time when both the peak (hourly) emission rates from each emission point at the facility and worst-case dispersion conditions occur. The acute HQ is the estimated acute exposure divided by the acute dose-response value. In each case, acute HQ values were calculated using best available, short-term health threshold values. These acute dose-response values, which are described below, include the acute REL, acute exposure guideline levels (AEGL) and emergency response planning guidelines (ERPG) for 1-hour exposure durations. As discussed below, we used conservative assumptions for emission rates, meteorology and exposure location for our acute analysis.

As described in the CalEPA's *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants,* an acute REL value (*http://www.oehha.ca.gov/air/pdf/acuterel.pdf*) is defined as ''the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.'' Acute REL values are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. Acute REL values are designed to protect the most sensitive sub-populations (*e.g.,* asthmatics) by the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL value does not automatically indicate an adverse health impact.

AEGL values were derived in response to recommendations from the National Research Council (NRC). As described in *Standing Operating Procedures (SOP) of the National Advisory Committee on Acute Exposure Guideline Levels for Hazardous Substances* (*http://www.epa.gov/opptintr/aegl/pubs/sop.pdf*),[11] ''the NRC's previous name for acute exposure levels—community emergency exposure levels—was replaced by the term AEGL to reflect the broad application of these values to planning, response and prevention in the community, the workplace, transportation, the military and the remediation of Superfund sites.'' This document also states that AEGL values ''represent threshold exposure limits for the general public and are applicable to emergency exposures ranging from 10 minutes to 8 hours.'' The document lays out the purpose and objectives of AEGL by stating (page 21) that ''the primary purpose of the AEGL program and the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances is to develop guideline levels for once-in-a-lifetime, short-term exposures to airborne concentrations of acutely toxic, high-priority chemicals.'' In detailing the intended application of AEGL values, the document states (page 31) that ''[i]t is anticipated that the AEGL values will be used for regulatory and nonregulatory purposes by U.S. Federal and state agencies and, possibly, the international community in conjunction with chemical emergency response, planning and prevention programs. More specifically, the AEGL values will be used for conducting various risk assessments to aid in the development of emergency preparedness and prevention plans, as well as real-time emergency response actions, for accidental chemical releases at fixed facilities and from transport carriers.''

The AEGL–1 value is then specifically defined as ''the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.'' The document also notes (page 3) that, ''Airborne concentrations below AEGL–1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste, and sensory irritation or certain asymptomatic, nonsensory effects.'' Similarly, the document defines AEGL–2 values as ''the airborne concentration (expressed as ppm or milligrams per cubic meter (mg/m^3) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.''

ERPG values are derived for use in emergency response, as described in the American Industrial Hygiene Association's document titled, *Emergency Response Planning Guidelines (ERPG) Procedures and Responsibilities* (*http://www.aiha.org/1documents/committees/ERPSOPs2006.pdf*), which states that, ''Emergency Response Planning Guidelines were developed for emergency planning and are intended as

[10] These classifications also coincide with the terms ''known carcinogen, probable carcinogen, and possible carcinogen,'' respectively, which are the terms advocated in the EPA's previous *Guidelines for Carcinogen Risk Assessment,* published in 1986 (51 FR 33992, September 24, 1986). Summing the risks of these individual compounds to obtain the cumulative cancer risks is an approach that was recommended by the EPA's SAB in their 2002 peer review of the EPA's National Air Toxics Assessment (NATA) entitled, *NATA—Evaluating the National-scale Air Toxics Assessment 1996 Data—an SAB Advisory,* available at: *http://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf.*

[11] NAS, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals,* page 2.

health-based guideline concentrations for single exposures to chemicals.''[12] The ERPG–1 value is defined as ''the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined, objectionable odor.'' Similarly, the ERPG–2 value is defined as ''the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.''

As can be seen from the definitions above, the AEGL and ERPG values include the similarly-defined severity levels 1 and 2. For many chemicals, a severity level 1 value AEGL or ERPG has not been developed because the types of effects for these chemicals are not consistent with the AEGL–1/ERPG–1 definitions; in these instances, higher severity level AEGL–2 or ERPG–2 values are compared to our modeled exposure levels to screen for potential acute concerns. When AEGL–1/ERPG–1 values are available, they are used in our acute risk assessments.

Acute REL values for 1-hour exposure durations are typically lower than their corresponding AEGL–1 and ERPG–1 values. Even though their definitions are slightly different, AEGL–1 values are often similar to the corresponding ERPG–1 values, and AEGL–2 values are often similar to ERPG–2 values. Maximum HQ values from our acute screening risk assessments typically result when basing them on the acute REL value for a particular pollutant. In cases where our maximum acute HQ value exceeds 1, we also report the HQ value based on the next highest acute dose-response value (usually the AEGL–1 and/or the ERPG–1 value).

To develop screening estimates of acute exposures in the absence of hourly emissions data, generally we first develop estimates of maximum hourly emissions rates by multiplying the average actual annual hourly emission rates by a default factor to cover routinely variable emissions. We choose the factor to use based on process knowledge and engineering judgment and with awareness of a Texas study of short-term emissions variability, which showed that most peak emission events in a heavily-industrialized 4-county area (Harris, Galveston, Chambers and Brazoria Counties, Texas) were less than twice the annual average hourly emission rate. The highest peak emissions event was 74 times the annual average hourly emission rate, and the 99th percentile ratio of peak hourly emissions rate to the annual average hourly emissions rate was 9.[13] This analysis is provided in the *Draft Residual Risk Assessment for 7 Source Categories* report, which is available in the docket for this action. Considering this analysis, to account for more than 99 percent of the peak hourly emissions, we apply a conservative screening multiplication factor of 10 to the average annual hourly emissions rate in our acute exposure screening assessments as our default approach. However, we use a factor other than 10 if we have information that indicates that a different factor is appropriate for a particular source category. For these source categories, a factor of 10 was applied to all emissions, with two exceptions. For certain facilities with volatile organic compound (VOC) emissions greater than 876 tpy and for several facilities with emissions from equipment leaks, a factor of two was applied. A further discussion of why this factor was chosen can be found in the memorandum, *Emissions Data and Acute Risk Factor Used in Residual Risk Modeling: Pesticide Active Ingredients, Polyether Polyols, and Group IV Polymers and Resins,* available in the docket for this rulemaking.

As part of our acute risk assessment process, for cases where acute HQ values from the screening step were less than or equal to 1, acute impacts were deemed negligible and no further analysis was performed. In the cases where an acute HQ from the screening step was greater than 1, additional site-specific data were considered to develop a more refined estimate of the potential for acute impacts of concern. The data refinements considered include using a peak-to-mean hourly emissions ratio based on source category-specific knowledge or data (rather than the default factor of 10) and using the site-specific facility layout to distinguish facility property from an area where the public could be exposed. Ideally, we would prefer to have continuous measurements over time to see how the emissions vary by each hour over an entire year. Having a frequency distribution of hourly emission rates over a year would allow us to perform a probabilistic analysis to estimate potential threshold exceedances and their frequency of occurrence. Such an evaluation could include a more complete statistical treatment of the key parameters and elements adopted in this screening analysis. However, we recognize that having this level of data is rare, hence our use of the multiplier approach.

To better characterize the potential health risks associated with estimated acute exposures to HAP, and in response to a key recommendation from the SAB's peer review of the EPA's RTR risk assessment methodologies,[14] we generally examine a wider range of available acute health metrics (*e.g.,* REL, AEGL) than we do for our chronic risk assessments. This is in response to the SAB's acknowledgement that there are generally more data gaps and inconsistencies in acute reference values than there are in chronic reference values. In some cases, when Reference Value Arrays[15] for HAP have been developed, we consider additional acute values (*i.e.,* occupational and international values) to provide a more complete risk characterization.

4. Conducting Multipathway Exposure and Risk Screening

The potential for significant human health risks due to exposures via routes other than inhalation (*i.e.,* multipathway exposures) and the potential for adverse environmental impacts were evaluated in a two-step process. In the first step, we determined whether any facilities emitted any HAP known to be persistent and bio-accumulative in the environment (PB–HAP). There are 14 PB–HAP compounds or compound classes identified for this screening in the EPA's Air Toxics Risk Assessment Library (available at *http://www.epa.gov/ttn/fera/risk_atra_vol1.html*). They are cadmium compounds, chlordane, chlorinated dibenzodioxins and furans, dichlorodiphenyldichloroethylene, heptachlor, hexachlorobenzene, hexachlorocyclohexane, lead compounds, mercury compounds, methoxychlor, polychlorinated biphenyls (PCB), POM, toxaphene and trifluralin.

[12] *ERP Committee Procedures and Responsibilities.* 1 November, 2006. American Industrial Hygiene Association.

[13] See *http://www.tceq.state.tx.us/compliance/field_ops/eer/index.html* or docket to access the source of these data.

[14] The SAB peer review of RTR Risk Assessment Methodologies is available at: *http://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf.*

[15] U.S. EPA. (2009) Chapter 2.9 Chemical Specific Reference Values for Formaldehyde in Graphical Arrays of Chemical-Specific Health Effect Reference Values for Inhalation Exposures (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/061, and available on-line at *http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=211003.*

In the second step of the screening process, we determined whether the facility-specific emission rates of each of the emitted PB–HAP were large enough to create the potential for significant non-inhalation human or environmental risks under reasonable worst-case conditions. To facilitate this step, we have developed emission rate thresholds for several of these PB–HAP using a hypothetical worst-case screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology Fate, Transport and Ecological Exposure (TRIM.FaTE) model. The hypothetical screening scenario was subjected to a sensitivity analysis to ensure that its key design parameters were established such that environmental media concentrations were not underestimated (*i.e.,* to minimize the occurrence of false negatives or results that suggest that risks might be acceptable when, in fact, actual risks are high) and to also minimize the occurrence of false positives for human health endpoints. We call this application of the TRIM.FaTE model TRIM-Screen. The facility-specific emission rates of each of the PB–HAP in each source category were compared to the TRIM-Screen emission threshold values for each of these PB–HAP to assess the potential for significant human health risks or environmental risks via non-inhalation pathways.

5. Assessing Risks Considering Emissions Control Options

In addition to assessing baseline inhalation risks and screening for potential multipathway risks, for some source categories, we also estimated risks considering the potential emission reductions that would be achieved by the particular control options under consideration. In these cases, the expected emissions reductions were applied to the specific HAP and emission points in the source category dataset to develop corresponding estimates of risk reductions.

6. Conducting Other Risk-Related Analyses: Facility-Wide Assessments

To put the source category risks in context, we examined the risks from the entire ''facility,'' where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, for each facility that includes one or more sources from a source category under review, we examined the HAP emissions not only from that source category, but also emissions of HAP from all other emission sources at the facility. The emissions data for generating these ''facility-wide'' risks were obtained from the 2005 NEI. We analyzed risks due to the inhalation of HAP that are emitted ''facility-wide'' for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of facility-wide risks that could be attributed to each of the seven source categories addressed in this proposal. We specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The risk documentation available through the docket for this action provides all facility-wide risks and the percentage of source category contribution for all source categories assessed.

The methodology and results of the facility-wide analyses for each source category are included in the residual risk documentation as referenced in sections IV though VI of this preamble, which is available in the docket for this action.

7. Considering Uncertainties in Risk Assessment

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for the source categories addressed in this proposal. Although uncertainty exists, we believe the approach taken, which used conservative tools and assumptions, ensures that our decisions are health-protective. A brief discussion of the uncertainties in the emissions data sets, dispersion modeling, inhalation exposure estimates and dose-response relationships follows below. A more thorough discussion of these uncertainties is included in the risk assessment documentation (*Draft Residual Risk Assessment for 7 Source Categories* (September 2011)), which is available in the docket for this action.

a. Uncertainties in the Emissions Data Sets

Although the development of the RTR data sets involved quality assurance/quality control processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the data sets are accurate, errors in estimating emissions values and other factors. The emission values considered in this analysis generally are annual totals that do not reflect short-term fluctuations during the course of a year or variations from year to year. In contrast, the estimates of peak hourly emission rates for the acute effects screening assessment were based on emission adjustment factors applied to the average annual hourly emission rates (the default factor is 10 for the initial screening), which are intended to account for emission fluctuations due to normal facility operations. In some cases, more refined estimates, using lower emission adjustment factors that reflected consideration of category-specific information, were used for source categories where the screening estimates did not ''screen out'' all sources and more specific information was available.

b. Uncertainties in Dispersion Modeling

While the analysis employed the EPA's recommended regulatory dispersion model, AERMOD, we recognize that there is uncertainty in ambient concentration estimates associated with any model, including AERMOD. Where possible, model options (*e.g.,* rural/urban, plume depletion, chemistry) were selected to provide an overestimate of ambient air concentrations of the HAP rather than underestimates. However, because of practicality and data limitation reasons, some factors (*e.g.,* meteorology, building downwash) have the potential in some situations to overestimate or underestimate ambient impacts. For example, meteorological data were taken from a single year (1991), and facility locations can be a significant distance from the site where these data were taken. Despite these uncertainties, we believe that at off-site locations and census block centroids, the approach considered in the dispersion modeling analysis should generally yield overestimates of ambient HAP concentrations.

c. Uncertainties in Inhalation Exposure

The effects of human mobility on exposures were not included in the assessment. Specifically, short-term mobility and long-term mobility between census blocks in the modeling domain were not considered.[16] Not considering short or long-term population mobility does not bias the estimate of the theoretical MIR, nor does it affect the estimate of cancer incidence because the total population number remains the same. It does, however, affect the shape of the distribution of individual risks across the affected

[16] Short-term mobility is movement from one microenvironment to another over the course of hours or days. Long-term mobility is movement from one residence to another over the course of a lifetime.

population, shifting it toward higher estimated individual risks at the upper end and reducing the number of people estimated to be at lower risks, thereby increasing the estimated number of people at specific high risk levels (*e.g.,* 1-in-1 million).

In addition, the assessment predicted the chronic exposures at the centroid of each populated census block as surrogates for the exposure concentrations for all people living in that block. Using the census block centroid to predict chronic exposures tends to over-predict exposures for people in the census block who live farther from the facility and under-predict exposures for people in the census block who live closer to the facility. Thus, using the census block centroid to predict chronic exposures may lead to a potential understatement or overstatement of the true maximum impact, but it is an unbiased estimate of average risk and incidence.

The assessments evaluate the cancer inhalation risks associated with continuous pollutant exposures over a 70-year period, which is the assumed lifetime of an individual. In reality, both the length of time that modeled emissions sources at facilities actually operate (*i.e.,* more or less than 70 years) and the domestic growth or decline of the modeled industry (*i.e.,* the increase or decrease in the number or size of United States facilities) will influence the risks posed by a given source category. Depending on the characteristics of the industry, these factors will, in most cases, result in an overestimate both in individual risk levels and in the total estimated number of cancer cases. However, in rare cases, where a facility maintains or increases its emission levels beyond 70 years, residents live beyond 70 years at the same location, and the residents spend most of their days at that location, then the risks could potentially be underestimated. Annual cancer incidence estimates from exposures to emissions from these sources would not be affected by uncertainty in the length of time emissions sources operate.

The exposure estimates used in these analyses assume chronic exposures to ambient levels of pollutants. Because most people spend the majority of their time indoors, actual exposures may not be as high, depending on the characteristics of the pollutants modeled. For many HAP, indoor levels are roughly equivalent to ambient levels, but for very reactive pollutants or larger particles, these levels are typically lower. This factor has the potential to result in an overstatement of 25 to 30 percent of exposures.[17]

In addition to the uncertainties highlighted above, there are several other factors specific to the acute exposure assessment. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emissions rates, meteorology and human activity patterns. In this assessment, we assume that individuals remain for 1 hour at the point of maximum ambient concentration as determined by the co-occurrence of peak emissions and worst-case meteorological conditions. These assumptions would tend to be worst-case actual exposures, as it is unlikely that a person would be located at the point of maximum exposure during the time of worst-case impact.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the reference values used in our risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties may be considered quantitatively and others generally are expressed in qualitative terms. We note as a preface to this discussion a point on dose-response uncertainty that is brought out in the EPA's *2005 Cancer Guidelines;* namely, that ''the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective.'' (*EPA 2005 Cancer Guidelines,* pages 1–7.) This is the approach followed here as summarized in the next several paragraphs. A complete detailed discussion of uncertainties and variabilities in dose-response relationships is given in the residual risk documentation, which is available in the docket for this action.

Cancer URE values used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk. That is, they represent a ''plausible upper limit to the true value of a quantity'' (although this is usually not a true statistical confidence limit).[18] In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[19] When developing an upper bound estimate of risk and to provide risk values that do not underestimate risk, health-protective default approaches are generally used. To err on the side of ensuring adequate health protection, the EPA typically uses the upper bound estimates rather than lower bound or central tendency estimates in our risk assessments, an approach that may have limitations for other uses (*e.g.,* priority-setting or expected benefits analysis).

Chronic noncancer reference (RfC) and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. Specifically, these values provide an estimate (with uncertainty spanning perhaps an order of magnitude) of daily oral exposure (RfD) or of a continuous inhalation exposure (RfC) to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. To derive values that are intended to be ''without appreciable risk,'' the methodology relies upon an uncertainty factor (UF) approach (U.S. EPA, 1993, 1994), which includes consideration of both uncertainty and variability. The UF are applied to derive reference values that are intended to protect against appreciable risk of deleterious effects. The UF are commonly default values,[20] *e.g.,* factors of 10 or 3, used in the absence of compound-specific data; where data are available, UF may also be developed using compound-specific information. When data are limited, more assumptions are needed and more UF are used. Thus, there may be a greater

[17] U.S. EPA. *National-Scale Air Toxics Assessment for 1996.* (EPA 453/R–01–003; January 2001; page 85.)

[18] IRIS glossary (*http://www.epa.gov/NCEA/iris/help_gloss.htm*).

[19] An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

[20] According to the NRC report, *Science and Judgment in Risk Assessment* (NRC, 1994) ''[Default] options are generic approaches, based on general scientific knowledge and policy judgment, that are applied to various elements of the risk assessment process when the correct scientific model is unknown or uncertain.'' The 1983 NRC report, *Risk Assessment in the Federal Government: Managing the Process,* defined default option as ''the option chosen on the basis of risk assessment policy that appears to be the best choice in the absence of data to the contrary'' (NRC, 1983a, p. 63). Therefore, default options are not rules that bind the agency; rather, the agency may depart from them in evaluating the risks posed by a specific substance when it believes this to be appropriate. In keeping with the EPA's goal of protecting public health and the environment, default assumptions are used to ensure that risk to chemicals is not underestimated (although defaults are not intended to overtly overestimate risk). See EPA 2004, *An examination of EPA Risk Assessment Principles and Practices,* EPA/100/B–04/001, available at: *http://www.epa.gov/osa/pdfs/ratf-final.pdf.*

tendency to overestimate risk in the sense that further study might support development of reference values that are higher (*i.e.,* less potent), because fewer default assumptions are needed. However, for some pollutants it is possible that risks may be underestimated.

While collectively termed ''UF,'' these factors account for a number of different quantitative considerations when using observed animal (usually rodent) or human toxicity data in the development of the RfC. The UF are intended to account for: (1) Variation in susceptibility among the members of the human population (*i.e.,* inter-individual variability); (2) uncertainty in extrapolating from experimental animal data to humans (*i.e.,* interspecies differences); (3) uncertainty in extrapolating from data obtained in a study with less-than-lifetime exposure (*i.e.,* extrapolating from sub-chronic to chronic exposure); (4) uncertainty in extrapolating the observed data to obtain an estimate of the exposure associated with no adverse effects; and (5) uncertainty when the database is incomplete or there are problems with the applicability of available studies. Many of the UF used to account for variability and uncertainty in the development of acute reference values are quite similar to those developed for chronic durations, but they more often use individual UF values that may be less than 10. UF are applied based on chemical-specific or health effect-specific information (*e.g.,* simple irritation effects do not vary appreciably between human individuals, hence a value of 3 is typically used), or based on the purpose for the reference value (see the following paragraph). The UF applied in acute reference value derivation include: (1) Heterogeneity among humans; (2) uncertainty in extrapolating from animals to humans; (3) uncertainty in lowest observed adverse effect (exposure) level to no observed adverse effect (exposure) level adjustments; and (4) uncertainty in accounting for an incomplete database on toxic effects of potential concern. Additional adjustments are often applied to account for uncertainty in extrapolation from observations at one exposure duration (*e.g.,* 4 hours) to derive an acute reference value at another exposure duration (*e.g.,* 1 hour).

Not all acute reference values are developed for the same purpose and care must be taken when interpreting the results of an acute assessment of human health effects relative to the reference value or values being exceeded. Where relevant to the estimated exposures, the lack of short-term dose-response values at different levels of severity should be factored into the risk characterization as potential uncertainties.

Although every effort is made to identify peer-reviewed reference values for cancer and noncancer effects for all pollutants emitted by the sources included in this assessment, some pollutants have no peer-reviewed reference values for cancer, chronic noncancer or acute effects. Since exposures to these pollutants cannot be included in a quantitative risk estimate, an understatement of risk for these pollutants at environmental exposure levels is possible. For a group of compounds that are either unspeciated or do not have reference values for every individual compound (*e.g.,* glycol ethers) we conservatively use the most protective reference value to estimate risk from individual compounds in the group of compounds.

Additionally, chronic reference values for several of the compounds included in this assessment are currently under EPA IRIS review, and revised assessments may determine that these pollutants are more or less potent than the current value. We may re-evaluate residual risks for the final rulemaking if these reviews are completed prior to our taking final action for these source categories and if a dose-response metric changes enough to indicate that the risk assessment supporting this notice may significantly understate human health risk.

e. Uncertainties in the Multipathway and Environmental Effects Screening Assessment

We generally assume that when exposure levels are not anticipated to adversely affect human health, they also are not anticipated to adversely affect the environment. For each source category, we generally rely on the site-specific levels of PB–HAP emissions to determine whether a full assessment of the multipathway and environmental effects is necessary. Our screening methods use worst-case scenarios to determine whether multipathway impacts might be important. The results of such a process are biased high for the purpose of screening out potential impacts. Thus, when individual pollutants or facilities screen out, we are confident that the potential for multipathway impacts is negligible. On the other hand, when individual pollutants or facilities do not screen out, it does not mean that multipollutant impacts are significant, only that we cannot rule out that possibility.

C. How did we consider the risk results in making decisions for this proposal?

As discussed in the previous section of this preamble, we apply a two-step process for determining whether to develop standards to address residual risk. In the first step, the EPA determines whether risks are acceptable. This determination ''considers all health information, including risk estimation uncertainty, and includes a presumptive level on maximum individual lifetime [cancer] risk (MIR) [21] of approximately one in 10 thousand [*i.e.,* 100 in 1 million].'' 54 FR 38045. In the second step of the process, the EPA determines what level of the standard is needed to provide an ample margin of safety ''in consideration of all health information, including the number of persons at risk levels higher than approximately one in one million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision.'' *Id.*

In past residual risk actions, the EPA presented and considered a number of human health risk metrics associated with emissions from the category under review, including: The MIR; the numbers of persons in various risk ranges; cancer incidence; the maximum noncancer HI; and the maximum acute noncancer hazard. See, *e.g.,* 75 FR 65068, 65072–74 (Oct. 21, 2010), and 76 FR 22566, 22575 (Apr. 21, 2011). In estimating risks, the EPA considered sources under review that are located near each other and that affect the same population. The EPA developed risk estimates based on the actual emissions from the source category under review as well as based on the maximum emissions allowed pursuant to the source category MACT standards. The EPA also discussed and considered risk estimation uncertainties. The EPA is providing this same type of information in support of these actions.

The agency is considering all available health information to inform our determinations of risk acceptability and ample margin of safety under CAA section 112(f). Specifically, as explained in the Benzene NESHAP, ''the first step judgment on acceptability cannot be reduced to any single factor'' and thus ''[t]he Administrator believes that the acceptability of risk under [previous] section 112 is best judged on the basis of a broad set of health risk measures and information.'' 54 FR 38046.

[21] Although defined as ''maximum individual risk,'' MIR refers only to cancer risk. MIR, one metric for assessing cancer risk, is the estimated risk were an individual exposed to the maximum level of a pollutant for a lifetime.

Similarly, with regard to making the ample margin of safety determination, as stated in the Benzene NESHAP, ''[i]n the ample margin decision, the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors.'' *Id.*

The agency acknowledges that the Benzene NESHAP provides flexibility regarding what factors the EPA might consider in making our determinations and how they might be weighed for each source category. In responding to comment on our policy under the Benzene NESHAP, the EPA explained that: ''The policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of noncancer health effects and the uncertainties of the risk estimates. In this way, the effect on the most exposed individuals can be reviewed as well as the impact on the general public. These factors can then be weighed in each individual case. This approach complies with the Vinyl Chloride mandate that the Administrator ascertain an acceptable level of risk to the public by employing [her] expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA's consideration with respect to CAA section 112 regulations and, thereby, implicitly permits consideration of any and all measures of health risk which the Administrator, in [her] judgment, believes are appropriate to determining what will 'protect the public health.' '' 54 FR 38057.

Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risks. The Benzene NESHAP explains ''an MIR of approximately one in 10 thousand should ordinarily be the upper end of the range of acceptability. As risks increase above this benchmark, they become presumptively less acceptable under CAA section 112, and would be weighed with the other health risk measures and information in making an overall judgment on acceptability. Or, the agency may find, in a particular case, that a risk that includes MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors.'' *Id.* at 38045. Similarly, with regard to the ample margin of safety analysis, the Benzene NESHAP states that: ''EPA believes the relative weight of the many factors that can be considered in selecting an ample margin of safety can only be determined for each specific source category. This occurs mainly because technological and economic factors (along with the health-related factors) vary from source category to source category.'' *Id.* at 38061.

D. How did we perform the technology review?

Our technology review is focused on the identification and evaluation of ''developments in practices, processes, and control technologies.'' If a review of available information identifies such developments, then we conduct an analysis of the technical feasibility of requiring the implementation of these developments, along with the impacts (costs, emission reductions, risk reductions, *etc.*). We then make a decision on whether it is necessary to amend the regulation to require compliance with revised standards in light of these developments. This has become our standard practice in conducting technology reviews. See, *e.g.,* 75 FR 65068, 65083 (October 21, 2010).

Based on specific knowledge of each source category, we began by identifying known developments in practices, processes and control technologies. For the purpose of this exercise, we considered any of the following to be a ''development'':

- Any add-on control technology or other equipment that was not identified and considered during MACT development;
- Any improvements in add-on control technology or other equipment (that was identified and considered during MACT development) that could result in significant additional emission reduction;
- Any work practice or operational procedure that was not identified and considered during MACT development; and
- Any process change or pollution prevention alternative that could be broadly applied that was not identified and considered during MACT development.

In addition to looking back at practices, processes or control technologies reviewed at the time we developed the MACT standards, we reviewed a variety of sources of data to aid in our evaluation of whether there were additional practices, processes or controls to consider. One of these sources of data was subsequent air toxics rules. Since the promulgation of the MACT standards for the source categories addressed in this proposal, the EPA has developed air toxics regulations for a number of additional source categories. In these subsequent air toxic regulatory actions, we consistently evaluated any new practices, processes and control technologies. We reviewed the regulatory requirements and/or technical analyses associated with these subsequent regulatory actions to identify any practices, processes and control technologies considered in these efforts that could possibly be applied to emission sources in the source categories under this current RTR review.

We also consulted the EPA's RBLC. The terms ''RACT,'' ''BACT'' and ''LAER'' are acronyms for different program requirements under the CAA provisions addressing the national ambient air quality standards. Control technologies classified as RACT, BACT or LAER apply to stationary sources depending on whether the sources are existing or new and on the size, age and location of the facility. BACT and LAER (and sometimes RACT) are determined on a case-by-case basis, usually by state or local permitting agencies. The EPA established the RBLC to provide a central data base of air pollution technology information (including technologies required in source-specific permits) to promote the sharing of information among permitting agencies and to aid in identifying future possible control technology options that might apply broadly to numerous sources within a category or apply only on a source-by-source basis. The RBLC contains over 5,000 air pollution control permit determinations that can help identify appropriate technologies to mitigate many air pollutant emission streams. We searched this database to determine whether any practices, processes or control technologies are included for the types of processes used for emission sources (*e.g.,* tanks or vents) in the source categories under consideration in this proposal.

We also reviewed other information sources, such as state or local permitting agency databases and industry-supported databases.

E. What other issues are we addressing in this proposal?

In addition to the RTR performed regarding the NESHAP, we are also proposing revisions to the NESHAP to address emissions during periods of startup, shutdown and malfunction (SSM) and revisions to require electronic reporting of emissions test results.

1. Startup, Shutdown and Malfunction (SSM)

The United States Court of Appeals for the District of Columbia Circuit vacated portions of two provisions in the EPA's CAA Section 112 regulations governing the emissions of HAP during periods of SSM. *Sierra Club* v. *EPA,* 551 F.3d 1019 (DC Cir. 2008), *cert. denied,* 130 S. Ct. 1735 (U.S. 2010). Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), that are part of a regulation, commonly referred to as the ''General Provisions Rule,'' that the EPA promulgated under section 112 of the CAA. When incorporated into CAA section 112(d) regulations for specific source categories, these two provisions exempt sources from the requirement to comply with the otherwise applicable CAA section 112(d) emission standard during periods of SSM.

As we have done in other recent risk and technology review rulemakings, we are proposing the elimination of the SSM exemption in each of the three MACT standards addressed by this rule. See, *e.g.,* 76 FR 22568, 22573 (Apr. 21, 2011). Consistent with *Sierra Club* v. *EPA,* the EPA is proposing standards in these rules that apply at all times. We are also proposing several revisions to the General Provisions Applicability table in each of the MACT standards. For example, we are proposing to eliminate the incorporation of the General Provisions' requirement that the source develop an SSM plan. We also are proposing to eliminate or revise certain recordkeeping and reporting related to the SSM exemption. The EPA has attempted to ensure that we have not included in the proposed regulatory language any provisions that are inappropriate, unnecessary or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether there are any such provisions that we have inadvertently incorporated or overlooked.

In proposing the standards in these rules, the EPA has taken into account startup and shutdown periods and has not proposed different standards for those periods because we expect the difference in emission levels during periods of startup and shutdown are insignificant and that facilities in these source categories should be able to comply with the standards during these times.

Periods of startup, normal operation and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a ''sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * *.'' (40 CFR 63.2). The EPA has determined that CAA section 112 does not require that emissions that occur during periods of malfunction be factored into development of CAA section 112 standards. Under section 112, emissions standards for new sources must be no less stringent than the level ''achieved'' by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation ''achieved'' by the best performing 12 percent of sources in the category. There is nothing in section 112 that directs the agency to consider malfunctions in determining the level ''achieved'' by the best performing or best controlled sources when setting emission standards. Moreover, while the EPA accounts for variability in setting emissions standards consistent with the CAA section 112 caselaw, nothing in that caselaw requires the agency to consider malfunctions as part of that analysis. Section 112 uses the concept of ''best controlled'' and ''best performing'' unit in defining the level of stringency that CAA section 112 performance standards must meet. Applying the concept of ''best controlled'' or ''best performing'' to a unit that is malfunctioning presents significant difficulties, as malfunctions are sudden and unexpected events.

Further, accounting for malfunctions would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree and duration of various malfunctions that might occur. As such, the performance of units that are malfunctioning is not ''reasonably'' foreseeable. See, *e.g., Sierra Club* v. *EPA,* 167 F. 3d 658, 662 (DC Cir. 1999) (The EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to ''invest the resources to conduct the perfect study.''). See also, *Weyerhaeuser* v. *Costle,* 590 F.2d 1011, 1058 (DC Cir. 1978) (''In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation.''). In addition, the goal of a best controlled or best performing source is to operate in such a way as to avoid malfunctions of the source, and accounting for malfunctions could lead to standards that are significantly less stringent than levels that are achieved by a well-performing non-malfunctioning source. The EPA's approach to malfunctions is consistent with section 112 and is a reasonable interpretation of the statute.

In the event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, ''sudden, infrequent, not reasonably preventable'' and was not instead ''caused in part by poor maintenance or careless operation.'' 40 CFR 63.2 (definition of malfunction).

Finally, the EPA recognizes that even equipment that is properly designed and maintained can sometimes fail and that such failure can sometimes cause an exceedance of the relevant emission standard. (See, *e.g.,* State Implementation Plans: Policy Regarding Excessive Emissions During Malfunctions, Startup, and Shutdown (Sept. 20, 1999); Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions (Feb. 15, 1983)). The EPA is, therefore, proposing to follow its recently established practice (see, *e.g.,* 76 FR 22566, 22573–74 (Apr. 21, 2011)) and add to the rules an affirmative defense to civil penalties for exceedances of emission limits that are caused by malfunctions. See proposed 40 CFR 63.1312 (Group IV Polymers and Resins), 40 CFR 63.1361 (PAI) and 40 CFR 63.1423 (PEPO). The regulations define ''affirmative defense'' to mean, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding. We also are proposing other regulatory provisions to specify the

elements that are necessary to establish this affirmative defense; the source must prove by a preponderance of the evidence that it has met all of the elements set forth in proposed 40 CFR 63.1310(k) (Group IV Polymers and Resins), 40 CFR 63.1360(k) (PAI) and 40 CFR 63.1420(i) (PEPO). (See 40 CFR 22.24). The criteria ensure that the affirmative defense is available only where the event that causes an exceedance of the emission limit meets the narrow definition of malfunction in 40 CFR 63.2 (sudden, infrequent, not reasonable preventable and not caused by poor maintenance and or careless operation). For example, to successfully assert the affirmative defense, the source must prove by a preponderance of the evidence that excess emissions ''[w]ere caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner * * *.'' The criteria also are designed to ensure that steps are taken to correct the malfunction, to minimize emissions in accordance with proposed 40 CFR 63.1310(j)(4) (Group IV Polymers and Resins), 40 CFR 63.1362(i) (PAI) and 40 CFR 63.1420(h)(4) (PEPO) and to prevent future malfunctions. For example, the source must prove by a preponderance of the evidence that ''[r]epairs were made as expeditiously as possible when the applicable emission limitations were being exceeded * * *'' and that ''[a]ll possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health * * *.'' In any judicial or administrative proceeding, the Administrator may challenge the assertion of the affirmative defense and, if the respondent has not met its burden of proving all of the requirements in the affirmative defense, appropriate penalties may be assessed in accordance with section 113 of the CAA (see also 40 CFR 22.27).

The EPA included an affirmative defense in these proposed rules in an attempt to balance a tension, inherent in many types of air regulation, to ensure adequate compliance while simultaneously recognizing that despite the most diligent of efforts, emission limits may be exceeded under circumstances beyond the control of the source. The EPA must establish emission standards that ''limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis.'' 42 U.S.C. 7602(k) (defining ''emission limitation and emission standard''). See generally, *Sierra Club* v. *EPA,* 551 F.3d 1019, 1021 (D.C. Cir. 2008). Thus, the EPA is required to ensure that section 112 emissions limitations are continuous. The affirmative defense for malfunction events meets this requirement by ensuring that even where there is a malfunction, the emission limitation is still enforceable through injunctive relief. While ''continuous'' limitations, on the one hand, are required, there is also caselaw indicating that in many situations it is appropriate for the EPA to account for the practical realities of technology. For example, in *Essex Chemical* v. *Ruckelshaus,* 486 F.2d 427, 433 (D.C. Cir. 1973), the District of Columbia Circuit acknowledged that, in setting standards under CAA section 111, ''variant provisions'' such as provisions allowing for upsets during startup, shutdown and equipment malfunction ''appear necessary to preserve the reasonableness of the standards as a whole and that the record does not support the 'never to be exceeded' standard currently in force.'' See also, *Portland Cement Association* v. *Ruckelshaus,* 486 F.2d 375 (D.C. Cir. 1973). Though intervening caselaw such as *Sierra Club* v. *EPA* and the CAA 1977 amendments undermine the relevance of these cases today, they support the EPA's view that a system that incorporates some level of flexibility is reasonable. The affirmative defense simply provides for a defense to civil penalties for excess emissions that are proven to be beyond the control of the source. By incorporating an affirmative defense, EPA has formalized its approach to upset events. In a Clean Water Act setting, the Ninth Circuit required this type of formalized approach when regulating ''upsets beyond the control of the permit holder.'' *Marathon Oil Co.* v. *EPA,* 564 F.2d 1253, 1272–73 (9th Cir. 1977). See, *Weyerhaeuser Co.* v. *Costle,* 590 F.2d 1011, 1057–58 (D.C. Cir. 1978) (holding that an informal approach is adequate). The affirmative defense provisions give the EPA the flexibility to both ensure that its emission limitations are ''continuous'' as required by 42 U.S.C. section 7602(k), and account for unplanned upsets and thus support the reasonableness of the standard as a whole.

In addition to these changes in the provisions related to SSM, we are also proposing that there be no discharge to the atmosphere from any pressure relief device (PRD) on any equipment in HAP service within the process units for these seven source categories. To ensure compliance with this requirement, facility owners or operators would be required to install electronic indicators on each PRD that would be able to identify and record the time and duration of each pressure release and notify operators that a pressure release has occurred. While pressure release events may be associated with unplanned, nonroutine discharges that result from operator error, malfunctions or other unexpected causes that require immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage, we are concerned that a large number of these releases that occur may emit large quantities of HAP, may not be identified and controlled in a timely manner and may be due to repeat problems that have not been corrected. These proposed provisions will clarify that such release events would be violations of the emissions standards of these rules. If any pressure release events that occur are related to a process or control device malfunction, the owner or operator could claim the affirmative defense described above.

2. Electronic Reporting

We are proposing to add electronic reporting requirements to the PAI, PEPO and the Group IV Polymers and Resin Production NESHAP. The EPA must have performance test data to conduct effective reviews of CAA section 112 standards, as well as for many other purposes including compliance determinations, emission factor development and annual emission rate determinations. In conducting these required reviews, the EPA has found it ineffective and time consuming, not only for us, but also for regulatory agencies and source owners and operators, to locate, collect and submit performance test data because of varied locations for data storage and varied data storage methods. In recent years, though, stack testing firms have typically collected performance test data in electronic format, making it possible to move to an electronic data submittal system that would increase the ease and efficiency of data submittal and improve data accessibility.

Through this proposal, the EPA is presenting a step to increase the ease and efficiency of data submittal and improve data accessibility. Specifically, the EPA is proposing that owners and operators of PAI, PEPO and Group IV Polymers and Resins facilities submit electronic copies of required performance test reports to the EPA's WebFIRE database. The WebFIRE database was constructed to store performance test data for use in developing emission factors. A description of the WebFIRE database is

available at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main.*

As proposed above, data entry would be through an electronic emissions test report structure called the Electronic Reporting Tool (ERT). The ERT would generate electronic report which would be submitted using the Compliance and Emissions Data Reporting Interface (CEDRI). The submitted report would be transmitted through the EPA's Central Data Exchange (CDX) network for storage in the WebFIRE database making submittal of data very straightforward and easy. A description of the ERT can be found at *http://www.epa.gov/ttn/chief/ert/index.html* and CEDRI can be accessed through the CDX Web site (*http://www.epa.gov/cdx*).

The proposal to submit performance test data electronically to the EPA would apply only to those performance tests conducted using test methods that will be supported by the ERT. The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. A listing of the pollutants and test methods supported by the ERT is available at *http://www.epa.gov/ttn/chief/ert/index.html.* We believe that industry would benefit from this proposed approach to electronic data submittal. Having these data, the EPA would be able to develop improved emission factors, make fewer information requests and promulgate better regulations.

One major advantage of the proposed submittal of performance test data through the ERT is a standardized method to compile and store much of the documentation required to be reported by this rule. Another advantage is that the ERT clearly states what testing information would be required. Another important proposed benefit of submitting these data to the EPA at the time the source test is conducted is that it should substantially reduce the effort involved in data collection activities in the future. When the EPA has performance test data in hand, there will likely be fewer or less substantial data collection requests in conjunction with prospective required residual risk assessments or technology reviews. This would result in a reduced burden on both affected facilities (in terms of reduced manpower to respond to data collection requests) and the EPA (in terms of preparing and distributing data collection requests and assessing the results).

State, local and tribal agencies could also benefit from more streamlined and accurate review of electronic data submitted to them. The ERT would allow for an electronic review process rather than a manual data assessment making review and evaluation of the source provided data and calculations easier and more efficient. Finally, another benefit of the proposed data submittal to WebFIRE electronically is that these data would greatly improve the overall quality of existing and new emissions factors by supplementing the pool of emissions test data for establishing emissions factors and by ensuring that the factors are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emission factors are outdated or not representative of a particular source category. With timely receipt and incorporation of data from most performance tests, the EPA would be able to ensure that emission factors, when updated, represent the most current range of operational practices. In summary, in addition to supporting regulation development, control strategy development and other air pollution control activities, having an electronic database populated with performance test data would save industry, state, local, tribal agencies and the EPA significant time, money and effort while also improving the quality of emission inventories and, as a result, air quality regulations.

IV. Analytical Results and Proposed Decisions for Group IV Polymers and Resins Source Categories

A. Acrylonitrile Butadiene Styrene Resin (ABS)

1. What are the results of the risk assessments?

a. Inhalation Risk Assessment Results

Table 3 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 3—ABS INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
5	30	30	32,000	0.003	0.2	0.2	HQ_{REL} = 2 acetaldehyde. HQ_{ERPG-1} = 0.04 acetaldehyde.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the ABS source category is the reproductive system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 3, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 30-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.2, and the maximum off-facility site acute HQ value could be up to 2, based on the actual emissions level and the REL value for acetaldehyde. The total estimated national cancer incidence from these facilities, based on actual emission levels, is 0.003 excess cancer cases per year or one case in every 333 years.

Based on our analysis, we believe that actual emissions approximate emissions allowable under the MACT standards. Therefore, the risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For

more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

There were no reported emissions of PB–HAP; therefore, we do not expect potential for human health multipathway risks or adverse environmental impacts as a result of PB–HAP.

b. Facility-Wide Risk Assessment Results

Table 4 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 4—ABS FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	5
Cancer Risk:*	
Estimated maximum facility-wide individual cancer risk (in 1 million)	30
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the ABS source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the ABS source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	4
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	< 1
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	0
Number of facilities at which the ABS source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the Group IV Polymers and Resins MACT standards for ABS resins is estimated to be 30-in-1 million, based on actual emissions. Of the 5 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There are 4 facilities with facility-wide MIR of 1-in-1 million or greater (MIR ranging from 10 to 30 in a million). Each of these facilities has ABS production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be less than 1, based on actual emissions. Of the 5 facilities included in this analysis, none have facility-wide maximum chronic noncancer TOSHI values greater than 1.

c. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the ABS source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 30-in-1 million due to both actual and allowable emissions. This value is considerably less than 100-in-1 million, which is the presumptive level of acceptability. The risk analysis also shows low cancer incidence (1 in every 333 years), no potential for human health multipathway effects, and that chronic noncancer health impacts are unlikely.

We estimate that the worst-case acute HQ value could exceed a value of 1 for one HAP, acetaldehyde, with a potential maximum HQ up to 2 based on the acute REL dose-response value. Only one of the five facilities in this source category had an estimated HQ greater than 1 (REL of 2 for acetaldehyde). All other facilities modeled had an HQ less than 1. The maximum HQ based on an AEGL–1 or ERPG–1 dose-response value is 0.04 for acetaldehyde based on the ERPG–1. As described earlier in this preamble, the acute assessment includes some conservative assumptions and some uncertainties. Moreover, the REL are protective and designed to protect the most sensitive individuals in the population by inclusion of margins of safety and exposures above the REL do not necessarily indicate that adverse effects will occur. Considering the improbable assumption that worst-case meteorological conditions are present at the same time that maximum hourly emissions of acetaldehyde exceed the average hourly emission rate by a factor of 10 at all emission points simultaneously, coincident with individuals being in the location of maximum impact, and considering the low acute HQ values based on the AEGL–1 and ERPG–1 dose-response values collectively with the REL value, we believe it is unlikely that HAP emissions from this source category would result in acute health effects.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 30-in-1 million and that the maximum chronic exposures are expected to be without appreciable risk of adverse noncancer health effects.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the ABS source category are acceptable.

d. What is our proposed decision regarding ample margin of safety?

We considered whether the MACT standards provide an ample margin of safety to protect public health. In this analysis, we investigated available emissions control options that might reduce the risk associated with emissions from the source category and considered this information along with all of the health risks and other health information considered in the risk acceptability determination.

For the ABS source category, we identified only one control option to further address risks from equipment leaks. This control option would require sources to install leakless valves to prevent leaks from those components.

While approximately 15 percent of the emissions from this source category are due to equipment leaks, these emissions do not contribute to the maximum individual cancer risks estimated for the source category.

We estimated HAP reduction resulting from this control option is approximately 6 tpy from the baseline actual emissions level. We estimated that achieving these reductions would involve a capital cost of approximately $11,000,000, a total annualized cost of about $1,500,000 and a cost effectiveness of $244,000 per ton of HAP emissions reduced. The additional control requirement would not achieve a reduction in the maximum individual cancer risks. We estimate that the MACT allowable emissions from this source category are approximately equal to the reported, actual emissions. Therefore, the estimated emission reduction, risk reduction and costs discussed above would also be applicable to the MACT allowable emissions level. We believe that the costs of this option are not reasonable, given the level of emission and risk reduction.

In accordance with the approach established in the Benzene NESHAP, the EPA weighed all health risk measures and information considered in the risk acceptability determination, along with the costs and economic impacts of emissions controls, technological feasibility, uncertainties and other relevant factors in making our ample margin of safety determination. Considering the health risk information and the unreasonable cost effectiveness of the option identified, we propose that the existing MACT standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

2. What are the results of the technology review?

In the decade since the Group IV Polymers and Resins MACT standards were promulgated, the EPA has developed 19 air toxics regulations for source categories that emit organic HAP from the same type of emissions sources that are present in the five Group IV Polymers and Resins source categories addressed in this proposed action. We reviewed the regulatory requirements and/or technical analyses for these 19 regulations for new practices, processes and control technologies. We also conducted a search of the RBLC for controls for VOC–SOCMI categories with permits dating back to 1997.

We identified no advancements in practices, processes, and control technologies applicable to the emission sources in the Group IV Polymers and Resins source categories in our technology review.

3. What other actions are we proposing?

a. SSM Provisions

We are proposing to eliminate the SSM exemption in the Group IV Polymers and Resins MACT standards. Consistent with *Sierra Club* v. *EPA,* the EPA is proposing that standards in this rule would apply at all times. We are proposing several revisions to 40 CFR part 63, subpart JJJ. Specifically, we are proposing to revise Table 1 to indicate that the requirements of 40 CFR 63.6(e) of the General Provisions do not apply. The 40 CFR 63.6(e) requires the owner or operator to act according to the general duty to ''operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.'' We are separately proposing to incorporate this general duty to minimize into 40 CFR 63.1310(j)(4). The 40 CFR 63.6(e) also requires the owner or operator of an affected source to develop a written SSM plan. We are proposing to remove the SSM plan requirement. We are proposing to remove the explanation of applicability of emissions standards during periods SSM in 40 CFR 63.1310(j); remove the malfunction plan from 40 CFR 63.1335(b); clarify that representative conditions do not include periods of SSM throughout the rule; remove references to periods of SSM in monitoring; remove the provisions for excused excursions from 40 CFR 63.1334(g); and revise the SSM-associated recordkeeping and reporting requirements in 40 CFR 63.1335(b) to require reporting and recordkeeping for periods of malfunction. We are also proposing to revise Table 1 to indicate that SSM-related provisions in 40 CFR 63.6(e)(1), 63.6(e)(3), 63.6(f)(1); 40 CFR 63.7(e)(1); 40 CFR 63.8(c)(1); and 40 CFR 63.10(d)(5) of the General Provisions do not apply. We are also proposing to add requirements in 40 CFR 63.1331(a)(9)) to clarify that PRD releases to the atmosphere are violations of the emissions standards and to require pressure release alarms and to add requirements in 40 CFR 63.1335(e)(9) to require reporting of any pressure device releases to the atmosphere with the periodic report. In addition, we are proposing to promulgate an affirmative defense against civil penalties for exceedances of emission standards caused by malfunctions, as well as criteria for establishing the affirmative defense.

b. Electronic Reporting

To increase the ease and efficiency of data submittal and improve data accessibility, we are proposing to require the submission of electronic copies of required performance tests for test methods that are supported by the ERT to EPA's WebFIRE database. These provisions are added in 40 CFR 63.1335(e)(10).

B. Styrene Acrylonitrile Resin (SAN)

1. What are the results of the risk assessments?

a. Inhalation Risk Assessment Results

Table 5 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 5—SAN INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
2	0.03	0.03	0	0.000006	0.0002	0.0002	HQ_{REL} = 0.007 methylene chloride.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the SAN source category is the respiratory system.

[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 5, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 0.03-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.0002, and the maximum off-facility site acute HQ value could be up to 0.007, based on the actual emissions level and the REL value for methylene chloride. The total estimated national cancer incidence from these facilities based on actual emission levels is 0.000006 excess cancer cases per year or one case in every 166,666 years.

Based on our analysis, we believe that actual emissions approximate emissions allowable under the MACT standards. Therefore, the risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

There were no reported emissions of PB–HAP; therefore, we do not expect potential for human health multipathway risks or adverse environmental impacts as a result of PB–HAP.

b. Facility-Wide Risk Assessment Results

Table 6 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 6—SAN FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	2
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	20
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the SAN source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the SAN source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	0
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	2
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	1
Number of facilities at which the SAN source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the Group IV Polymers and Resins MACT standards for SAN resins is estimated to be 20-in-1 million, based on actual emissions. Of the 2 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There are 2 facilities with facility-wide MIR of 1-in-1 million or greater (MIR of 20 and 10 in a million). Neither of these facilities have SAN production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be 2, based on actual emissions. Of the 2 facilities included in this analysis, only one facility has a facility-wide maximum chronic noncancer TOSHI value greater than 1 (TOSHI of 2).

c. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the SAN source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 0.03-in-1 million due to both actual and allowable emissions. This value is less than 1-in-1 million. The risk analysis also shows low cancer incidence (1 in every 166,666 years), no potential for human health multipathway effects and that chronic noncancer and acute health effects are unlikely.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 20-in-1 million. The maximum chronic noncancer TOSHI is estimated to be 2, but the source category contributes less than 1 percent to the maximum facility-wide TOSHI.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the SAN source category are acceptable.

d. What is our proposed decision regarding ample margin of safety?

The SAN source category emits HAP which are known, probable or possible carcinogens. The EPA evaluated the emissions of these HAP and determined that the cancer risks to the individual most exposed are less than 1-in-1 million. Our analysis demonstrated that chronic noncancer risks are expected to be low, based on actual and MACT allowable emissions. We determined that emissions from the SAN source category would result in a chronic noncancer TOSHI less than 1 and an acute HQ less than 1 for the individual most exposed. The EPA undertook further analysis to assess whether environmental effects might result from

emissions from this source category. We assume that human toxicity values for the inhalation pathway are generally protective of terrestrial mammals and plants, and thus, we do not anticipate that actual or MACT allowable emissions would result in acute or chronic noncancer health effects to these mammals. While we believe this to be generally true, we acknowledge that there is some associated uncertainty with this assumption. In addition, this source category had no reported emissions of PB–HAP and, therefore, no potential for an adverse environment effect via multipathway exposures was identified as a result of PB–HAP.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the existing MACT standards for the SAN source category provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

2. What are the results of the technology review?

The results of the technology review for the Group IV Polymers and Resins MACT standards are discussed above in section IV.A.2. We identified no advancements in practices, processes, and control technologies applicable to the emission sources in the Group IV Polymers and Resins source categories in our technology review.

3. What other actions are we proposing?

a. SSM Provisions

The proposed changes to the SSM provisions for the Group IV Polymers and Resins MACT standards, which apply to the SAN source category, are discussed above in section IV.A.3.a.

b. Electronic Reporting

The proposed addition of electronic reporting requirements for performance tests for the Group IV Polymers and Resins MACT standards, which apply to the SAN source category, is discussed above in section IV.A.3.b.

C. Methyl Methacrylate Butadiene Styrene Resin (MBS)

1. What are the results of the risk assessments?

a. Inhalation Risk Assessment Results

Table 7 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 7—MBS INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
2	0.4	0.4	0	0.00003	0.007	0.007	HQ_{ERPG-1} = 9 ethyl acrylate. HQ_{AEGL-1} = 0.01 ethyl acrylate.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the MBS source category is the reproductive system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute threshold. For this source category, the maximum acute values were based on the ERPG–1 HQ for ethyl acrylate, and no REL value was available for this HAP. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 7, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 0.4-in-1 million, the maximum chronic noncancer TOSHI value could up to 0.007 and the maximum off-facility site acute HQ value could be up to 9, based on the actual emissions level and the ERPG–1 value for ethyl acrylate. The total estimated national cancer incidence from these facilities, based on actual emission levels is 0.00003 excess cancer cases per year or one case in every 33,333 years.

Based on our analysis, we believe that actual emissions approximate emissions allowable under the MACT standards. Therefore, the risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

There were no reported emissions of PB–HAP; therefore, we do not expect potential for human health multipathway risks or adverse environmental impacts as a result of PB–HAP.

b. Facility-Wide Risk Assessment Results

Table 8 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 8—MBS FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	2
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	2
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the MBS source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0

TABLE 8—MBS FACILITY-WIDE RISK ASSESSMENT RESULTS—Continued

Number of facilities at which the MBS source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	0
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	< 1
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	0
Number of facilities at which the MBS source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the Group IV Polymers and Resins MACT standards for MBS resins is estimated to be 2-in-1 million, based on actual emissions. Of the 2 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There is 1 facility with a facility-wide MIR of 1-in-1 million or greater (MIR of 2 in a million). The facility with an MIR greater than 1-in-1 million does not have MBS production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be less than 1, based on actual emissions. Of the 2 facilities included in this analysis, neither have facility-wide maximum chronic noncancer TOSHI values greater than 1.

c. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the MBS source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 0.4-in-1 million due to both actual and allowable emissions. This value is less than 1-in-1 million. The risk analysis also shows low cancer incidence (1 in every 33,333 years), no potential for human health multipathway effects and that chronic noncancer health impacts are unlikely.

We estimate that the worst-case acute HQ value could exceed a value of 1 for one HAP, ethyl acrylate, with a potential maximum HQ up to 9 based on the acute ERPG–1 dose-response value. One of the two facilities in this source category had an estimated HQ greater than 1 (ERPG–1 of 9 for ethyl acrylate). All other facilities modeled had an HQ less than 1. The maximum HQ based on an AEGL–1 dose-response value is 0.01 for ethyl acrylate. For ethyl acrylate, the ERPG–1 value is indicative of the odor recognition threshold, while the AEGL–1 value is indicative of a level which could result in eye irritation. This suggests that, at this worst-case exposure level, a person might smell the pollutant, but not experience any eye irritation. As described earlier in this preamble, the acute assessment includes some conservative assumptions and some uncertainties. Considering the improbable assumption that worst-case meteorological conditions are present at the same time that maximum hourly emissions of ethyl acrylate exceed the average hourly emission rate by a factor of 10 at all emission points simultaneously, coincident with individuals being in the location of maximum impact and considering the low acute HQ value based on the AEGL–1 dose-response value collectively with the ERPG–1 value, we believe it is unlikely that HAP emissions from this source category would result in acute health effects.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 2-in-1 million and that the maximum chronic exposures are expected to be without appreciable risk of adverse noncancer health effects.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the MBS source category are acceptable.

d. What is our proposed decision regarding ample margin of safety?

The MBS source category emits HAP which are known, probable or possible carcinogens. The EPA evaluated the emissions of these HAP and determined that the cancer risks to the individual most exposed are less than 1-in-1 million. Our analysis demonstrated that chronic noncancer risks are expected to be low, based on actual and MACT allowable emissions. We determined that emissions from the MBS source category would result in a chronic noncancer TOSHI less than 1 for the individual most exposed. While the assessment for acute impacts suggests that short-term ethyl acrylate concentrations at one facility could exceed the ERPG–1 dose-response value, we believe it unlikely that acute impacts would occur due to the conservative assumptions and uncertainties associated with the acute analysis. These assumptions include having worst-case meteorological conditions present at the same time that maximum hourly emissions of ethyl acrylate exceed the average hourly emission rate by a factor of 10, coincident with individuals being in the location of maximum impact. The EPA undertook further analysis to assess whether environmental effects might result from emissions from this source category. We assume that human toxicity values for the inhalation pathway are generally protective of terrestrial mammals and plants and, thus, we do not anticipate that actual or MACT allowable emissions would result in acute or chronic noncancer health effects to these mammals. While we believe this to be generally true, we acknowledge that there is some associated uncertainty with this assumption. In addition, this source category had no reported emissions of PB–HAP and, therefore, no potential for an adverse environmental effect via multipathway exposures was identified.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the existing MACT standards for the MBS source category provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

2. What are the results of the technology review?

The results of the technology review for the Group IV Polymers and Resins MACT standards are discussed above in section IV.A.2. We identified no advancements in practices, processes

and control technologies applicable to the emission sources in the Group IV Polymers and Resins source categories in our technology review.

3. What other actions are we proposing?

a. SSM Provisions

The proposed changes to the SSM provisions for the Group IV Polymers and Resins MACT standards, which apply to the MBS source category, are discussed above in section IV.A.3.a.

b. Electronic Reporting

The proposed addition of electronic reporting requirements for performance tests for the Group IV Polymers and Resins MACT standards, which apply to the MBS source category, are discussed above in section IV.A.3.b.

D. Polystyrene Resin

1. What are the results of the risk assessments?

a. Inhalation Risk Assessment Results

Table 9 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 9—POLYSTYRENE RESINS INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
11	2	2	180	0.00003	0.004	0.004	HQ_{REL} = 0.3 styrene.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the polystyrene resin source category is the nervous system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 9, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 2-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.004, and the maximum off-facility site acute HQ value could be up to 0.3, based on the actual emissions level and the REL value for styrene. The total estimated national cancer incidence from these facilities, based on actual emission levels, is 0.00003 excess cancer cases per year, or one case in every 33,333 years.

Based on our analysis, we believe that actual emissions approximate emissions allowable under the MACT standards. Therefore, the risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

There were no reported emissions of PB–HAP; therefore, we do not expect potential for human health multipathway risks or adverse environmental impacts as a result of PB–HAP.

b. Facility-Wide Risk Assessment Results

Table 10 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 10—POLYSTYRENE RESINS FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	11
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	10
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the polystyrene resin source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the polystyrene resin source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	1
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	<1
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	0
Number of facilities at which the Polystyrene Resin source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the Group IV Polymers and Resins MACT standards for polystyrene resins is estimated to be 10-in-1 million, based on actual emissions. Of the 11 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There are 2 facilities with facility-wide MIR of 1-in-1 million or greater (MIR of 10 and 2 in a million). One of these facilities has polystyrene resin production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be less than 1, based on

actual emissions. Of the 11 facilities included in this analysis, none have facility-wide maximum chronic noncancer TOSHI values greater than 1.

c. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the Polystyrene Resin source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 2-in-1 million due to both actual and allowable emissions. This value is considerably less than 100-in-1 million, which is the presumptive level of acceptability. The risk analysis also shows low cancer incidence (1 in every 33,333 years), no potential for human health multipathway effects and that acute and chronic noncancer health impacts are unlikely.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 10-in-1 million and that the maximum chronic exposures are expected to be without appreciable risk of adverse noncancer health effects.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the Polystyrene Resin source category are acceptable.

d. What is our proposed decision regarding ample margin of safety?

We considered whether the MACT standards provide an ample margin of safety to protect public health. In this analysis, we investigated available emissions control options that might reduce the risk associated with emissions from the source category and considered this information along with all of the health risks and other health information considered in the risk acceptability determination.

For the Polystyrene Resin source category, we identified only one control option to further address risks from equipment leaks, which were shown to contribute 100 percent to the maximum individual cancer risks for this source category. This control option would require sources to install leakless valves to prevent leaks from those components.

We estimated HAP reduction resulting from this control option is approximately 5 tpy from the baseline actual emissions level. We estimated that achieving these reductions would involve a capital cost of approximately $9,000,000, a total annualized cost of about $1,300,000 and a cost effectiveness of $244,000 per ton of HAP emissions reduced. The additional control requirement would achieve approximately 20-percent reduction in baseline risks at a very high cost. We estimate that the MACT allowable emissions from this source category are approximately equal to the reported, actual emissions. Therefore, the estimated emission reduction, risk reduction and costs discussed above would also be applicable to the MACT allowable emissions level. We believe that the costs of this option are not reasonable, given the level of emission and risk reduction.

In accordance with the approach established in the Benzene NESHAP, the EPA weighed all health risk measures and information considered in the risk acceptability determination, along with the costs and economic impacts of emissions controls, technological feasibility, uncertainties and other relevant factors in making our ample margin of safety determination. Considering the health risk information and the unreasonable cost effectiveness of the option identified, we propose that the existing MACT standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

2. What are the results of the technology review?

The results of the technology review for the Group IV Polymers and Resins MACT standards are discussed above in section IV.A.2. We identified no advancements in practices, processes and control technologies applicable to the emission sources in the Group IV Polymers and Resins source categories in our technology review.

3. What other actions are we proposing?

a. SSM Provisions

The proposed changes to the SSM provisions for the Group IV Polymers and Resins MACT standards, which apply to the polystyrene resin source category, are discussed above in section IV.A.3.a.

b. Electronic Reporting

The proposed addition of electronic reporting requirements for performance tests for the Group IV Polymers and Resins MACT standards, which apply to the polystyrene resin source category, are discussed above in section IV.A.3.b.

E. Poly (Ethylene Terephthalate) Resin (PET)

1. What are the results of our analyses and proposed decisions regarding unregulated HAP and/or emissions sources?

a. Equipment Leaks

We identified the absence of a limit for a potentially significant emissions source within the provisions of the Group IV Polymers and Resins MACT standards that apply to the PET continuous TPA high viscosity multiple end finisher subcategory. Specifically, there are no regulations for equipment leaks for this source subcategory.[22] As these processes are potentially major sources of emissions for the one facility in the source category, we are proposing to set a work practice standard for equipment leaks under CAA section 112(d)(2) and (d)(3) in this action. CAA section 112(h)(1) states that the Administrator may prescribe a work practice standard or other requirements, consistent with the provisions of CAA sections 112(d) or (f), in those cases where, in the judgment of the Administrator, it is not feasible to enforce an emission standard. CAA section 112(h)(2) defines the phrase ''not feasible to prescribe or enforce an emission standard'' as follows:

> [A]ny situation in which the Administrator determines that (A) a hazardous air pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

The work practice standards in this proposed rule are consistent with CAA section 112(h)(2)(B), because applying a measurement methodology to this class of sources is not technologically and economically feasible due to the number of openings and possible emissions points and because the fugitive emissions cannot be routed to a conveyance designed to capture such emissions.

As there is only one facility in the source subcategory, the emissions level currently being achieved by this facility represents the MACT floor. However, emissions from equipment leaks are

[22] Note that these uncontrolled emissions were included in the risk assessment for the PET source category.

intermittent and fugitive in nature and, therefore, it is not feasible to fully measure the mass emission rate from numerous potential leaks at this facility or to route such emissions through a conveyance designed and constructed to emit or capture such fugitive pollutants. For this reason, under CAA section 112(h), we are proposing to establish the MACT floor for this source subcategory, based on the work practices this facility currently performs to limit emissions from equipment leaks. The work practices this facility follows are to perform a 2- to 3-hour leak check upon startup following an outage where changes have been made to the facility's esterification equipment, which is the only area of the facility that has equipment in gas/vapor service. This is conducted by introducing hot ethylene g1yco1 vapors into the system. Any leaks identified are repaired by tightening flange bolts before introducing new materials into the process. The other equipment components at the facility are in vacuum or heavy liquid service, which are not monitored due to the low vapor pressure of predominant HAP, ethylene glycol and the low potential for equipment leak emissions from these components.

As part of our beyond-the-floor analysis, we considered alternatives more stringent than the MACT floor option. We identified the HON LDAR program as one such option, which is the required level of control for other facilities subject to the Group IV Polymers and Resins MACT standards. The HON requires the use of sensory monitoring for pumps, valves, agitators and connectors in heavy liquid service; the use of EPA Method 21 of 40 CFR part 60, Appendix A, for instrument monitoring of equipment in gas/vapor service; and equipment in vacuum service is not required to be monitored. Based on previous information prepared to examine the equipment leak costs for facilities in the PET source category,[23] the capital costs of this option are estimated to be approximately $13,000 and the total annual costs are estimated to be approximately $13,000. The estimated HAP decrease is 1.27 tpy, with a cost effectiveness of approximately $11,000/ton. Table 11 summarizes the cost and emission reduction impacts of the proposed options. Because the HAP reduced would be ethylene glycol, which does not contribute to the cancer risk estimate for the PET source category, the MIR for the source category would remain at 9. Any impact on the magnitude of the HI resulting from ethylene glycol emission reductions due to this control option would be negligible as ethylene glycol contributes minimally to the chronic noncancer TOSHI of 0.5. These risk values are discussed further in section IV.E.2 below.

TABLE 11—PET CONTINUOUS TPA HIGH VISCOSITY EQUIPMENT LEAKS OPTIONS IMPACTS

Regulatory alternatives	HAP emissions (tpy)	Capital cost ($)	Annual cost ($)	Cost effectiveness ($/ton HAP removed)
Baseline	1.43	——	——	——
1 (MACT floor)	1.43	0	0	——
2 (Beyond-the-floor)	0.16	13,000	13,000	11,000

We believe that the costs of this beyond-the-floor option are not reasonable, given the level of emission reduction. Therefore, we are proposing an emission standard that reflects the MACT floor option, which is a work practice standard.

We are requesting comment on this analysis and these options.

b. Changes to PCCT Provisions in Response to a Petition for Reconsideration

We identified a potentially significant emissions source that is currently effectively unregulated within the provisions of the Group IV Polymers and Resins MACT standards that apply to the sources producing PET using the continuous TPA high viscosity multiple end finisher process. Specifically, sources have not been required to comply with the previously promulgated provisions addressing emissions from PCCT within this source subcategory. We originally promulgated standards for PCCT in this subcategory in the September 12, 1996, **Federal Register** publication of NESHAP for Group IV Polymer and Resin source categories. On August 29, 2000, the EPA took action to indefinitely stay the compliance date for the PCCT provisions for this subcategory because the EPA was in the process of responding to a request to reconsider portions of the Group IV Polymers and Resins MACT standards that could result in changes to the emission limitation for PCCT in this subcategory (65 FR 52319–23). As PCCT are potentially major sources of emissions for the one facility in the PET continuous TPA high viscosity multiple end finisher subcategory, we have reconsidered the emissions and cost data available and we are proposing MACT standards for PCCT under CAA section 112(d)(2) and (d)(3) in this action.

As there is only one facility in the source subcategory, the emissions level currently being achieved by this facility represents the MACT floor. The facility is currently regulated by the Polymers Manufacturing New Source Performance Standards, which requires the facility to maintain an ethylene glycol concentration in the PCCT at or below 6.0 percent by weight, averaged on a daily basis over a rolling 14-day period of operating days. We are proposing to establish the MACT floor for this source subcategory, based on the 6.0 percent by weight ethylene glycol concentration limit this facility is required to achieve.

As part of our beyond-the-floor analysis, we considered alternatives more stringent than the MACT floor option. The original PCCT regulations promulgated in the Group IV Polymer and Resin NESHAP established an ethylene glycol concentration limit of 4.0 percent by weight for PCCT in this source subcategory, based on the information available on controls and costs, but the source has never been required to achieve this limit, in light of our August 29, 2000, indefinite stay of the compliance date. We identified this 4.0-percent concentration limit as a beyond-the-floor option for our revised analysis. To achieve the beyond-the-floor option, the facility would need to modify its existing ethylene glycol

[23] Memorandum to Group IV Resins Docket, A–92–45, from Ken Meardon, Pacific Environmental Services, Inc. *Re-Evaluation of Equipment Leak Emissions and Costs at PET Facilities.*

recovery system and increase the amount of steam used to strip ethylene glycol from the contaminated water. Based on information received from the only facility in the subcategory after promulgation of the Group IV Polymers and Resins MACT standards, the capital costs of this option are estimated to be approximately $8.7 million and the total annual costs are estimated to be approximately $4.2 million. The estimated HAP decrease is 49.0 tpy, with a cost effectiveness of approximately $86,000/ton. Table 12 summarizes the cost and emission reduction impacts of the proposed options. Because the HAP reduced would be ethylene glycol, which does not contribute to the cancer risk estimate for the PET source category, the MIR for the source category would remain at 9. Any impact on the magnitude of the HI resulting from ethylene glycol emission reductions due to this control option would be negligible as ethylene glycol contributes minimally to the chronic noncancer TOSHI of 0.5. These risk values are discussed further in section IV.E.2 below. Further information regarding this analysis can be found in the memorandum, *Impacts Assessment for Process Contact Cooling Towers for the PET Continuous TPA High Viscosity Multiple End Finisher Subcategory,* available in the docket for this action.

TABLE 12—PET CONTINUOUS TPA HIGH VISCOSITY MULTIPLE END FINISHER SUBCATEGORY PROCESS CONTACT COOLING TOWERS OPTIONS IMPACTS

Regulatory alternatives	HAP emissions (tpy)	Capital cost ($)	Annual cost ($)	Cost effectiveness ($/ton HAP removed)
Baseline	147.0	——	——	——
1 (MACT floor)	147.0	0	0	——
2 (Beyond-the-floor)	98.0	8,800,000	4,200,000	86,000

We believe that the costs of this beyond-the-floor option are not reasonable, given the level of emission reduction. Therefore, we are proposing to re-set the previously stayed MACT standard as an emission standard that reflects the MACT floor option, which is the ethylene glycol concentration limit of 6.0 weight percent.

We are requesting comment on this analysis and these options.

2. What are the results of the risk assessments?

a. Inhalation Risk Assessment Results

Table 13 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 13—PET INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
15	9	9	4,200	0.002	0.5	0.5	HQ_{REL} = 8 acetaldehyde. HQ_{ERPG-1} = 1 acetaldehyde. HQ_{AEGL-1} = 0.2 acetaldehyde.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the PET source category is the respiratory system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 13, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 9-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.5, and the maximum off-facility site acute HQ value could be up to 8, based on the actual emissions level and the REL value for acetaldehyde. The total estimated national cancer incidence from these facilities based on actual emission levels is 0.002 excess cancer cases per year or one case in every 500 years.

Based on our analysis, we believe that actual emissions approximate emissions allowable under the MACT standards. Therefore, the risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

One facility reported emissions of PB–HAP, including cadmium compounds, lead compounds and POM. Therefore, we compared the facility-specific

emission rates of each of these PB–HAP to the TRIM–Screen emission threshold values to assess the potential for significant human health risks or environmental risks via non-inhalation pathways. The emission rates were less than the emission threshold values; therefore, we do not expect potential for human health multipathway risks or adverse environmental impacts as a result of PB–HAP.

b. Facility-Wide Risk Assessment Results

Table 14 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 14—PET FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	15
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	9
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the PET source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the PET source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	6
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	1
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	1
Number of facilities at which the PET source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the Group IV Polymers and Resins MACT standards for PET is estimated to be 9-in-1 million, based on actual emissions. Of the 15 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There are 8 facilities with facility-wide MIR of 1-in-1 million or greater (MIR ranging from 2 to 9 in a million). Six of these facilities have PET production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be 1, based on actual emissions. Of the 15 facilities included in this analysis, one has a facility-wide maximum chronic noncancer TOSHI value of 1.

c. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the PET source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 9-in-1 million due to both actual and allowable emissions. This value is considerably less than 100-in-1 million, which is the presumptive level of acceptability. The risk analysis also shows low cancer incidence (1 in every 500 years), no potential for human health multipathway effects and that chronic noncancer health impacts are unlikely.

We estimate that the worst-case acute HQ value could exceed a value of 1 for one HAP, acetaldehyde, with a potential maximum HQ up to 8 based on the acute REL dose-response value. Seven of the 15 facilities in this source category had an estimated acute HQ greater than 1 (REL for acetaldehyde ranging from 3 to 8). All other facilities modeled had an acute HQ less than 1. The maximum acute HQs based on ERPG–1 and AEGL–1 dose-response values for acetaldehyde are 1 and 0.2, respectively. As described earlier in this preamble, the acute assessment includes some conservative assumptions and some uncertainties. Considering the improbable assumption that worst-case meteorological conditions are present at the same time that maximum hourly emissions of acetaldehyde exceed the average hourly emission rate by a factor of 10 at all emission points simultaneously, coincident with individuals being in the location of maximum impact and considering the low acute HQ values, based on the ERPG–1 and AEGL–1 dose-response values collectively with the REL value, we believe it is unlikely that HAP emissions from this source category would result in acute health effects.

Our screening level evaluation of the potential health risks associated with emissions of PB–HAP did not indicate potential for adverse multipathway impacts due to emissions of the any of the PB–HAP associated with the source category.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 9-in-1 million. The maximum chronic noncancer TOSHI is estimated to be 1, but the source category contributes only 5 percent to the maximum facility-wide TOSHI.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the PET source category are acceptable.

d. What is our proposed decision regarding ample margin of safety?

We considered whether the MACT standards provide an ample margin of safety to protect public health. In this analysis, we investigated available emissions control options that might reduce the risk associated with emissions from the source category and considered this information along with all of the health risks and other health information considered in the risk acceptability determination.

For the PET source category, we identified only one control option to further address risks from equipment leaks, which were shown to contribute 100 percent to the maximum individual cancer risks for this source category. This control option would require sources to install leakless valves to prevent leaks from those components.

We estimated HAP reduction resulting from this control option is

approximately 123 tpy from the baseline actual emissions level. We estimated that achieving these reductions would involve a capital cost of approximately $220,000,000, a total annualized cost of about $30,000,000 and a cost effectiveness of $244,000 per ton of HAP emissions reduced. The additional control requirement would achieve approximately 20-percent reduction in baseline risks at a very high cost. We estimate that the MACT allowable emissions from this source category are approximately equal to the reported, actual emissions. Therefore, the estimated emission reduction, risk reduction and costs discussed above would also be applicable to the MACT allowable emissions level. We believe that the costs of this option are not reasonable, given the level of emission and risk reduction.

In accordance with the approach established in the Benzene NESHAP, the EPA weighed all health risk measures and information considered in the risk acceptability determination, along with the costs and economic impacts of emissions controls, technological feasibility, uncertainties and other relevant factors in making our ample margin of safety determination. Considering the health risk information and the unreasonable cost effectiveness of the option identified, we propose that the existing MACT standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

3. What are the results of the technology review?

The results of the technology review for the Group IV Polymers and Resins MACT standards are discussed above in section IV.A.2. We identified no advancements in practices, processes and control technologies applicable to the emission sources in the Group IV Polymers and Resins source categories in our technology review.

4. What other actions are we proposing?

a. SSM Provisions

The proposed changes to the SSM provisions for the Group IV Polymers and Resins MACT standards, which apply to the PET source category, are discussed above in section IV.A.3.a.

b. Electronic Reporting

The proposed addition of electronic reporting requirements for performance tests for the Group IV Polymers and Resins MACT standards, which apply to the PET source category, are discussed above in section IV.A.3.b.

V. Analytical Results and Proposed Decisions for Pesticide Active Ingredient Production

A. What are the results of the risk assessments?

1. Inhalation Risk Assessment Results

Table 16 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 16—PAI INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
17	7	7	11,000	0.001	0.7	3	HQ_{REL} = 8 ethylene glycol ethyl ether. HQ_{ERPG-1} = 0.3 chlorine.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the PAI source category is the respiratory system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 16, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 7-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.7, and the maximum off-facility site acute HQ value could be up to 8, based on the actual emissions level and the REL value for ethylene glycol ethyl ethers. The total estimated national cancer incidence from these facilities, based on actual emission levels is 0.001 excess cancer cases per year or one case in every 1,000 years.

Based on our analysis, we estimate that the MACT-allowable emissions levels from process vents for organic HAP emissions could be up to five times the actual emissions and the MACT-allowable level for chlorine and HCl emissions could be up to six times the actual emissions from this source category. However, the highest cancer risks are caused by fugitive emissions and the application of the factor of five to the organic HAP emissions from point sources did not result in cancer risks in excess of the levels resulting from actual fugitive source emissions. Therefore, the cancer risk results for MACT-allowable emissions are approximately equal to those for actual emissions. The highest TOSHI at the MACT-allowable level is approximately 3. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

Three facilities reported emissions of PB–HAP, including lead compounds, PCBs and hexachlorobenzene. We typically would compare the facility-specific emission rates of each of these PB–HAP to the TRIM–Screen emission threshold values to assess the potential for significant human health risks or environmental risks via non-inhalation pathways. However, while lead is a PB–HAP, the National Ambient Air Quality Standards (NAAQS) value (which was used for the chronic noncancer risk assessment) takes into account air-related multipathway exposures, so a

separate multipathway screening value was not developed here. Since we did not estimate any exceedances of the NAAQS in our chronic noncancer risk assessment, we do not expect any unacceptable multipathway exposure and risk of concern due to lead emissions from these facilities. In addition, there is currently not a screening value for PCBs or hexachlorobenzene, and they were not evaluated for potential non-inhalation risks.

2. Facility-Wide Risk Assessment Results

Table 17 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 17—PAI FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	17
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	20
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the PAI source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the PAI source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	4
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	2
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	1
Number of facilities at which the PAI source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the PAI MACT standards is estimated to be 20-in-1 million, based on actual emissions. Of the 17 facilities included in this analysis, none have a facility-wide MIR of 100-in-1 million. There are 12 facilities with facility-wide MIR of 1-in-1 million or greater (2 facilities with an MIR of 20 in a million and 2 facilities with an MIR of 10 in a million; the remaining 8 facilities have an MIR below 10 in a million). Four of these facilities have PAI production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be 2, based on actual emissions. Of the 17 facilities included in this analysis, one has a facility-wide maximum chronic noncancer TOSHI values greater than 1 (TOSHI of 2).

3. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the PAI source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 7-in-1 million due to both actual and allowable emissions. This value is considerably less than 100-in-1 million, which is the presumptive level of acceptability. The risk analysis also shows low cancer incidence (1 in every 1,000 years) and that chronic noncancer health impacts are unlikely at the actual emissions levels.

We estimate that the worst-case acute HQ value could exceed a value of 1 for six HAP: ethylene glycol ethyl ethers (one facility); acrolein (one facility); chloroform (one facility); nickel compounds (one facility); chlorine (one facility); and formaldehyde (one facility). One facility had acute HQ greater than 1 for three HAP (ethyl glycol ethyl ether, acrolein and nickel). The potential maximum HQ is up to 8, based on the acute REL dose-response value for ethylene glycol ethyl ether. Four of the 17 facilities in this source category had an estimated HQ greater than 1. All other facilities modeled had an HQ less than 1. The maximum HQ based on an ERPG–1 or AEGL–1 dose-response value is 0.3, based on the AEGL–1 for chlorine. As described earlier in this preamble, the acute assessment includes some conservative assumptions and some uncertainties. Considering the improbable assumption that worst-case meteorological conditions are present at the same time that maximum hourly emissions of ethylene glycol ethyl ether exceed the average hourly emission rate by a factor of 10 at all emission points simultaneously for three of these four facilities or a factor of 2 at all emission points simultaneously for the other facility, coincident with individuals being in the location of maximum impact and considering the low acute HQ values, based on the AEGL–1 and ERPG–1 dose-response values collectively with the REL values, we believe it is unlikely that HAP emissions from this source category would result in acute health effects.

Our screening level evaluation of the potential health risks associated with emissions of PB–HAP did not indicate potential for adverse multipathway impacts due to emissions of lead. While there are no screening values for PCB and hexachlorobenzene, these HAP are not emitted in appreciable quantities and are not expected to cause multipathway impacts of concern.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 20-in-1 million. The maximum chronic noncancer TOSHI is estimated to be 2, but the source category contributes less than 5 percent to the maximum facility-wide TOSHI.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the PAI source category are acceptable.

4. What is our proposed decision regarding ample margin of safety?

We considered whether the MACT standards provide an ample margin of safety to protect public health. In this analysis, we investigated available

emissions control options that might reduce the risk associated with emissions from the source category and considered this information along with all of the health risks and other health information considered in the risk acceptability determination.

For the PAI source category, we identified only one control option to further address risks from equipment leaks, which were shown to contribute 100 percent to the maximum individual cancer risks for this source category. This control option would require sources to install leakless valves to prevent leaks from those components.

We estimated HAP reduction resulting from this control option is approximately 101 tpy from the baseline actual emissions level. We estimated that achieving these reductions would involve a capital cost of approximately $180,000,000, a total annualized cost of about $25,000,000 and a cost effectiveness of $244,000 per ton of HAP emissions reduced. The additional control requirement would achieve approximately 60-percent reduction in baseline risks at a very high cost. We estimate that the MACT allowable emissions from equipment leaks at this source category are approximately equal to the reported, actual emissions. Therefore, the estimated emission reduction, risk reduction and costs discussed above would also be applicable to the MACT allowable emissions level. We believe that the costs of this option are not reasonable, given the level of emission and risk reduction.

In accordance with the approach established in the Benzene NESHAP, the EPA weighed all health risk measures and information considered in the risk acceptability determination, along with the costs and economic impacts of emissions controls, technological feasibility, uncertainties and other relevant factors in making our ample margin of safety determination. Considering the health risk information and the unreasonable cost effectiveness of the option identified, we propose that the existing MACT standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

B. What are the results of the technology review?

In the decade since the PAI NESHAP was promulgated, the EPA has developed 19 air toxics regulations for source categories that emit organic HAP from the same type of emissions sources that are present in the PAI source category. We reviewed the regulatory requirements and/or technical analyses for these 19 regulations for new practices, processes and control technologies. We also conducted a search of the RBLC for controls for VOC- and HAP-emitting processes in the Agricultural Chemical Manufacturing and the SOCMI categories with permits dating back to 1997.

We identified no advancements in practices, processes and control technologies applicable to the emission sources in the PAI source category in our technology review.

C. What other actions are we proposing?

1. SSM Provisions

As we have done in other recent risk and technology rulemakings, we are proposing to eliminate the SSM exemption in the PAI MACT standards. Consistent with *Sierra Club* v. *EPA,* the EPA is proposing that standards in this rule would apply at all times. We are proposing several revisions to 40 CFR part 63, subpart MMM. Specifically, we are proposing to revise Table 1 to indicate that the requirements of 40 CFR 63.6(e) of the General Provisions do not apply. The 40 CFR 63.6(e) requires owner or operators to act according to the general duty to ''operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.'' We are separately proposing to incorporate this general duty to minimize into 40 CFR 63.1360(e). The 40 CFR 63.6(e) also requires the owner or operator of an affected source to develop a written SSM plan. We are proposing to remove the SSM plan requirement. We are proposing to remove the explanation of applicability of emissions standards during periods SSM in 40 CFR 63.1360(e); remove the malfunction plan from 40 CFR 63.1367(a); clarify that representative conditions do not include periods of SSM throughout the rule; remove references to periods of SSM in monitoring; and revise the SSM-associated recordkeeping and reporting requirements in 40 CFR 63.1367(a) to require reporting and recordkeeping for periods of malfunction. We are also proposing to revise Table 1 to indicate that SSM-related provisions in 40 CFR 63.6(e)(1), 63.6(e)(3), 63.6(f)(1); 40 CFR 63.7(e)(1); 40 CFR 63.8(c)(1)–(3); 40 CFR 63.10(c)(10), (11), and (15); and 40 CFR 63.10(d)(5) of the General Provisions do not apply. We are also proposing to add requirements in 40 CFR 63.1363(b)(4) to clarify that PRD releases to the atmosphere are violations of the emissions standards and to require pressure release alarms and to add requirements in 40 CFR 63.1463(h)(4) to require reporting of any pressure device releases to the atmosphere with the periodic report. In addition, following our recently established practice in other risk and technology review rulemakings, we are proposing to promulgate an affirmative defense against civil penalties for exceedances of emission standards caused by malfunctions, as well as criteria for establishing the affirmative defense.

2. Electronic Reporting

To increase the ease and efficiency of data submittal and improve data accessibility, we are proposing to require the submission of electronic copies of required performance tests for test methods that are supported by the ERT to EPA's WebFIRE database. These provisions are added in 40 CFR 63.1368(p).

VI. Analytical Results and Proposed Decisions for Polyether Polyols Production

A. What are the results of the risk assessments?

1. Inhalation Risk Assessment Results

Table 19 provides an overall summary of the inhalation risk assessment results for the source category.

TABLE 19—PEPO INHALATION RISK ASSESSMENT RESULTS

Number of facilities [1]	Maximum individual cancer risk (in 1 million) [2]		Population at risk ≥ 1-in-1 million	Annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI [3]		Maximum off-site acute noncancer HQ [4]
	Actual emissions level	Allowable emissions level			Actual emissions level	Allowable emissions level	
23	30	30	160,000	0.02	0.8	0.8	HQ_{REL} = 6 glycol ethers. HQ_{AEGL-1} = 0.1 acrolein.

[1] Number of facilities evaluated in the risk analysis.
[2] Maximum individual excess lifetime cancer risk.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the PEPO source category is the respiratory system.
[4] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which, in most cases, is the REL. When HQ values exceed 1, we also show HQ values using the next lowest available acute dose-response value. See section III.B.3 of this preamble for explanation of acute dose-response values.

The inhalation risk modeling was performed using actual emissions level data. As shown in Table 19, the results of the inhalation risk assessment indicated the maximum lifetime individual cancer risk could be up to 30-in-1 million, the maximum chronic noncancer TOSHI value could be up to 0.8 and the maximum off-facility site acute HQ value could be up to 6, based on the actual emissions level and the REL value for glycol ethers. The total estimated national cancer incidence from these facilities, based on actual emission levels is 0.02 excess cancer cases per year or one case in every 50 years.

Based on our analysis, we estimate that the MACT-allowable emissions level for organic non-epoxide HAP emissions from certain process vents could be up to five times the actual emissions from this source category. However, the highest cancer risks are caused by epoxide emissions, and the application of the factor of five to the non-epoxide organic HAP emissions from point sources did not result in cancer risks in excess of the levels resulting from actual epoxide emissions. Therefore, the cancer risk results for MACT-allowable emissions are approximately equal to those for actual emissions. For more detail about this estimate of the ratio of actual to MACT-allowable emissions and the estimation of MACT-allowable emission levels and associated risks and impacts, see the memorandum, *MACT Allowable Emissions and Risks for the Pesticide Active Ingredient, Polyether Polyols, and Polymers and Resins IV Production Source Categories,* in the docket for this rulemaking.

Two facilities reported emissions of PB–HAP, including fluoranthene (a POM HAP) and lead compounds. We typically compare the facility-specific emission rates of PB–HAP to the TRIM–Screen emission threshold values to assess the potential for significant human health risks or environmental risks via non-inhalation pathways. However, while lead is a PB–HAP, the NAAQS value (which was used for the chronic noncancer risk assessment) takes into account multipathway exposures, so a separate multipathway screening value was not developed. Since we did not estimate any exceedances of the NAAQS in our chronic noncancer risk assessment, we do not expect any significant multipathway exposure and risk due to lead emissions from these facilities. For fluoranthene emissions, one facility emits this PB–HAP and the emissions exceed the screening-level threshold level for POM by a factor of four. Based on this screening analysis, we cannot rule out the potential for multipathway impacts of concern due to emissions of fluoranthene from the one facility. However, we do not expect fluoranthene emissions from PEPO processes, and we specifically request data regarding these emissions.

2. Facility-Wide Risk Assessment Results

Table 20 displays the results of the facility-wide risk assessment. This assessment was conducted based on actual emission levels. For detailed facility-specific results, see Appendix 4 of the *Draft Residual Risk Assessment for 7 Source Categories* in the docket for this rulemaking.

TABLE 20—PEPO FACILITY-WIDE RISK ASSESSMENT RESULTS

Number of facilities analyzed	23
Cancer Risk:	
Estimated maximum facility-wide individual cancer risk (in 1 million)	30
Number of facilities with estimated facility-wide individual cancer risk of 100-in-1 million or more	0
Number of facilities at which the PEPO source category contributes 50 percent or more to the facility-wide individual cancer risks of 100-in-1 million or more	0
Number of facilities at which the PEPO source category contributes 50 percent or more to the facility-wide individual cancer risk of 1-in-1 million or more	14
Chronic Noncancer Risk:	
Maximum facility-wide chronic noncancer TOSHI	2
Number of facilities with facility-wide maximum noncancer TOSHI greater than 1	1
Number of facilities at which the PEPO source category contributes 50 percent or more to the facility-wide maximum noncancer TOSHI of 1 or more	0

The facility-wide MIR from all HAP emissions at a facility that contains sources subject to the PEPO MACT standards is estimated to be 30-in-1 million, based on actual emissions. Of the 23 facilities included in this

analysis, none have a facility-wide MIR of 100-in-1 million. There are 20 facilities with a facility-wide MIR of 1-in-1 million or greater (10 of these facilities have a facility-wide MIR equal to or greater than 10 in a million). Fourteen of these facilities have PEPO production operations that contribute greater than 50 percent to the facility-wide risks.

The facility-wide maximum individual chronic noncancer TOSHI is estimated to be 2 based on actual emissions. Of the 23 facilities included in this analysis, one has facility-wide maximum chronic noncancer TOSHI values greater than 1 (TOSHI of 2).

3. What is our proposed decision regarding risk acceptability?

As noted in section III.C of this preamble, we weigh all health risk factors in our risk acceptability determination, including the MIR; the number of persons in various cancer and noncancer risk ranges; cancer incidence; the maximum noncancer HI; the maximum acute noncancer HQ; the extent of noncancer risks; the potential for adverse environmental effects; distribution of cancer and noncancer risks in the exposed population; and risk estimation uncertainty (54 FR 38044, September 14, 1989).

For the PEPO source category, the risk analysis we performed indicates that the cancer risks to the individual most exposed could be up to 30-in-1 million due to both actual and allowable emissions. This value is considerably less than 100-in-1 million, which is the presumptive level of acceptability. The risk analysis also shows low cancer incidence (1 in every 50 years). The chronic noncancer TOSHI is estimated to be 1 due to emissions of chlorine.

We estimate that the worst-case acute HQ value could exceed a value of 1 for two HAP, glycol ethers and acrolein, with a potential maximum acute HQ up to 6, based on the acute REL dose-response value for glycol ethers. For glycol ethers, we used the lowest acute REL of any of the glycol ethers with such health values (*i.e.,* ethylene glycol monomethyl ether) to assess the other glycol ethers without such values. Two of the 23 facilities in this source category had an estimated acute HQ greater than 1. All other facilities modeled had an acute HQ less than 1. The maximum acute HQ (based on the AEGL–1 dose-response value for acrolein) is 0.1. As described earlier in this preamble, the acute assessment includes some conservative assumptions and some uncertainties. Considering the improbable assumption that worst-case meteorological conditions are present at the same time that maximum hourly emissions of glycol ethers exceed the average hourly emission rate by a factor of 2 at all emission points simultaneously for both of these facilities and coincident with individuals being in the location of maximum impact, and considering the low acute HQ values, based on the AEGL–1 and ERPG–1 dose-response values collectively with the REL values, we believe it is unlikely that HAP emissions from this source category would result in acute health effects.

Our screening level evaluation of the potential health risks associated with emissions of PB–HAP did not indicate potential for adverse multipathway impacts due to emissions of lead. The screening level evaluation indicated that the one facility that reported fluoranthene emissions exceeded the screening-level threshold for POM by a factor of 4; however, as explained in section III.B.7.e, our screening methods use worst-case scenarios and the results are biased high.

Our additional analysis of facility-wide risks showed that the maximum facility-wide cancer risk is 30-in-1 million. The maximum chronic noncancer TOSHI is estimated to be 3, but the source category contributes less than one-third to the maximum facility-wide TOSHI.

The EPA has weighed the various health risk measures and health factors, including risk estimation uncertainty, discussed above and in section III.B.7 of this preamble, and we are proposing that the risks from the PEPO source category are acceptable.

4. What is our proposed decision regarding ample margin of safety?

We considered whether the MACT standards provide an ample margin of safety to protect public health. In this analysis, we investigated available emissions control options that might reduce the risk associated with emissions from the source category and considered this information along with all of the health risks and other health information considered in the risk acceptability determination.

For the PEPO source category, we identified only one control option to further address risks from equipment leaks, which were shown to contribute approximately 47 percent to the maximum individual cancer risks for this source category. This control option would require sources to install leakless valves to prevent leaks from those components.

We estimated HAP reduction resulting from this control option is approximately 59 tpy from the baseline actual emissions level. We estimated that achieving these reductions would involve a capital cost of about $104,000,000, a total annualized cost of about $14,000,000 and a cost effectiveness of $244,000 per ton of HAP emissions reduced. The additional control requirement would achieve approximately 30-percent reduction in baseline risks at a very high cost. We estimate that the MACT allowable emissions from equipment leaks at this source category are approximately equal to the reported, actual emissions. Therefore, the estimated emission reduction, risk reduction and costs discussed above would also be applicable to the MACT allowable emissions level. We believe that the costs of this option are not reasonable, given the level of emission and risk reduction.

In accordance with the approach established in the Benzene NESHAP, the EPA weighed all health risk measures and information considered in the risk acceptability determination, along with the costs and economic impacts of emissions controls, technological feasibility, uncertainties and other relevant factors in making our ample margin of safety determination. Considering the health risk information and the unreasonable cost effectiveness of the option identified, we propose that the existing MACT standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

B. What are the results of the technology review?

In the decade since the PEPO NESHAP was promulgated, EPA has developed 19 air toxics regulations for source categories that emit organic HAP from the same type of emissions sources that are present in the PEPO source category. We reviewed the regulatory requirements and/or technical analyses for these 19 regulations for new practices, processes and control technologies. We also conducted a search of the RBLC for controls for VOC- and HAP-emitting processes in the SOCMI categories with permits dating back to 1997.

We identified no advancements in practices, processes and control technologies applicable to the emission sources in the PEPO source category in our technology review.

C. What other actions are we proposing?

1. SSM Provisions

As we have done in other recent risk and technology review rulemakings, we are proposing to eliminate the SSM

exemption in the PEPO MACT standards. Consistent with *Sierra Club* v. *EPA,* the EPA is proposing that standards in this rule would apply at all times. We are proposing several revisions to 40 CFR part 63, subpart PPP. Specifically, we are proposing to revise Table 1 to indicate that the requirements of 40 CFR 63.6(e) of the General Provisions do not apply. The 40 CFR 63.6(e) requires owners or operators to act according to the general duty to ''operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.'' We are separately proposing to incorporate this general duty to minimize into 40 CFR 63.1420(h). The 40 CFR 63.6(e) also requires the owner or operator of an affected source to develop a written SSM plan. We are proposing to remove the SSM plan requirement. We are proposing to remove the explanation of applicability of emissions standards during periods SSM in 40 CFR 63.1420(h); remove the malfunction plan from 40 CFR 63.1439(b); clarify that representative conditions do not include periods of SSM throughout the rule; remove references to periods of SSM in monitoring; remove the provisions for excused excursions in 40 CFR 63.1438(g) and revise the SSM-associated recordkeeping and reporting requirements in 40 CFR 63.1439(b) to require reporting and recordkeeping for periods of malfunction. We are also proposing to revise Table 1 to indicate that SSM-related provisions in 40 CFR 63.6(e)(1), 63.6(e)(3), 63.6(f)(1); 40 CFR 63.7(e)(1); 40 CFR 63.8(c)(1); 40 CFR 63.10(c)(10), (11) and (15); and 40 CFR 63.10(d)(5) of the General Provisions do not apply. We are also proposing to add requirements in 40 CFR 63.1434(c) to clarify that PRD releases to the atmosphere are violations of the emissions standards and to require pressure release alarms and to add requirements in 40 CFR 63.1439(e)(9) to require reporting of any pressure device releases to the atmosphere with the periodic report. In addition, following our practice established in other risk and technology review rulemakings, we are proposing to promulgate an affirmative defense against civil penalties for exceedances of emission standards caused by malfunctions, as well as criteria for establishing the affirmative defense.

2. Electronic Reporting

To increase the ease and efficiency of data submittal and improve data accessibility, we are proposing to require the submission of electronic copies of required performance tests for test methods that are supported by the ERT to EPA's WebFIRE database. These provisions are added in 40 CFR 63.1439(e)(10).

VII. Compliance Dates

For the three MACT standards being addressed in this action, the proposed compliance date for the revised SSM requirements and electronic reporting requirements is the effective date of the promulgated revised standards. We are proposing these compliance dates because these requirements should be immediately implementable by the facilities upon the next occurrence of a malfunction or the performance of a performance test that is required to be submitted to the ERT. We also believe that the facilities should already be able to comply with the existing standards during periods of startup and shutdown.

In accordance with CAA section 112(i)(3), the compliance date for PRD monitoring is 3 years from the effective date of the promulgated standards. This time period will allow facilities to purchase, install and test the equipment.

For the facility in the PET continuous TPA high viscosity multiple end finisher subcategory subject to the Group IV Polymers and Resins MACT standards, the proposed compliance date for the new MACT standards applicable to equipment leaks and PCCT is the effective date of the promulgated standards. Since this facility is already performing the proposed equipment leak requirements and meeting the proposed PCCT standards, the facility should be able to comply immediately with the promulgated rule provisions. It should be feasible for the facility to conduct any additional recordkeeping required upon the promulgation date and information required in the next periodic report for these requirements would only reflect the period of time between the promulgation date and the periodic report due date.

Beyond the revised SSM and electronic reporting requirements, there are no changes to the PAI and PEPO MACT standards.

VIII. Summary of Cost, Environmental and Economic Impacts

A. What are the affected sources?

We anticipate that each facility in these seven source categories will be affected by these proposed amendments. We estimate there are 17 existing facilities subject to the PAI MACT standards, 23 existing facilities subject to the PEPO MACT standards and 30 existing facilities subject to the Group IV Polymers and Resins MACT standards. We do not know of any new facilities that are expected to be constructed in the foreseeable future. Therefore, our impact analysis is focused on the existing sources affected by the MACT standards for these source categories.

B. What are the air quality impacts?

No quantifiable air quality impacts are expected to result from the proposed amendments to these three MACT standards for seven source categories. For the two emissions sources, we are proposing new emissions standards for equipment leaks and PCCT in the PET continuous TPA high viscosity multiple end finisher subcategory regulated by the Group IV Polymers and Resins MACT standards, we are proposing to establish the MACT floor at the current emissions levels for the one facility in this subcategory. As a result, no additional emission reduction will be realized, although increases in emissions in the future will be prevented. For the proposed revisions to the MACT standards regarding SSM, while these changes may result in fewer emissions during these periods or less frequent periods of startup, shutdown or malfunction, these possible emission reductions are difficult to quantify and are not included in our assessment of air quality impacts.

C. What are the cost impacts?

Under the proposed amendments, facilities in all seven source categories are expected to incur initial capital and annual operation and maintenance costs for the installation of PRD monitoring systems. The capital costs for each facility were estimated, based on data collected for other EPA projects. The memorandum, *Draft Cost Impacts of the Revised NESHAP for 7 Source Categories,* includes a complete description of the cost estimate methods used for this analysis and is available in the docket.

TABLE 21—COST IMPACTS OF THE PROPOSED PRD MONITORING REQUIREMENTS

Source category	Total capital costs (million 2010 $)	Total annual costs (million 2010 $/year)
PAI	3.2	0.5
PEPO	4.7	0.7
P&R IV:		
ABS	0.9	0.1
MBS	0.4	0.05
Polystyrene Resins	2.0	0.3
PET	2.8	0.4
SAN	0.4	0.05

D. What are the economic impacts?

We estimate that there will be no more than a 0.5-percent price change and a similar reduction in output associated with the proposal. This is based on the costs of the rule and responsiveness of producers and consumers based on supply and demand elasticities for the industries affected by this proposal. The impacts to affected firms will be low because the annual compliance costs are quite small when compared to the annual revenues for the affected parent firms (much less than 1 percent for each). The impacts to affected consumers should also be quite small. Thus, there will not be any significant impacts on affected firms and their consumers as a result of this proposal.

E. What are the benefits?

No quantifiable monetized benefits are expected to result from the proposed amendments to these three MACT standards for seven source categories. As explained in the air quality impacts section, there are no quantifiable emission reductions associated with the proposed amendments for these MACT standards and, therefore, there are no quantifiable health benefits to associate with reduced emissions.

IX. Request for Comments

We are soliciting comments on this proposed action. All comments received during the comment period will be considered. In addition to general comments on the proposed actions, we are also interested in any additional data that may help to reduce the uncertainties inherent in the risk assessments. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Please see the following section for more information on submitting data.

X. Submitting Data Corrections

The facility-specific data used in the source category risk analyses and facility-wide analyses for each source category subject to this action are available for download on the RTR Web page at *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html.* These data files include detailed information for each HAP emissions release point at each facility included in the source category and all other HAP emissions sources at these facilities (facility-wide emissions sources). However, it is important to note that the source category risk analysis included only those emissions tagged with the MACT code associated with the source category subject to the risk analysis.

If you believe the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide the data that you believe are more accurate, if available. When you submit data, we request that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR Web page, complete the following steps:

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

Data element	Definition
Control Measure	Are control measures in place? (yes or no).
Control Measure Comment	Select control measure from list provided, and briefly describe the control measure.
Delete	Indicate here if the facility or record should be deleted.
Delete Comment	Describes the reason for deletion.
Emission Calculation Method Code For Revised Emissions	Code description of the method used to derive emissions. For example, continuous emission monitoring, material balance, stack test, *etc.*
Emission Process Group	Enter the general type of emission process associated with the specified emission point.
Fugitive Angle	Enter release angle (clockwise from true North); orientation of the y-dimension relative to true North, measured positive for clockwise starting at 0 degrees (maximum 89 degrees).
Fugitive Length	Enter dimension of the source in the east-west (x-) direction, commonly referred to as length (ft).
Fugitive Width	Enter dimension of the source in the north-south (y-) direction, commonly referred to as width (ft).
Malfunction Emissions	Enter total annual emissions due to malfunctions (tpy).
Malfunction Emissions Max Hourly	Enter maximum hourly malfunction emissions here (lb/hr).
North American Datum	Enter datum for latitude/longitude coordinates (NAD27 or NAD83); if left blank, NAD83 is assumed.
Process Comment	Enter general comments about process sources of emissions.
REVISED Address	Enter revised physical street address for MACT facility here.
REVISED City	Enter revised city name here.

Data element	Definition
REVISED County Name	Enter revised county name here.
REVISED Emission Release Point Type	Enter revised Emission Release Point Type here.
REVISED End Date	Enter revised End Date here.
REVISED Exit Gas Flow Rate	Enter revised Exit Gas Flowrate here (ft^3/sec).
REVISED Exit Gas Temperature	Enter revised Exit Gas Temperature here (F).
REVISED Exit Gas Velocity	Enter revised Exit Gas Velocity here (ft/sec).
REVISED Facility Category Code	Enter revised Facility Category Code here, which indicates whether facility is a major or area source.
REVISED Facility Name	Enter revised Facility Name here.
REVISED Facility Registry Identifier	Enter revised Facility Registry Identifier here, which is an ID assigned by the EPA Facility Registry System.
REVISED HAP Emissions Performance Level Code	Enter revised HAP Emissions Performance Level here.
REVISED Latitude	Enter revised Latitude here (decimal degrees).
REVISED Longitude	Enter revised Longitude here (decimal degrees).
REVISED MACT Code	Enter revised MACT Code here.
REVISED Pollutant Code	Enter revised Pollutant Code here.
REVISED Routine Emissions	Enter revised routine emissions value here (tpy).
REVISED SCC Code	Enter revised SCC Code here.
REVISED Stack Diameter	Enter revised Stack Diameter here (ft).
REVISED Stack Height	Enter revised Stack Height here (Ft).
REVISED Start Date	Enter revised Start Date here.
REVISED State	Enter revised State here.
REVISED Tribal Code	Enter revised Tribal Code here.
REVISED Zip Code	Enter revised Zip Code here.
Shutdown Emissions	Enter total annual emissions due to shutdown events (tpy).
Shutdown Emissions Max Hourly	Enter maximum hourly shutdown emissions here (lb/hr).
Stack Comment	Enter general comments about emission release points.
Startup Emissions	Enter total annual emissions due to startup events (tpy).
Startup Emissions Max Hourly	Enter maximum hourly startup emissions here (lb/hr).
Year Closed	Enter date facility stopped operations.

2. Fill in the commenter information fields for each suggested revision (*i.e.,* commenter name, commenter organization, commenter email address, commenter phone number and revision comments).

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

4. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to Docket ID No. EPA–HQ–OAR–2011–0435 (through one of the methods described in the **ADDRESSES** section of this preamble). To expedite review of the revisions, it would also be helpful if you submitted a copy of your revisions to the EPA directly at *RTR@epa.gov* in addition to submitting them to the docket.

5. 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 request 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* Web page.

XI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a significant regulatory action because it raises novel legal and policy issues. Accordingly, the EPA submitted this action to OMB for review under Executive Order 12866 and Executive Order 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to OMB under the *Paperwork Reduction Act,* 44 U.S.C. 3501, *et seq.* The information collection requirements are not enforceable until OMB approves them. The information requirements are based on notification, recordkeeping and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emissions standards. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to agency policies set forth in 40 CFR part 2, subpart B.

The OMB has previously approved the information collection requirements contained in the existing regulations being amended with this proposed rule (*i.e.,* 40 CFR part 63, subparts JJJ, MMM, and PPP) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. Burden is defined at 5 CFR 1320.3(b).

For these proposed rules, the EPA is adding affirmative defense to the estimates of burden in the ICR for these rules. To provide the public with an estimate of the relative magnitude of the burden associated with an assertion of the affirmative defense position adopted by a source, the EPA has provided administrative adjustments to this ICR to show what the notification, recordkeeping and reporting requirements associated with the assertion of the affirmative defense might entail. The EPA's estimate for the required notification, reports and records for any individual incident, including the root cause analysis, totals $1,459 annually per MACT standard and is based on the time and effort

required of a source to review relevant data, interview plant employees and document the events surrounding a malfunction that has caused an exceedance of an emissions limit. The estimate also includes time to produce and retain the record and reports for submission to the EPA. The EPA provides this illustrative estimate of this burden because these costs are only incurred if there has been a violation and a source chooses to take advantage of the affirmative defense.

Given the variety of circumstances under which malfunctions could occur, as well as differences among sources' operation and maintenance practices, we cannot reliably predict the severity and frequency of malfunction-related excess emissions events for a particular source. It is important to note that the EPA has no basis currently for estimating the number of malfunctions that would qualify for an affirmative defense. Current historical records would be an inappropriate basis, as source owners or operators previously operated their facilities in recognition that they were exempt from the requirement to comply with emissions standards during malfunctions. Of the number of excess emissions events reported by source operators, only a small number would be expected to result from a malfunction (based on the definition above) and only a subset of excess emissions caused by malfunctions would result in the source choosing to assert the affirmative defense. Thus, we believe the number of instances in which source operators might be expected to avail themselves of the affirmative defense will be extremely small. For this reason, we estimate no more than 1 or 2 such occurrences for all sources subject to subparts JJJ, MMM and PPP over the 3-year period covered by this ICR. We expect to gather information on such events in the future and will revise this estimate as better information becomes available.

1. Group IV Polymers and Resins MACT Standards

The ICR document prepared by the EPA for the amendments to the Group IV Polymers and Resins MACT standards has been assigned EPA ICR number 1737.01. Burden changes associated with these amendments would result from new recordkeeping and reporting requirements associated with the cooling towers and equipment leak provisions for one facility and PRD monitoring systems and affirmative defense provisions for all facilities subject to the MACT standards.

We estimate 30 regulated facilities are currently subject to 40 CFR part 63, subpart JJJ. The annual monitoring, reporting and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the standards) for these amendments to subpart JJJ is estimated to be 327 labor hours at a cost of $19,947 per year. There is no estimated change in annual burden to the Federal government for these amendments.

2. Pesticide Active Ingredient Production MACT Standards

The ICR document prepared by the EPA for the amendments to the PAI MACT standards has been assigned EPA ICR number 1807.05. Burden changes associated with these amendments would result from new recordkeeping and reporting requirements associated with PRD monitoring systems and affirmative defense provisions for all facilities subject to the MACT standards.

We estimate 17 regulated facilities are currently subject to 40 CFR part 63, subpart MMM. The annual monitoring, reporting and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the standards) for these amendments to subpart MMM is estimated to be 187 labor hours at a cost of $11,433 per year. There is no estimated change in annual burden to the Federal government for these amendments.

3. Polyether Polyols Production MACT Standards

The ICR document prepared by the EPA for the amendments to the PEPO MACT standards has been assigned EPA ICR number 1811.06. Burden changes associated with these amendments would result from new recordkeeping and reporting requirements associated with PRD monitoring systems and affirmative defense provisions for all facilities subject to the MACT standards.

We estimate 23 regulated facilities are currently subject to 40 CFR part 63, subpart PPP. The annual monitoring, reporting and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the standards) for these amendments to subpart PPP is estimated to be 253 labor hours at a cost of $15,433 per year. There is no estimated change in annual burden to the Federal government for these amendments.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When these ICR are approved by OMB, the agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control numbers for the approved information collection requirements contained in the final rules.

To comment on the agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden, the EPA has established a public docket for this rule, which includes this ICR, under Docket ID number EPA–HQ–OAR–2011–0435. Submit any comments related to the ICR to the EPA and OMB. See the ADDRESSES section at the beginning of this notice for where to submit comments to the EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, Attention: Desk Office for EPA. Because OMB is required to make a decision concerning the ICR between 30 and 60 days after January 9, 2012, a comment to OMB is best assured of having its full effect if OMB receives it by February 8, 2012. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of this proposed rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. According to the SBA small business standards definitions, for the Group IV Polymers and Resins source categories, which have the NAICS code of 325211 (*i.e.,* Plastics Material and Resin Manufacturing), the SBA small business

size standard is 750 employees. For the PEPO source category, which has the NAICS code of 325199 (*i.e.,* All Other Basic Organic Chemical Manufacturing), the SBA small business size standard is 1,000 employees. For the PAI source category, which has the NAICS codes of 325199 (*i.e.,* All Other Basic Organic Chemical Manufacturing) and 325320 (*i.e.,* Pesticide and Other Agricultural Chemical Manufacturing), the SBA small business size standards are 1,000 employees and 500 employees, respectively.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. Only one small business in the PAI source category is impacted and only one small business in the Group IV Polymers and Resins source categories is impacted. For each affected small business, the impact of this proposal is an annual compliance cost of less than 1 percent of the parent firm's revenues. There are no affected small businesses in the PEPO source category. All of the other companies affected by this rule are generally large integrated corporations that are not considered to be small entities per the definitions provided in this section.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This proposed rule does not contain a Federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local or tribal governments or the private sector. The proposed rule would not result in expenditures of $100 million or more for state, local and tribal governments, in aggregate, or the private sector in any 1 year. This proposed rule would require the use of PRD monitoring systems, but the nationwide annualized costs of this proposed requirement are estimated to be approximately $2 million for affected sources. Thus, this proposed rule is not subject to the requirements of sections 202 or 205 of the UMRA.

This proposed rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments nor does it impose obligations upon them.

E. Executive Order 13132: Federalism

This proposed rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The burden to the respondents and the states is approximately $2,000,000 for the three MACT standards addresses in this proposed rule. Thus, Executive Order 13132 does not apply to this proposed rule.

In the spirit of Executive Order 13132 and consistent with EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicits comment on this proposed rule from state and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This proposed rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). Thus, Executive Order 13175 does not apply to this action.

The EPA specifically solicits additional comment on this proposed action from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This proposed rule is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant, as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action would not cause appreciable increases in emissions or emissions-related health risks. The EPA's risk assessments (included in the docket for this proposed rule) demonstrate that the existing regulations are associated with an acceptable level of risk and provide an ample margin of safety to protect public health and prevent adverse environmental effects.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action,'' as defined under Executive Order 13211, (66 FR 28355, May 22, 2001), because it is not likely to have significant adverse effect on the supply, distribution or use of energy. This action will not create any new requirements and, therefore, no additional costs for sources in the energy supply, distribution or use sectors.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113 (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.,* materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by VCS bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not to use available and applicable VCS.

This proposed rulemaking involves technical standards. The EPA proposes to use ASTM D2908–74 or 91 and ASTM D3370–76 or 96a for the PCCT at the one Group IV Polymers and Resins facility in the PET continuous TPA high viscosity multiple end finisher subcategory. No applicable VCS were identified for these methods.

The EPA welcomes comments on this aspect of this proposed rulemaking and, specifically, invites the public to identify potentially-applicable VCS and to explain why such standards should be used in this regulation.

Under section 63.7(f) and section 63.8(f) of Subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications or procedures in the proposed rule.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority populations and low-income populations in the United States.

To examine the potential for any environmental justice issues that might be associated with the level of the standards for each source category, we performed a comparative analysis of the demographics of the population within the vicinity of the facilities in these source categories (*i.e.,* within a 3-mile radius) and the national average demographic distributions. The results of this analysis show that most demographic categories are within 2 percentage points of national averages, except for the African American population, which exceeds the national average by 6 percentage points (18 percent versus 12 percent). The EPA has determined that the current health risks posed by emissions from these source categories are acceptable and provide an ample margin of safety to protect public health and prevent adverse environmental effects. The proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it maintains the level of environmental protection for all affected populations.

List of Subjects for 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: November 30, 2011.

Lisa P. Jackson,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency (EPA) proposes to amend Title 40, chapter I, of the Code of Federal Regulations (CFR) as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart JJJ—[Amended]

2. Section 63.1310 is amended by:

a. Revising paragraphs (a)(4) introductory text, (a)(4)(iv) and (a)(4)(vi);

b. Revising paragraphs (c)(1) and (d) introductory text;

c. Revising paragraph (j); and

d. Adding paragraph (k) to read as follows:

§ 63.1310 Applicability and designation of affected sources.

(a) * * *

(4) *Emission points and equipment.* The affected source also includes the emission points and components specified in paragraphs (a)(4)(i) through (vi) of this section that are associated with each applicable group of one or more TPPU constituting an affected source.

* * * * *

(iv) Each process contact cooling tower used in the manufacture of poly (ethylene terephthalate) resin (PET) that is associated with a new affected source.

* * * * *

(vi) Components required by or utilized as a method of compliance with this subpart, which may include control devices and recovery devices.

* * * * *

(c) * * *

(1) Components and equipment that do not contain organic HAP and is located within a TPPU that is part of an affected source;

* * * * *

(d) *Processes excluded from the affected source.* The processes specified in paragraphs (d)(1) through (5) of this section are not part of the affected source and are not subject to the requirements of both this subpart and subpart A of this part:

* * * * *

(j) *Applicability of this subpart.* (1) The emission limitations set forth in this subpart and the emission limitations referred to in this subpart shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

(2) The emission limitations set forth in subpart H of this part, as referred to in § 63.1331, shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized, resulting in cessation of the emissions to which § 63.1331 applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene requirements of this subpart applicable to such items of equipment

(4) *General duty.* At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source.

(k) *Affirmative defense for exceedance of emission limit during malfunction.* In response to an action to enforce the standards set forth in this subpart, the owner or operator may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet their burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a limit, the owner or operator must timely meet the notification requirements in paragraph (k)(2) of this section, and must prove by a preponderance of evidence that:

(i) The excess emissions:

(A) Were caused by a sudden, infrequent and unavoidable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided or planned for; and

(D) Were not part of a recurring pattern indicative of inadequate design, operation or maintenance; and

(ii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(iv) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury or severe property damage; and

(v) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) *Notification*. The owner or operator of the affected source experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than 2 business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (k)(1) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45-day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

3. Section 63.1311 is amended by revising paragraph (d)(6) to read as follows:

§ 63.1311 Compliance dates and relationship of this subpart to existing applicable rules.

* * * * *

(d) * * *

(6) Notwithstanding paragraphs (d)(1) through (5) of this section, existing affected sources whose primary product, as determined using the procedures specified in § 63.1310(f), is PET shall be in compliance with § 63.1331 no later than August 6, 2002.

* * * * *

4. Section 63.1312 is amended by:

a. Removing the term ''Start-up, shutdown, and malfunction plan (§ 63.101)'' in paragraph (a); and

b. Adding the definition for ''Affirmative defense'' in alphabetical order in paragraph (b) to read as follows:

§ 63.1312 Definitions.

* * * * *

(b) * * *

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

* * * * *

§ 63.1319 [Amended]

5. Section 63.1319 is amended by removing ''Lfimits'' and adding in its place ''limits'' in the heading for paragraph (c).

6. Section 63.1324 is amended by revising the first two sentences of paragraph (c)(4)(ii)(C) to read as follows:

§ 63.1324 Batch process vents—monitoring equipment.

* * * * *

(c) * * *

(4) * * *

(ii) * * *

(C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than malfunctions. * * *

* * * * *

7. Section 63.1329 is amended by:

a. Revising the first sentence of paragraph (c) introductory text; and

b. Adding paragraphs (c)(2)(i) and (ii) to read as follows:

§ 63.1329 Process contact cooling towers provisions.

* * * * *

(c) *Existing affected source requirements.* The owner or operator of an existing affected source subject to this section who manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process and who is subject or becomes subject to 40 CFR part 60, subpart DDD, shall maintain an ethylene glycol concentration in the process contact cooling tower at or below 6.0 percent by weight averaged on a daily basis over a rolling 14-day period of operating days. * * *

* * * * *

(2) * * *

(i) Where 40 CFR 60.564(j)(1) requires the use of ASTM D2908–74 or 91, ''Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography,'' ASTM D2908–91 (2011), D2908–91 (2005), D2908–91 (2001), D2908–91 or D2908–74 may be used.

(ii) Where 40 CFR 60.564(j)(1)(i) requires the use of ASTM D3370–76 or 96a, ''Standard Practices for Sampling Water,'' ASTM D3370–10, D3370–08, D3370–07, D3370–96a or D3370–76 may be used.

8. Section 63.1331 is amended by adding paragraphs (a)(9) and (c) to read as follows:

§ 63.1331 Equipment leak provisions.

(a) * * *

(9) *Requirements for pressure relief devices.* For pressure relief devices, the owner or operator must meet the requirements of this paragraph. Any release to the atmosphere from a pressure relief device in organic HAP service constitutes a violation of this rule. The owner or operator must install, maintain and operate release indicators as specified in paragraphs (a)(9)(i) and (ii) of this section unless the pressure relief routes to a closed vent system and control device designed and operated in accordance with the requirements of this subpart. For any pressure relief devices, the owner or operator must comply with the recordkeeping and reporting provisions in this paragraph (a) and § 63.1335(e)(9). For any release, the owner or operator must submit the report specified in § 63.1335(e)(9), as described in paragraph (a)(9)(iii) of this section.

(i) A release indicator must be properly installed on each pressure relief device in such a way that it will indicate when an emission release has occurred.

(ii) Each indicator must be equipped with an alert system that will notify an operator immediately and automatically when the pressure relief device is open. The alert must be located such that the signal is detected and recognized easily by an operator.

(iii) For any instance that the release indicator indicates that a pressure relief device is open, the owner or operator must notify the Administrator that a pressure release has occurred and

submit to the Administrator the report specified in § 63.1335(e)(9). This report is required even if the owner or operator elects to follow the procedures specified in § 63.1310(k) to establish an affirmative defense.

* * * * *

(c)(1) Each affected source producing PET using a continuous TPA high viscosity multiple end finisher process shall monitor for leaks upon startup following an outage where changes have been made to equipment in gas/vapor or light liquid service. This leak check shall consist of the introduction of hot ethylene glycol vapors into the system for a period of no less than 2 hours during which time sensory monitoring of the equipment shall be conducted.

(2) A leak is determined to be detected if there is evidence of a potential leak found by visual, audible or olfactory means.

(3) When a leak is detected, it shall be repaired as soon as practical, but not later than 15 days after it is detected, except as provided in § 63.171.

(i) The first attempt at repair shall be made no later than 5 days after each leak is detected.

(ii) Repaired shall mean that the visual, audible, olfactory or other indications of a leak have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(4) When a leak is detected, the following information shall be recorded and kept for 2 years and reported in the next periodic report:

(i) The instrument and the equipment identification number and the operator name, initials or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

9. Section 63.1332 is amended by:

a. Removing and reserving paragraph (f)(1); and

b. Revising paragraph (f)(2) introductory text to read as follows:

§ 63.1332 Emissions averaging provisions.

* * * * *

(f) * * *

(2) Emissions during periods of monitoring excursions, as defined in § 63.1334(f). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(2)(i) through (iii) of this section.

* * * * *

10. Section 63.1333 is amended by revising paragraph (a) introductory text to read as follows:

§ 63.1333 Emissions averaging provisions.

(a) Performance testing shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested and in accordance with § 63.7(a)(1), (a)(3), (d), (e)(2), (e)(4), (g) and (h), with the exceptions specified in paragraphs (a)(1) through (5) of this section and the additions specified in paragraphs (b) through (d) of this section. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. Sections 63.1314 through 63.1330 also contain specific testing requirements.

* * * * *

§ 63.1334 [Amended]

11. Section 63.1334 is amended by:

a. Removing and reserving paragraphs (f)(1)(v)(B) through (D);

b. Removing and reserving paragraphs (f)(2)(ii)(B)(*2*) through (*4*);

c. Removing and reserving paragraphs (f)(5)(ii) through (iv);

d. Removing and reserving paragraphs (f)(6)(ii) through (iv); and

e. Removing and reserving paragraph (g).

12. Section 63.1335 is amended by:

a. Revising paragraphs (b)(1) introductory text, (b)(1)(i) introductory text, and (b)(1)(i)(A) and (B);

b. Removing and reserving paragraph ((b)(1)(i)(C));

c. Revising paragraph (b)(1)(ii);

d. Revising paragraph (d)(7)(i);

e. Removing and reserving paragraphs (d)(7)(ii) through (iv);

f. Revising the first sentence of paragraph (e) introductory text, the first sentence of paragraph (e)(3) introductory text, and paragraph (e)(3)(v);

g. Removing and reserving paragraph (e)(3)(viii);

h. Revising paragraph (e)(3)(ix)(B)

i. Revising the first two sentences of paragraph (e)(6) introductory text, (e)(6)(iii)(E), (e)(6)(xii)(A)(*1*), and (e)(6)(xii)(D);

j. Adding paragraphs (e)(9) and (10);

k. Revising paragraph (h)(1)(i);

l. Removing and reserving paragraph (h)(1)(ii)(C);

m. Revising the first sentence of paragraph (h)(1)(iii);

n. Revising paragraphs (h)(2)(iii) through (iv).

The revisions read as follows:

§ 63.1335 General recordkeeping and reporting provisions.

* * * * *

(b) * * *

(1) *Malfunction recordkeeping and reporting.* (i) *Records of malfunctions.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Records of the occurrence and duration of each malfunction of operation of process equipment or control devices or recovery devices or continuous monitoring systems used to comply with this subpart, and an estimate of the excess emissions released.

(B) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.1420(h)(4), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

* * * * *

(ii) *Reports of malfunctions.* For the purposes of this subpart, reports of malfunctions shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section. If a malfunction occurred during the reporting period, the report must include the number, duration, excess emissions estimate and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.1420(h)(4), including actions taken to correct a malfunction.

* * * * *

(d) * * *

(7) * * *

(i) Monitoring system malfunctions, breakdowns, repairs, calibration checks and zero (low-level) and high-level adjustments;

* * * * *

(e) * * * In addition to the reports and notifications required by subpart A of this part as specified in Table 1 of this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (10) of this section, as applicable. * * *

* * * * *

(3) * * * Owners or operators of affected sources requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping or alternative controls; requesting approval to use engineering

assessment to estimate emissions from a batch emissions episode, as described in § 63.1323(b)(6)(i)(C); or wishing to establish parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d), shall submit a Precompliance Report according to the schedule described in paragraph (e)(3)(i) of this section. * * *

* * * * *

(v) The owner or operator shall report the intent to use alternative emissions standards to comply with the provisions of this subpart in the Precompliance Report. The Administrator may deem alternative emissions standards to be equivalent to the standard required by the subpart, under the procedures outlined in § 63.6(g).

* * * * *

(ix) * * *

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(3)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(3)(iv) of this section; to use alternative controls, as specified in paragraph (e)(3)(v) of this section; to use engineering assessment to estimate emissions from a batch emissions episode, as specified in paragraph (e)(3)(vi) of this section; to establish parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d), as specified in paragraph (e)(3)(vii) of this section.

* * * * *

(6) *Periodic Reports.* For existing and new affected sources, the owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (xi) of this section. In addition, for equipment leaks subject to § 63.1331, with the exception of § 63.1331(c), the owner or operator shall submit the information specified in § 63.182(d) under the conditions listed in § 63.182(d), and for heat exchange systems subject to § 63.1328, the owner or operator shall submit the information specified in § 63.104(f)(2) as part of the Periodic Report required by this paragraph (e)(6). * * *

* * * * *

(iii) * * *

(E) The information in paragraph (b)(1)(ii) of this section for reports of malfunctions.

* * * * *

(xii) * * *

(A) * * *

(*1*) A control or recovery device for a particular emission point or process section has one or more excursions, as defined in § 63.1334(f), for a semiannual reporting period; or

* * * * *

(D) After quarterly reports have been submitted for an emission point for 1 year without one or more excursions occurring (during that year), the owner or operator may return to semiannual reporting for the emission point or process section.

* * * * *

(9) *Pressure relief device deviation report.* If any pressure relief device in organic HAP service or any piece of equipment or closed vent system has discharged to the atmosphere, as specified in § 63.1331(a)(9), the owner or operator must submit to the Administrator in the next Periodic Report:

(i) The source, nature and cause of the discharge.

(ii) The date, time and duration of the discharge.

(iii) An estimate of the quantity of total organic HAP emitted during the discharge and the method used for determining this quantity.

(iv) The actions taken to prevent this discharge.

(v) The measures adopted to prevent future such discharges.

(10) *Electronic reporting.* (i) Within 60 days after the date of completing each performance test (defined in § 63.2), as required in this subpart, the owner or operator must transmit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (see *http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(ii) All reports required by this subpart not subject to the requirements in paragraphs (e)(10)(i) and (ii) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.,* by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (e)(10)(i) and (ii) of this section in paper format.

* * * * *

(h) * * *

(1) * * *

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation (*e.g.,* a temperature reading of −200 °C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

* * * * *

(iii) The monitoring system is capable of detecting unchanging data during periods of operation, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (*e.g.,* pH in some scrubbers), and will alert the operator by alarm or other means. * * *

* * * * *

(2) * * *

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i) through (iii) of this section, for the duration specified in this (h). For any calendar week, if compliance with paragraphs (h)(1)(i) through (iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation.

(iv) For purposes of this paragraph (h), an excursion means that the daily average (or batch cycle daily average) value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value.

13. Table 1 to Part JJJ of Subpart 63 is amended by:

a. Revising entries 63.6(e), 63.6(e)(1)(i), and 63.6(e)(1)(ii);
b. Removing entries 63.6(e)(3)(i) through 63.6(e)(3)(ix);
c. Adding entries 63.6(e)(3) and 63.6(f)(1);
d. Revising entry 63.7(e)(1);
e. Revising entries 63.8(c)(1)(i) and 63.8(c)(1)(iii);
f. Removing entries 63.10(d)(5)(i) and 63.10(d)(5)(ii);
g. Adding entry 63.10(d)(5);
h. Removing footnote (a).

The revisions and additions read as follows:

TABLE 1 TO SUBPART JJJ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES

Reference	Applies to subpart JJJ	Explanation
* * * * * * *		
§ 63.6(e)	Yes	Except as otherwise specified for individual paragraphs.
§ 63.6(e)(1)(i)	No	See § 63.1310(j)(4) for general duty requirement.
§ 63.6(e)(1)(ii)	No.	
* * * * * * *		
§ 63.6(e)(3)	No.	
§ 63.6(f)(1)	No.	
* * * * * * *		
§ 63.7(e)(1)	No	See § 63.1333(a).
* * * * * * *		
§ 63.8(c)(1)(i)	No.	
* * * * * * *		
§ 63.8(c)(1)(iii)	No.	
* * * * * * *		
§ 63.10(d)(5)	No	See § 63.1335(b)(1)(ii) for malfunction reporting requirements.
* * * * * * *		

* * * * *

Subpart MMM—[Amended]

14. Section 63.1360 is amended by revising paragraphs (e)(1), (3), and (4) and adding paragraph (k) to read as follows:

§ 63.1360 Applicability.

* * * * *

(e) *Applicability of this subpart.* (1) Each provision set forth in this subpart shall apply at all times.

* * * * *

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the emissions limitations of this subpart during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene emissions limitations of this subpart applicable to such items of equipment.

(4) *General duty.* At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

* * * * *

(k) *Affirmative defense for exceedance of emission limit during malfunction.* In response to an action to enforce the standards set forth in this subpart, the owner or operator may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet their burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a limit, the owner or operator must timely meet the notification requirements in paragraph (k)(2) of this section, and must prove by a preponderance of evidence that:

(i) The excess emissions:

(A) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner, and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(iv) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) *Notification.* The owner or operator of the affected source experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (k)(1) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

15. Section 63.1361 is amended by:

a. Adding in alphabetical order the definition for ''Affirmative defense''.

b. Correcting a typographical error in the definition of ''Group 1 process vent'' by Removing the word ''hydogen'' and adding in its place the word ''hydrogen'' in the definition of ''Group 1 process vent''

The addition reads as follows:

§ 63.1361 Definitions.

* * * * *

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

* * * * *

16. Section 63.1362 is amended by revising paragraph (i) to read as follows:

§ 63.1362 Standards.

(i) *Opening of a safety device.* The owner or operator that opens a safety device, as defined in § 63.1361, is not exempt from applicable standards in order to avoid unsafe conditions. If opening a safety device results in the failure to meet any applicable standard, the owner or operator must still comply with the general duty to minimize emissions. If opening a safety device results in a deviation or excess emissions, such events must be reported as specified in § 63.1368(i). If the owner or operator attributes the event to a malfunction and intends to assert an affirmative defense, the owner or operator is subject to § 63.1360(k).

* * * * *

17. Section 63.1363 is amended by:

a. Revising the first sentence of paragraph (b) introductory text;

b. Adding paragraph (b)(4);

c. Revising paragraph (g)(4)(v)(A);

d. Revising paragraphs (h)(1) introductory text and (h)(1)(i);

e. Adding paragraph (h)(1)(iii);

f. Adding paragraph (h)(4).

The additions and revisions read as follows:

§ 63.1363 Standards for equipment leaks.

* * * * *

(b) * * * The owner or operator shall comply with the provisions of subpart H of this part as specified in paragraphs (b)(1) through (3) of this section and with paragraph (b)(4) of this section for pressure relief device monitoring. * * *

* * * * *

(4) *Requirements for pressure relief devices.* For pressure relief devices, the owner or operator must meet the requirements of this paragraph. Any release to the atmosphere from a pressure relief device in organic HAP service constitutes a violation of this rule. The owner or operator must install, maintain, and operate release indicators as specified in paragraphs (b)(4)(i) and (ii) of this section unless the pressure relief routes to a closed vent system and control device designed and operated in accordance with the requirements of this subpart. For any pressure relief devices, the owner or operator must comply with the recordkeeping provisions in paragraph (g) of this section and the reporting provisions in this paragraph (h) of this section. For any release, the owner or operator must submit the report specified in paragraph (h)(4) of this section, as described in paragraph (b)(4)(iii) of this section.

(i) A release indicator must be properly installed on each pressure relief device in such a way that it will indicate when an emission release has occurred.

(ii) Each indicator must be equipped with an alert system that will notify an operator immediately and automatically when the pressure relief device is open. The alert must be located such that the signal is detected and recognized easily by an operator.

(iii) For any instance that the release indicator indicates that a pressure relief device is open, the owner or operator must notify the Administrator that a pressure release has occurred and submit to the Administrator the report specified in paragraph (h)(4) of this section. This report is required even if the owner or operators elects to follow the procedures specified in § 63.1360(k) to establish an affirmative defense.

* * * * *

(g) * * *

(4) * * *

(v) * * *

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures must be maintained at the plant site. Reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(h) * * *

(1) Each owner or operator of a source subject to this section shall submit the reports listed in paragraphs (h)(1)(i) through (iii) of this section.

(i) A Notification of Compliance Status report described in paragraph (h)(2) of this section.

* * * * *

(iii) A pressure relief device deviation report described in paragraph (h)(4) of this section.

* * * * *

(4) *Pressure relief device deviation report.* If any pressure relief device in organic HAP service or any piece of equipment or closed vent system has discharged to the atmosphere as specified in paragraph (b)(4) of this section, the owner or operator must submit to the Administrator in the next Periodic Report:

(i) The source, nature, and cause of the discharge.

(ii) The date, time, and duration of the discharge.

(iii) An estimate of the quantity of total organic HAP emitted during the discharge and the method used for determining this quantity.

(iv) The actions taken to prevent this discharge.

(v) The measures adopted to prevent future such discharges.

18. Section 63.1365 is amended by:

a. Revising paragraph (b) introductory text;

b. Removing and reserving paragraph (h)(3).

The revision reads as follows:

§ 63.1365 Test methods and initial compliance procedures.

* * * * *

(b) *Test methods and conditions.* When testing is conducted to measure emissions from an affected source, the test methods specified in paragraphs (b)(1) through (9) of this section shall be used. Compliance and performance tests shall be performed under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested and as specified in paragraphs (b)(10) and (11) of this section. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

* * * * *

§ 63.1366 [Amended]

19. Section 63.1366 is amended by removing and reserving paragraph (b)(8)(iv).

20. Section 63.1367 is amended by revising paragraph (a)(3) to read as follows:

§ 63.1367 Recordkeeping requirements.

(a) * * *

(3) *Records of malfunctions.* (i) The owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment), air pollution control equipment, or monitoring equipment, and an estimate of the excess emissions released.

(ii) The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.1360(e)(4), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

* * * * *

21. Section 63.1368 is amended by:

a. Revising paragraph (i);

b. Adding paragraph (p).

The revisions and addition read as follows:

§ 63.1368 Reporting requirements.

* * * * *

(i) *Reports of malfunctions.* For the purposes of this subpart, reports of malfunctions shall be submitted on the same schedule as the Periodic reports required under paragraph (g) of this section instead of the schedule specified in § 63.10(d)(5)(i) of subpart A of this part. If a malfunction occurred during the reporting period, the report must include the number, duration, excess emissions estimate, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.1360(e)(4), including actions taken to correct a malfunction.

* * * * *

(p) *Electronic reporting.* (1) Within 60 days after the date of completing each performance test (defined in § 63.2) as required in this subpart, the owner or operator must transmit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (see *http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(2) All reports required by this subpart not subject to the requirements in this paragraph (p) must be sent to the Administrator at the appropriate address listed in § 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.,* by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to this paragraph (p) in paper format.

22. Table 1 to subpart MMM of part 63 is amended by:

a. Removing entry 63.6(e);

b. Adding entries 63.6(e)(1)(i), 63.6(e)(1)(ii), 63.6(e)(1)(iii), and 63.6(e)(3);

c. Removing entry 63.6(f);

d. Adding entries 63.6(f)(1) and 63.6(f)(2)–(3);

e. Revising entry 63.7(e)(1);

f. Removing entry 63.8(b)(3)–(c)(3);

g. Adding entries 63.8(b)(3), 63.8(c)(1)(i), 63.8(c)(1)(ii), 63.8(c)(1)(iii), and 63.8(c)(2)–(3);

h. Revising entry 63.8(d)–(f)(3);

i. Removing entry 63.10(c);

j. Adding entries 63.10(c)(1)–(8), 63.10(c)(10)–(11), 63.10(c)(12)–(14), and 63.10(c)(15);

k. Revising entry 63.10(d)(5).

The revisions and additions read as follows:

TABLE 1 TO SUBPART MMM OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART MMM

Reference to subpart A	Applies to subpart MMM	Explanation
*	*	* * * * * * *
63.6(e)(1)(i)	No	See § 63.1360(e)(4) for general duty requirement.
§ 63.6(e)(1)(ii)	No.	

TABLE 1 TO SUBPART MMM OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART MMM—Continued

Reference to subpart A	Applies to subpart MMM	Explanation
§ 63.6(e)(1)(iii)	Yes.	
§ 63.6(e)(3)	No.	
§ 63.6(f)(1)	No.	
§ 63.6(f)(2)–(3)	Yes.	
* * * * * * *		
§ 63.7(e)(1)	No	See § 63.1365(b).
* * * * * * *		
§ 63.8(b)(3)	Yes.	
§ 63.8(c)(1)(i)	No.	
§ 63.8(c)(1)(ii)	Yes.	
§ 63.8(c)(1)(iii)	No.	
§ 63.8(c)(2)–(3)	Yes.	
* * * * * * *		
§ 63.8(d)–(f)(3)	Yes	Except the last sentence of § 63.8(d)(3), which refers to an SSM plan. SSM plans are not required.
* * * * * * *		
§ 63.10(c)(1)–(8)	Yes.	
§ 63.10(c)(10)–(11)	No	See § 63.1367(a)(3) for malfunction recordkeeping requirements.
§ 63.10(c)(12)–(14)	Yes.	
§ 63.10(c)(15)	No.	
* * * * * * *		
§ 63.10(d)(5)	No	See § 63.1368(i) for malfunction reporting requirements.
* * * * * * *		

* * * * *

Subpart PPP—[Amended]

23. Section 63.1420 is amended by:

a. Revising paragraphs (a)(4) introductory text and (a)(4)(iv);

b. Revising paragraphs (c)(1), (d) introductory text, and the heading for paragraph (e(8);

c. Revising paragraph (h) and;

d. Adding paragraph (i).

The revisions and addition read as follows:

§ 63.1420 Applicability and designation of affected sources.

(a) * * *

(4) The affected source also includes the emission points and components specified in paragraphs (a)(4)(i) through (vi) of this section that are associated with a PMPU (or a group of PMPUs) making up an affected source, as defined in § 63.1423.

* * * * *

(iv) Components required by or utilized as a method of compliance with this subpart which may include control techniques and recovery devices.

* * * * *

(c) * * *

(1) Components and equipment that do not contain organic HAP or that contain organic HAP as impurities only and are located at a PMPU that is part of an affected source.

* * * * *

(d) *Processes excluded from the affected source.* The processes specified in paragraphs (d)(1) through (3) of this section are not part of the affected source and are not subject to the requirements of both this subpart and subpart A of this part.

* * * * *

(e) * * *

(8) *Requirements for flexible process units that are not PMPU.* * * *

* * * * *

(h) *Applicability of this subpart.* (1) The emission limitations set forth in this subpart and the emission limitations referred to in this subpart shall apply at all times except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

(2) The emission limitations set forth in 40 CFR part 63, subpart H, as referred to in the equipment leak provisions in § 63.1434, shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which § 63.1434 applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment if the shutdown would contravene requirements applicable to such items of equipment.

(4) *General duty.* At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(i) *Affirmative defense for exceedance of emission limit during malfunction.* In response to an action to enforce the standards set forth in this subpart, the owner or operator may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails

to meet their burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a limit, the owner or operator must timely meet the notification requirements in paragraph (i)(2) of this section, and must prove by a preponderance of evidence that:

(i) The excess emissions:

(A) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(iv) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) *Notification.* The owner or operator of the affected source experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (i)(1) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

24. Section 63.1423 is amended by:

a. Removing the phrase ''Start-up, shutdown, and malfunction plan (subpart F)'' in paragraph (a); and

b. Adding the term ''Affirmative defense'' in alphabetical order to paragraph (b) to read as follows:

§ 63.1423 Definitions.

* * * * *

(b) * * *

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

* * * * *

25. Section 63.1430 is amended by revising paragraph (d)(2)(i) to read as follows:

§ 63.1430 Process vent reporting and recordkeeping requirements.

* * * * *

(d) * * *

(2) * * *

(i) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the daily averages. In addition, monitoring data recorded during periods of non-operation of the process (or specific portion thereof) resulting in cessation of organic HAP emissions shall not be included in computing the daily averages.

* * * * *

26. Section 63.1434 is amended by revising paragraphs (c) to read as follows:

§ 63.1434 Equipment leak provisions.

* * * * *

(c) *Requirements for pressure relief devices.* For pressure relief devices, the owner or operator must meet the requirements of this paragraph. Any release to the atmosphere from a pressure relief device in organic HAP service constitutes a violation of this rule. The owner or operator must install, maintain, and operate release indicators as specified in paragraphs (c)(1) and (2) of this section unless the pressure relief routes to a closed vent system and control device designed and operated in accordance with the requirements of this subpart. For any pressure relief devices, the owner or operator must comply with the recordkeeping and reporting provisions in § 63.1439(c) and (e)(9). For any release, the owner or operator must submit the report specified in § 63.1439(e)(9), as described in paragraph (c)(3) of this section.

(1) A release indicator must be properly installed on each pressure relief device in such a way that it will indicate when an emission release has occurred.

(2) Each indicator must be equipped with an alert system that will notify an operator immediately and automatically when the pressure relief device is open. The alert must be located such that the signal is detected and recognized easily by an operator.

(3) For any instance that the release indicator indicates that a pressure relief device is open, the owner or operator must notify the Administrator that a pressure release has occurred and submit to the Administrator the report specified in § 63.1439(e)(9). This report is required even if the owner or operator elects to follow the procedures specified in § 63.1420(k) to establish an affirmative defense.

* * * * *

27. Section 63.1437 is amended by revising paragraph (a) introductory text and the first sentence of (a)(1) introductory text to read as follows:

§ 63.1437 Additional requirements for performance testing.

(a) Performance testing shall be conducted in accordance with § 63.7(a)(1), (a)(3), (d), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (4) of this section and the additions specified in paragraph (b) of this section. Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(1) Performance tests shall be conducted according to the general provisions' performance testing requirements in § 63.7(e)(2), except that for all emission sources except process vents from batch unit operations, performance tests shall be conducted during maximum representative operating conditions for the process achievable during one of the time periods described in paragraph (a)(1)(i) of this section, without causing any of the situations described in paragraph (a)(1)(ii) or (iii) of this section to occur. * * *

* * * * *

28. Section 63.1438 is amended by:

a. Revising paragraphs (e)(1) introductory text and (e)(2);

b. Removing and reserving paragraphs (f)(1)(v)(A) through (C), (f)(3)(ii)(B)(*1*) through (*3*), and (g).

The revisions read as follows:

§ 63.1438 Parameter monitoring levels and excursions.

(e) * * *

(1) Each excursion, as defined in paragraphs (f)(1)(i), (f)(2)(i)(A), (f)(2)(ii), (f)(3)(i), and (f)(4) of this section, constitutes a violation of the provisions of this subpart in accordance with paragraph (e)(1)(i), (ii), or (iii) of this section.

* * * * *

(2) Each excursion, as defined in paragraphs (f)(1)(ii), (f)(1)(iii), (f)(2)(i)(B), and (f)(3)(ii) of this section constitutes a violation of the operating limit.

* * * * *

29. Section 63.1439 is amended by:

a. Revising paragraph (b)(1);

b. Removing and reserving paragraphs (d)(7)(ii) through (iv);

c. Revising paragraphs (e) introductory text, (e)(4)introductory text, and (e)(4)(v);

d. Removing and reserving paragraph (e)(4)(vi);

e. Revising paragraph (e)(4)(vii)(B);

f. Revising paragraphs (e)(6)(iii)(E), (e)(6)(viii)(A)(*1*), and (e)(6)(viii)(D);

g. Adding paragraphs (e)(9) and (10);

h. Revising the first sentence of paragraph (h)(1)(i);

i. Removing and reserving paragraph (h)(1)(ii)(C);

j. Revising paragraph (h)(1)(iii); and

k. Revising paragraph (h)(2)(iii) and (iv).

The additions and revisions read as follows:

§ 63.1439 General recordkeeping and reporting provisions.

* * * * *

(b) * * *

(1) *Malfunction recordkeeping and reporting.* (i) *Records of malfunctions.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) and (B) of this section.

(A) Records of the occurrence and duration of each malfunction of operation of process equipment or combustion, recovery, or recapture devices or continuous monitoring systems used to comply with this subpart, and an estimate of the excess emissions released.

(B) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.1420(h)(4), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(ii) *Reports of malfunctions.* For the purposes of this subpart, reports of malfunctions shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section. If a malfunction occurred during the reporting period, the report must include the number, duration, excess emissions estimate, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.1420(h)(4), including actions taken to correct a malfunction.

* * * * *

(e) *Reporting and notification.* In addition to the reports and notifications required by 40 CFR part 63, subpart A, as specified in this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (10) of this section, as applicable. All reports required by this subpart, and the schedule for their submittal, are listed in Table 8 of this subpart.

* * * * *

(4) *Precompliance Report.* The owner or operator of an affected source requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; or requesting approval to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d) shall submit a Precompliance Report according to the schedule described in paragraph (e)(4)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(4)(ii) through (viii) of this section, as appropriate.

* * * * *

(v) The owner or operator shall report the intent to use an alternative emissions standard to comply with the provisions of this subpart in the Precompliance Report. The Administrator may deem an alternative emissions standard to be equivalent to the standard required by the subpart, under the procedures outlined in the General Provisions' requirements for use of an alternative nonopacity emission standard, in § 63.6(g).

* * * * *

(vii) * * *

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(4)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(4)(iv) of this section; or to use alternative controls, as specified in paragraph (e)(4)(v) of this section.

* * * * *

(6) * * *

(iii) * * *

(E) The information in paragraph (b)(1)(ii) of this section for reports of malfunctions.

* * * * *

(viii) * * *

(A) * * *

(*1*) A combustion, recovery, or recapture device for a particular emission point or process section has one or more excursions, as defined in § 63.1438(f) for a semiannual reporting period; or

* * * * *

(D) After quarterly reports have been submitted for an emission point for 1 year without one or more excursions

occurring (during that year), the owner or operator may return to semiannual reporting for the emission point or process section

* * * * *

(9) *Pressure relief device deviation report.* If any pressure relief device in organic HAP service or any piece of equipment or closed vent system has discharged to the atmosphere as specified in § 63.1434(c), the owner or operator must submit to the Administrator in the next Periodic Report:

(i) The source, nature, and cause of the discharge.

(ii) The date, time, and duration of the discharge.

(iii) An estimate of the quantity of total organic HAP emitted during the discharge and the method used for determining this quantity.

(iv) The actions taken to prevent this discharge.

(v) The measures adopted to prevent future such discharges.

(10) *Electronic reporting.* (i) Within 60 days after the date of completing each performance test (defined in § 63.2) as required in this subpart, the owner or operator must transmit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (see *http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(ii) All reports required by this subpart not subject to the requirements in paragraph (e)(10) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.,* by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (e)(10)(i) and (ii) of this section in paper format.

* * * * *

(h) * * *

(1) * * *

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation (*e.g.,* a temperature reading of −200 °C on a boiler), and will alert the operator by alarm or other means. * * *

* * * * *

(iii) The monitoring system is capable of detecting unchanging data during periods of operation, except in circumstances where the presence of unchanging data are the expected operating condition based on past experience (*e.g.,* pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(2) * * *

(iii) The owner or operator shall retain the records specified in paragraph (h)(1) of this section, for the duration specified in this paragraph (h). For any calendar week, if compliance with paragraphs (h)(1)(i) through (iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation.

(iv) For the purposes of this paragraph (h), an excursion means that the daily average of monitoring data for a parameter is greater than the maximum, or less than the minimum established value.

30. Table 1 to Subpart PPP of part 63 is amended by:

a. Revising entries 63.6(e)(1)(i) and 63.6(e)(1)(ii);

b. Adding entry 63.6(e)(3);

c. Removing entries 63.6(e)(3)(i) through 63.6(e)(3)(ix);

d. Revising entries 63.6(f)(1), 63.7(e)(1), 63.8(c)(1)(i), 63.8(c)(1)(iii), and 63.10(d)(5);

e. Removing entries 63.10(d)(5)(i) and 63.10(d)(5)(ii).

The revisions and addition read as follows:

TABLE 1 OF SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to subpart PPP	Explanation
* * * * * * *		
63.6(e)(1)(i)	No	See § 63.1420(h)(4) for general duty requirement.
63.6(e)(1)(ii)	No.	
* * * * * * *		
63.6(e)(3)	No.	
63.6(f)(1)	No.	
* * * * * * *		
63.7(e)(1)	No	See §§ 63.1436(h) and 63.1437(a).
* * * * * * *		
63.8(c)(1)(i)	No.	
* * * * * * *		
63.8(c)(1)(iii)	No.	

TABLE 1 OF SUBPART PPP OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
* * * * * * *		
63.10(d)(5)	No.	
* * * * * * *		

31. Table 2 to Subpart PPP of part 63 is amended by revising the title to read as follows:

Table 2 of Subpart PPP of Part 63—Applicability of HON Provisions to Subpart PPP Affected Sources

* * * * *

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