ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2016–0490; FRL–9956–87–OAR]

RIN 2060–AS85

National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Publicly Owned Treatment Works (POTW) to address the results of the residual risk and technology review (RTR) conducted under the Clean Air Act (CAA). As a result of our review, we are proposing to include pretreatment requirements to limit emissions from collection systems and the POTW treatment plant; requirements for existing, new, or reconstructed industrial (Group 1) POTW to comply with both the requirements in this rule and those in the applicable NESHAP for which they act as control; and hazardous air pollutants (HAP) emission limits for existing, non-industrial (Group 2) POTW. In addition, the EPA is proposing to revise the applicability criteria, revise the names and definitions of the industrial (Group 1) and non-industrial (Group 2) subcategories, revise regulatory provisions pertaining to emissions during periods of startup, shutdown, and malfunction, add requirements for electronic reporting, and make other miscellaneous edits and technical corrections.

DATES: *Comments.* Comments must be received on or before February 27, 2017. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before January 26, 2017.

Public Hearing. A public hearing will be held on January 11, 2017, if requested by January 3, 2017.

ADDRESSES: *Comments.* Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2016–0490, at *http://www.regulations.gov*. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *http://www.regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets*.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Karen Marsh, Sector Policies and Programs Division (E143–05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–1065; fax number: (919) 541–3470; and email address: *marsh.karen@epa.gov*. For specific information regarding the risk modeling methodology, contact Michael Stewart, Health and Environmental Impacts Division (C539–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–7524; fax number: (919) 541–0237; and email address: *stewart.michael@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Patrick Yellin, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, EPA WJC South Building, Mail Code 2227A, 1200 Pennsylvania Avenue NW., Washington DC 20460; telephone number: (202) 564–2970; fax number: (202) 564–0050; and email address: *yellin.patrick@epa.gov*.

SUPPLEMENTARY INFORMATION:

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA–HQ–OAR–2016–0490. All documents in the docket are listed in the *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 *Regulations.gov* or in hard copy at the EPA Docket Center, Room 3334, EPA WJC West Building, 1301 Constitution Avenue NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

Instructions. Direct your comments to Docket ID No. EPA–HQ–OAR–2016–0490. 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 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 not include special characters or 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/dockets.*

Public Hearing. A public hearing will be held, if requested by January 3, 2017, to accept oral comments on this proposed action. If a hearing is requested, it will be held at the EPA's Washington, DC campus located at 1201 Constitution Avenue NW., Washington, DC. The hearing, if requested, will begin at 9:00 a.m. (local time) and will conclude at 4:00 p.m. (local time) on January 11, 2017. To request a hearing,

to register to speak at a hearing, or to inquire if a hearing will be held, please contact Aimee St. Clair at (919) 541–1063 or by email at *stclair.aimee@epa.gov.* The last day to pre-register to speak at a hearing, if one is held, will be January 9, 2017. Additionally, requests to speak will be taken the day of the hearing at the hearing registration desk, although preferences on speaking times may not be able to be fulfilled. Please note that registration requests received before the hearing will be confirmed by the EPA via email.

The EPA will make every effort to accommodate all speakers who arrive and register. Because the hearing will be held at a U.S. governmental facility, individuals planning to attend the hearing should be prepared to show valid picture identification to the security staff in order to gain access to the meeting room. Please note that the REAL ID Act, passed by Congress in 2005, established new requirements for entering federal facilities. If your driver's license is issued by Alaska, American Samoa, Arizona, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Montana, New York, Oklahoma or the state of Washington, you must present an additional form of identification to enter the federal building. Acceptable alternative forms of identification include: Federal employee badges, passports, enhanced driver's licenses and military identification cards. In addition, you will need to obtain a property pass for any personal belongings you bring with you. Upon leaving the building, you will be required to return this property pass to the security desk. No large signs will be allowed in the building, cameras may only be used outside of the building and demonstrations will not be allowed on federal property for security reasons.

Please note that any updates made to any aspect of the hearing, including whether or not a hearing will be held, will be posted online at *https://www.epa.gov/stationary-sources-air-pollution/publicly-owned-treatment-works-potw-national-emission-standards.* We ask that you contact Aimee St. Clair at (919) 541–1063 or by email at *stclair.aimee@epa.gov* or monitor our Web site to determine if a hearing will be held. The EPA does not intend to publish a notice in the **Federal Register** announcing any such updates. Please go to *https://www.epa.gov/stationary-sources-air-pollution/publicly-owned-treatment-works-potw-national-emission-standards* for more information on the public hearing.

Preamble Acronyms and Abbreviations. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AEGL Acute exposure guideline levels
AERMOD Air dispersion model used by the HEM–3 model
ATSDR Agency for Toxic Substances and Disease Registry
BACT Best available control technology
CAA Clean Air Act
CalEPA California EPA
CBI Confidential Business Information
CDX Central Data Exchange
CEDRI Compliance and Emissions Data Reporting Interface
CFR Code of Federal Regulations
CWA Clean Water Act
ECHO Enforcement and Compliance History Online
EJ Environmental justice
EPA Environmental Protection Agency
ERPG Emergency Response Planning Guidelines
ERT Electronic Reporting Tool
FR Federal Register
HAP Hazardous air pollutants
HCl Hydrochloric acid
HEM–3 Human Exposure Model, Version 1.1.0
HF Hydrogen fluoride
HI Hazard index
HQ Hazard quotient
ICR Information collection request
IRIS Integrated Risk Information System
km Kilometer
LAER Lowest achievable emission rate
LOAEL Lowest-observed-adverse-effect level
MACT Maximum achievable control technology
MGD Million gallons per day
mg/kg-day Milligrams per kilogram per day
mg/m^3 Milligrams per cubic meter
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
NEI National Emissions Inventory
NESHAP National emissions standards for hazardous air pollutants
NOAA National Oceanic and Atmospheric Administration
NOAEL No-observed-adverse-effect levels
NRC National Research Council
NSR New source review
NTTAA National Technology Transfer and Advancement Act
OAQPS Office of Air Quality Planning and Standards
OMB Office of Management and Budget
PAH polycyclic aromatic hydrocarbons
PB–HAP Hazardous air pollutants known to be persistent and bio-accumulative in the environment
PEL Probable effect level
POM Polycyclic organic matter
POTW Publicly owned treatment works
ppm Parts per million
PRA Paperwork Reduction Act
RACT Reasonably available control technology
REL Reference exposure level
RFA Regulatory Flexibility Act
RfC Reference concentration
RfD Reference dose
RTR Residual risk and technology review
SAB Science Advisory Board
SOP Standard operating procedure
SSM Startup, shutdown, and malfunction
TOSHI Target organ-specific hazard index
tpy Tons per year
TRIM.FaTE Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure model
UF Uncertainty factor
$\mu g/m^3$ microgram per cubic meter
UMRA Unfunded Mandates Reform Act
URE Unit risk estimate
VCS Voluntary consensus standards

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

I. General Information

A. Does this action apply to me?

Table 1 of this preamble lists the NESHAP and associated regulated industrial source category that is the subject of this proposal. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding the entities that this proposed action is likely to affect. The proposed standards, once promulgated, will be directly applicable to the affected sources. Federal, state, local, and tribal governments would be affected as discussed below. By definition, a POTW is owned by a municipality, state, intermunicipal or interstate agency, or any department, agency, or instrumentality of the federal government (See 40 CFR 63.1595 of subpart VVV). If a POTW has a design capacity to treat at least 5 million gallons per day (MGD) of wastewater, receives wastewater from industrial users, and is either a major source of HAP emissions or treats wastewater to comply with requirements of another NESHAP, then the POTW is affected by these standards. (Note, these applicability criteria represent proposed revisions to the current criteria and are discussed further in section IV.D.1 of this document.) As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992), the POTW source category includes emissions from wastewaters that are treated at a POTW. These wastewaters are generated by industrial, commercial, and domestic sources, although only industrial and commercial dischargers might consistently discharge HAP in quantities high enough to potentially result in an exceedance of the major source emission threshold at the POTW. Emissions from these wastewaters can

occur within the collection system (sewers) as well as during treatment at the POTW. Control options include, but are not limited to, reduction of HAP at the industrial discharger before wastewater enters the collection systems, add-on emission controls on the collection system and at the POTW, and/or treatment process modifications/substitutions.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS PROPOSED ACTION

Source category	NESHAP	NAICS code [1]
Sewage Treatment Facilities	Subpart VVV	221320

[1] North American Industry Classification System.

B. 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 action is available on the Internet. A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA–HQ–OAR–2016–0490). Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at *https://www.epa.gov/stationary-sources-air-pollution/publicly-owned-treatment-works-potw-national-emission-standards*. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal and key technical documents at this same Web site. Information on the overall residual risk and technology review (RTR) program is available at *http://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*.

C. 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 comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI 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: OAQPS Document Control Officer (C404–02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA–HQ–OAR–2016–0490.

II. Background

A. What is the statutory authority for this action?

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of 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) requires 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, the technology-based NESHAP must reflect the maximum degree of emission 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 reflect 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 pollutant, 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 section 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 floor for existing sources can be less stringent than floors for new sources, but not 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, the EPA 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 emission 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. CAA section 112(d)(6). In conducting this review, the EPA is not required to recalculate the MACT floor. *Natural Resources Defense Council* (*NRDC)* v. *EPA,* 529 F.3d 1077, 1084 (D.C. Cir. 2008). *Association of Battery Recyclers, Inc.* v. *EPA,* 716 F.3d 667 (D.C. Cir. 2013).

The second stage in standard-setting focuses on reducing any remaining (*i.e.,*

''residual'') risk according to CAA section 112(f). CAA section 112(f)(1) requires 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 the *Residual Risk Report to Congress,* EPA–453/R–99–001 (*Risk Report*) in March 1999. CAA section 112(f)(2) then provides that if Congress does not act on any recommendation in the *Risk Report,* the EPA must analyze and address residual risk for each category or subcategory of sources 8 years after promulgation of such standards pursuant to CAA section 112(d).

Section 112(f)(2) of the CAA requires the EPA to determine for source categories subject to MACT standards whether the emission standards provide an ample margin of safety to protect public health. Section 112(f)(2)(B) of the CAA expressly preserves the EPA's use of the two-step process for developing standards to address any residual risk and the Agency's 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 EPA notified Congress in the *Risk Report* that the Agency intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA–453/R–99–001, p. ES–11). The EPA subsequently adopted this approach in its residual risk determinations and in a challenge to the risk review for the Synthetic Organic Chemical Manufacturing source category, the United States Court of Appeals for the District of Columbia Circuit upheld as reasonable the EPA's interpretation that CAA section 112(f)(2) incorporates the approach established in the Benzene NESHAP. See *NRDC* v. *EPA,* 529 F.3d 1077, 1083 (D.C. Cir. 2008) (''[S]ubsection 112(f)(2)(B) expressly incorporates the 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,* vol. 1, p. 877 (Senate debate on Conference Report).

The first step in the process of evaluating residual risk is the determination of acceptable risk. If risks are unacceptable, the EPA cannot consider cost in identifying the emissions standards necessary to bring risks to an acceptable level. The second step is the determination of whether standards must be further revised in order to provide an ample margin of safety to protect public health. The ample margin of safety is the level at which the standards must be set, unless an even more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

1. Step 1—Determination of Acceptability

The Agency in the Benzene NESHAP concluded that ''the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information'' and that the ''judgment on acceptability cannot be reduced to any single factor.'' Benzene NESHAP at 54 FR 38046, September 14, 1989. 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'' (*Risk Report* at 178, quoting *NRDC* v. *EPA,* 824 F. 2d 1146, 1165 (D.C. Cir. 1987) (en banc) (''Vinyl Chloride''), recognizing that our world is not risk-free.

In the Benzene NESHAP, we stated that ''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 at 38045, September 14, 1989. 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 acknowledged 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 the MIR as a metric for determining acceptability, we acknowledged in the 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-1 million (1-in-10 thousand) provides a benchmark for judging the acceptability of maximum individual lifetime cancer risk, but does not constitute a rigid line for making that determination. Further, in the Benzene NESHAP, we noted that:

> [p]articular 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 Benzene NESHAP that:

> [i]n 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 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-emission of pollutants.

Id. at 38045. 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 noted earlier, in *NRDC* v. *EPA,* the court held that CAA section 112(f)(2) ''incorporates the EPA's interpretation of the Clean Air Act from the Benzene Standard.'' The court further held that Congress' incorporation of the Benzene standard applies equally to carcinogens and non-carcinogens. 529 F.3d at 1081–82. Accordingly, we also consider non-cancer risk metrics in our determination of risk acceptability and ample margin of safety.

2. Step 2—Determination of Ample Margin of Safety

CAA section 112(f)(2) requires the EPA to determine, for source categories subject to MACT standards, whether those standards provide an ample margin of safety to protect public health.

As explained in the Benzene NESHAP, ''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 section 112.'' 54 FR 38046, September 14, 1989.

According to CAA section 112(f)(2)(A), 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 (*i.e.,* the MACT standards) are sufficiently protective. *NRDC* v. *EPA,* 529 F.3d 1077, 1083 (D.C. Cir. 2008) (''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.

The CAA does not specifically define the terms ''individual most exposed,'' ''acceptable level,'' and ''ample margin of safety.'' In the Benzene NESHAP, 54 FR at 38044–38045, September 14, 1989, we stated as an overall objective:

> In protecting public health with an ample margin of safety under section 112, EPA strives 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 plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.

The Agency further stated that ''[t]he 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.'' *Id.* at 38045.

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, including the incremental risk reduction associated with standards more stringent than the MACT standard or a more stringent standard that the EPA has determined is necessary to ensure risk is acceptable. In the ample margin of safety analysis, the Agency considers additional factors, 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, September 14, 1989.

B. What is this source category and how does the 2002 NESHAP regulate its HAP emissions?

1. Definition of the POTW Source Category and the Affected Source

The NESHAP for the POTW source category (henceforth referred to as the ''POTW NESHAP'') was promulgated on October 26, 1999 (64 FR 57572) and codified at 40 CFR part 63, subpart VVV. The POTW NESHAP was amended on October 21, 2002 (67 FR 64742). As amended in 2002, the POTW NESHAP applies to new and existing POTW treatment plants that are located at a POTW that is a major source of HAP emissions and that is required to develop and implement a pretreatment program as defined by 40 CFR 403.8 under the Clean Water Act. Emissions from a POTW originate from wastewaters that are treated at a POTW. These wastewaters are generated by industrial, commercial, and domestic sources, although only industrial and commercial dischargers might consistently discharge HAP in quantities high enough to potentially result in an exceedance of the major source emission threshold at the POTW. Emissions from these wastewaters can occur within the collection system (sewers) as well as during treatment at the POTW treatment plant. Control options include, but are not limited to, reduction of HAP at the source before they enter the collection system, add-on emission controls on the collection system and at the POTW, and/or treatment process modifications/substitutions.

The POTW NESHAP (40 CFR 63.1595) defines ''POTW'' as ''a treatment works, as that term is defined by section 112(e)(5) of the Clean Air Act, which is owned by a municipality (as defined by section 502(4) of the Clean Water Act),[2] a state, an intermunicipal or interstate agency, or any department, agency, or instrumentality of the federal government. This definition includes any intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment. The wastewater treated by these facilities is generated by industrial, commercial, and domestic sources. As used in this regulation, the term POTW refers to both any publicly owned treatment works which is owned by a state, municipality, or intermunicipal or interstate agency and therefore eligible to receive grant assistance under the Subchapter II of the Clean Water Act, and any federally owned treatment works as that term is described in section 3023 of the Solid Waste Disposal Act.'' The ''affected source'' regulated by the 2002 POTW NESHAP is defined in 40 CFR 63.1595 of the POTW NESHAP as the ''group of all equipment that comprise the POTW treatment plant.'' The ''POTW treatment plant'' is defined as the ''portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.'' The 2002 POTW NESHAP excludes collection systems, including sewers, pump stations, and other conveyance equipment located outside the POTW treatment plant from the definition of affected source.

2. Applicability of the 2002 NESHAP: Industrial (Group 1) and Non-Industrial (Group 2) Subcategories

The 2002 POTW NESHAP set air pollution control requirements or emission limits on existing, new, and reconstructed POTW. Briefly, a POTW

[1] ''Adverse environmental effect'' is defined 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. CAA section 112(a)(7).

[2] CAA section 112(e)(5) adopts the definition of ''treatment works'' from Clean Water Act (CWA) section 212(2), 33 U.S.C. 1292(2).

is subject to the POTW NESHAP if: (1) The POTW is required to establish and implement a pretreatment program per the requirements in 40 CFR 403.8 under the CWA. Pretreatment programs are required for POTW with a design capacity of greater than 5 MGD and that receive wastewater from an ''industrial user'' that contains pollutants which pass through or interfere with the operation of the POTW. Pollutants that pass through are those that remain in the wastewater and are not removed during treatment operations at the POTW; and (2) either of the following:

- The POTW accepts waste streams regulated by another NESHAP and provides treatment and controls as an agent for the industrial facility. The industrial facility complies with its NESHAP requirements specific to that wastewater stream by using the treatment and controls located at the POTW; or
- The POTW is a major source of HAP emissions.

Accordingly, POTW that are area sources are not subject to the requirements in the 2002 rule unless they receive wastewater that is subject to control under another NESHAP.

Today we estimate that six facilities are subject to the POTW NESHAP. A complete list of facilities subject to the POTW NESHAP is available in the POTW RTR database, which is available for review in the docket for this proposed rulemaking. The EPA recognizes that there are approximately 16,000 POTW in the U.S.; however, most of these are small municipalities that do not treat wastewater from industrial users, and therefore, would not be subject to this regulation. Additionally, POTW that do treat wastewater from industrial users are generally required to develop and implement a pretreatment program that limits the concentration of pollutants in wastewaters received at the POTW, thus reducing the potential emissions of HAP so that they are below major source thresholds. The EPA requests comment specifically identifying other POTW that are subject to the POTW NESHAP.

In the 2002 NESHAP, the source category is subcategorized based on the way in which the POTW is providing treatment for wastewaters received from an industrial source. The 2002 POTW NESHAP defines (40 CFR 63.1595) an ''industrial POTW'' as ''a POTW that accepts a waste stream regulated by another NESHAP and provides treatment and controls as an agent for the industrial discharger. The industrial discharger complies with its NESHAP by using the treatment and controls located at the POTW. For example, an industry discharges its benzene-containing waste stream to the POTW for treatment to comply with 40 CFR part 61, subpart FF—National Emission Standard for Benzene Waste Operations. This definition does not include POTW treating waste streams not specifically regulated under another NESHAP.'' In other words, if a POTW is used as the control method by which an industrial source meets the wastewater requirements in their source category NESHAP, then the POTW is considered an ''industrial POTW treatment plant.'' An ''industrial POTW treatment plant'' is affected by the 2002 POTW NESHAP regardless of the HAP emissions (*i.e.,* does not have to be a major source).

In contrast, under the 2002 NESHAP, a ''non-industrial POTW'' is defined (40 CFR 63.1595) as ''a POTW that does not meet the definition of an industrial POTW as defined above.'' If a POTW treats wastewater from industrial users, but does not treat industrial wastewaters subject to control requirements in another NESHAP, then the POTW is a ''non-industrial POTW treatment plant.'' See section IV.D.2 of this preamble for a discussion on proposed changes to these subcategories, including proposed changes to the names for these subcategories (*i.e.,* Group 1 and Group 2).

3. HAP Emission Points

The amount and type of HAP emitted from a POTW is dependent on the composition of the wastewater streams discharged to a POTW by industrial users. Because HAP are not typically used in large quantities by domestic dischargers, we do not expect domestic dischargers to consistently or frequently contribute HAP constituents to the wastewater and any domestic discharges of HAP are trivial in comparison to industrial dischargers. An industrial user is defined in the 2002 regulation to include both industrial and commercial facilities that discharge wastewaters to the POTW. The primary HAP emitted from the POTW that were identified as subject to the 2002 NESHAP include acetaldehyde, acetonitrile, chloroform, ethylene glycol, formaldehyde, methanol, methylene chloride, tetrachloroethylene, toluene, and xylenes. HAP present in wastewater entering POTW can biodegrade, adhere to sewage sludge, volatilize to the air, or pass through (remain in the wastewater discharge) to receiving waters. Within the POTW source category, wastewater treatment units are the most likely source for HAP emissions, but wastewater collection systems, including sewers and other transport systems, may also have significant emissions in cases where the systems transport industrial wastewater. In addition to the wastewater treatment processes at a POTW, other sources of HAP emissions, such as sewage sludge incinerators, may be collocated at the same site. Sewage sludge incineration is regulated under section 129 of the CAA and is not a part of the POTW source category regulated under the POTW NESHAP as discussed in this preamble. However, HAP emissions from any collocated sources must be included when determining whether a source is a major source of HAP.

4. Regulation of HAP Emissions in the 2002 POTW NESHAP

The POTW NESHAP specifies requirements for both subcategories. Under the POTW NESHAP, an existing, industrial (Group 1) POTW must meet the requirements of the industrial source's NESHAP. For example, a POTW that accepts and treats wastewater for a pulp and paper facility in order to meet the wastewater requirements in 40 CFR part 63, subpart S is subject to the specific requirements found in subpart S, instead of requirements found in 40 CFR part 63, subpart VVV. A new or reconstructed, industrial (Group 1) POTW must meet the requirements of the industrial source's NESHAP or the requirements for new or reconstructed, non-industrial (Group 2) POTW, whichever is more stringent.

There are no control requirements in the 2002 NESHAP for existing, non-industrial (Group 2) POTW. However, new or reconstructed, non-industrial (Group 2) POTW must equip each treatment unit up to, but not including, the secondary influent pumping station, with a cover. The affected emission points at new or reconstructed non-industrial (Group 2) POTW include, but are not limited to, influent waste stream conveyance channels, bar screens, grit chambers, grinders, pump stations, aerated feeder channels, primary clarifiers, primary effluent channels, and primary screening stations. In addition, all covered units, except the primary clarifiers, must have the air in the headspace ducted to a control device in accordance with 40 CFR 63.693, the standards for closed-vent systems and control devices found in subpart DD of this part. As an alternative to these requirements, a new or reconstructed, non-industrial (Group 2) POTW can demonstrate, for all units up to the secondary influent pumping station or the secondary treatment units, that the HAP fraction emitted does not exceed 0.014. This is demonstrated by dividing the sum of all HAP emissions

from the primary treatment units by the sum of all HAP mass loadings (*i.e.,* the concentration of all HAP in the influent wastewater) on an annual rolling average. The POTW is allowed to use any combination of pretreatment, wastewater treatment plant modifications, and control devices to achieve this performance standard.

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

In October 2015, the EPA issued an information collection request (ICR), pursuant to CAA section 114, to nine POTW (covering a total of 18 facilities) that were known to, or thought to potentially, own and operate a POTW subject to the POTW NESHAP. EPA requested information on the treatment units that are subject to requirements in the POTW NESHAP (primary treatment units), as well as information on pretreatment programs, collection sewers, and secondary treatment units. EPA also requested information on control devices and location coordinates (latitude and longitude) of the individual treatment units (if fugitive sources) and emission points (if point sources). The ICR requested information on any HAP-containing chemicals used as part of the wastewater treatment process, point and fugitive HAP emissions, practices used to control HAP emissions, and other aspects of facility operations. The respondents to the ICR provided information on a total of five facilities subject to the POTW NESHAP and 12 synthetic area [3] or area source facilities not subject to the POTW NESHAP. Only the POTW subject to the NESHAP were included in the risk modeling analysis. One facility did not provide a response and it is unknown if this POTW is subject to the POTW NESHAP. We received emissions data directly from each POTW subject to the POTW NESHAP that responded to the survey in the form of ToxChem+ or WATER9 modeling results. Following the initial response, one POTW that was previously thought to be subject to the POTW NESHAP submitted correspondence from their state, which defines the POTW as an area source of HAP emissions, therefore, not subject to the POTW NESHAP.[4] Thus, we identified a total of four POTW subject to the POTW NESHAP through the 2015 ICR.

D. What other relevant background information and data are available?

The 2011 National Emissions Inventory (NEI version 2) provided supplemental information for this RTR. 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. The NEI includes information necessary for conducting risk modeling, including annual HAP emissions estimates from individual emission points at facilities and the related emissions release parameters.

For each emission record needed for the model input file for the risk assessment (hereafter referred to as the ''RTR emissions dataset'') that was not available from the 2015 ICR responses, the EPA used available data in the 2011 NEI as the first alternative.[5] The 2011 NEI was used to identify an additional two POTW that are subject to the POTW NESHAP that had not received the ICR. For the six sources found subject to the POTW NESHAP (the four POTW identified in the ICR responses and the two POTW identified from the NEI), the 2011 NEI provided emissions estimates for co-located emission points that are not part of the POTW source category. These data include emissions from boilers, engines, and sewage sludge incinerators that are located at the POTW, but are not in the POTW source category. These data were incorporated into the RTR emissions dataset to determine the whole facility risk.

The EPA's Enforcement Compliance History Online (ECHO) database was also used as a tool to identify which POTW were potentially subject to the POTW NESHAP and provided a list of sources to consider for the 2015 ICR. ECHO provides integrated compliance and enforcement information for approximately 800,000 regulated facilities nationwide. Using the search feature in ECHO, the EPA identified twenty POTW that could potentially be subject to the POTW NESHAP. The EPA then searched state Web sites for operating permits for these 20 POTW to determine whether the permits stated the POTW was subject to the rule. The four POTW identified as subject to the POTW NESHAP through the ICR were identified in the list of potential sources found in the ECHO database and subsequent permit search.

The EPA searched for Reasonably Available Control Technology (RACT), Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) determinations in the RACT/BACT/LAER Clearinghouse. This is a database that contains case-specific information of air pollution technologies that have been required to reduce the emissions of air pollutants from stationary sources. Under the EPA's New Source Review (NSR) program, if a facility is planning new construction or a modification that will increase the air emissions by a large amount, an NSR permit must be obtained. This central database promotes the sharing of information among permitting agencies and aids in case-by-case determinations for NSR permits. We examined information contained in the RACT/BACT/LAER Clearinghouse to determine what technologies are currently used at POTW to reduce air emissions.

III. Analytical Procedures

In this section, we describe the analyses performed to support the proposed decisions for the RTR and other issues addressed in this proposal.

A. How did we estimate post-MACT risks posed by the source category?

The EPA conducted a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause non-cancer health effects, and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause non-cancer health effects. The assessment also provides estimates of the distribution of cancer risks within the exposed populations, cancer incidence, and an evaluation of the potential for adverse environmental effects. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Publicly Owned Treatment Works Source Category in Support of the December 2016 Risk and Technology Review Proposed Rule (hereafter ''Residual Risk Report'').* The

[3] A synthetic area facility installs controls in order to reduce HAP emissions below major source thresholds prior to the initial compliance date of the NESHAP.

[4] See *Letter from State of Missouri regarding Bissell Point,* 2016. While the agency no longer considers this POTW to be a major source or subject to the POTW NESHAP, the POTW is still included in discussions in supporting materials and risk modeling.

[5] *See Inputs to the Publicly Owned Treatment Works March 2016 Residual Risk Modeling,* June 2016, located in docket number EPA–HQ–OAR–2016–0490.

methods used to assess risks (as described in the seven primary steps below) are consistent with the methods that were 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.[6] The methods used here are also consistent with the key recommendations contained in that report.

1. How did we estimate actual emissions and identify the emissions release characteristics?

Data for seven POTW were used to create the RTR emissions dataset, as described in section II.C of this preamble. As stated in section II.C of this preamble, we evaluated the risk associated with emissions from seven POTW, even though one POTW was later determined to be an area source of HAP emissions. The emissions sources included in the RTR emissions dataset include the following types of emission sources currently regulated by the POTW NESHAP: Primary treatment units including, lift stations, bar screens, grit chambers, grinders, Parshall flumes, denitrification, primary clarifiers, primary settling basins, and primary effluent channels. The RTR emissions dataset also includes the following types of emission sources not currently regulated by the POTW NESHAP: Secondary treatment units, including secondary clarifiers, aeration tanks, trickling filters, UNOX systems, and open lagoons; tertiary treatment units, including chlorine sumps, splitter boxes, and chlorine contact tanks; and gravity thickeners for sludge handling. For both emissions sources that are and those that are not currently regulated by the POTW NESHAP, the dataset includes both fugitive emissions and stack emissions. This RTR emissions dataset is based primarily on data gathered through the 2015 ICR and supplemented with data from 2011 NEI, 2011 NATA, and ECHO, as described in sections II.C and II.D of this preamble. These data sources provided all of the emissions data in the RTR emissions dataset and nearly all of the facility-specific data needed to conduct the risk modeling analysis. However, there were limited instances where default values were used to fill gaps in the facility-specific data used in the risk modeling analysis. For example, default values were used for stack and fugitive release parameters. Use of defaults are discussed in detail in the memorandum, *Inputs to the Publicly Owned Treatment Works March 2016 Residual Risk Modeling,* June 2016 (Modeling Inputs Memo), available in the docket for this action.

The RTR emissions dataset was refined following an extensive quality assurance check of source locations, emission release characteristics, and annual emission estimates. We checked the coordinates of each emission source in the dataset using ArcGIS to ensure the emission point locations were correct. For further information on the EPA's quality assurance review, see the Modeling Inputs Memo available in the docket for this action.

A list of the six POTW and additional information used to develop the RTR emissions dataset are available in the POTW RTR database itself, and additional documentation on the development of this database is provided in the Modeling Inputs Memo, both of which are available in the docket for this action.

2. How did we estimate MACT-allowable emissions?

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during the specified annual time period. In some cases, these ''actual'' emission levels are lower than the emission levels required to comply with the current MACT standards. The emissions level allowed to be emitted by the MACT standards is referred to as the ''MACT-allowable'' emissions level. We discussed the use of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed and final Hazardous Organic NESHAP RTRs (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, we noted that assessing the risks at the MACT-allowable level is inherently reasonable since these risks reflect the maximum level facilities could emit and still comply with national emission standards. 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 approach. (54 FR 38044, September 14, 1989.)

We used the RTR emissions dataset to estimate MACT-allowable emissions levels. POTW were asked to provide their design capacity and their average treatment capacity as part of the 2015 ICR. In discussions with the POTW that responded, EPA noted that most POTW operate below their design capacity. To be conservative, the EPA estimated that the reported emissions were for operations at half capacity. Therefore, the EPA chose to use a single multiplier of 2.0 to scale the actual annual emissions to allowable annual emissions. The docket for this rulemaking contains information on the development of estimated MACT-allowable emissions in the Modeling Inputs Memo.

3. How did we conduct dispersion modeling, determine inhalation exposures, and estimate individual and population inhalation risks?

Both long-term and short-term inhalation exposure concentrations and health risks from the source category addressed in this proposal were estimated using the Human Exposure Model (Community and Sector HEM–3 version 1.1.0). The HEM–3 performs three primary risk assessment activities: (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 kilometers (km) of the modeled sources,[7] and (3) estimating individual and population-level inhalation risks using the exposure estimates and quantitative dose-response information.

The air dispersion model used by the HEM–3 model (AERMOD) is one of the EPA's preferred models for assessing pollutant concentrations from industrial facilities.[8] 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 (2011) of hourly surface and upper air observations for more than 800 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block[9] internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, 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

[6] U.S. EPA SAB. *Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies—MACT I Petroleum Refining Sources and Portland Cement Manufacturing,* May 2010.

[7] This metric comes from the Benzene NESHAP. *See* 54 FR 38046.

[8] 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).

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

health benchmarks are the latest values recommended by the EPA for HAP and other toxic air pollutants. These values are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants* 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 concentrations of each 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 the 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). The URE 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). For carcinogenic pollutants without 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 the 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.

The EPA estimated incremental individual lifetime cancer risks associated with emissions from the facilities in the source category 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 carcinogenic potential) [10] emitted by the modeled sources. Cancer incidence and the distribution of individual cancer risks for the population within 50 km of the sources were also estimated for the source category as part of this assessment by summing individual risks. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044, September 14, 1989) and the limitations of Gaussian dispersion models, including AERMOD.

To assess the risk of non-cancer 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 value, which is a value selected from one of several sources. First, the chronic reference level can be the EPA reference concentration (RfC) (*https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary*), 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.'' Alternatively, in cases where an RfC from the EPA's IRIS database is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic reference level can be a value from the following prioritized sources: (1) The Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (*http://www.atsdr.cdc.gov/mrls/index.asp*), which is defined as ''an estimate of daily human exposure to a hazardous substance that is likely to be without an appreciable risk of adverse non-cancer health effects (other than cancer) over a specified duration of exposure''; (2) the CalEPA Chronic Reference Exposure Level (REL) (*http://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0*), which is defined as ''the concentration level (that is expressed in units of micrograms per cubic meter ($\mu g/m^3$) for inhalation exposure and in a dose expressed in units of milligram per kilogram-day (mg/kg-day) for oral exposures), 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.

As mentioned above, in order to characterize non-cancer chronic effects, and in response to key recommendations from the SAB, the EPA selects dose-response values that reflect the best available science for all HAP included in RTR risk assessments.[11] More specifically, for a given HAP, the EPA examines the availability of inhalation reference values from the sources included in our tiered approach (*e.g.,* IRIS first, ATSDR second, CalEPA third) and determines which inhalation reference value represents the best available science. Thus, as new inhalation reference values become available, the EPA will typically evaluate them and determine whether they should be given preference over those currently being used in RTR risk assessments.

The EPA also evaluated screening estimates of acute exposures and risks for each of the HAP (for which appropriate acute dose-response values are available) at the point of highest potential off-site exposure for each facility. To do this, the EPA estimated the risks when both the peak hourly emissions rate and worst-case dispersion conditions occur. We also assume that a person is located at the point of highest impact during that same time. In accordance with our mandate in section 112 of the CAA, we use the point of highest off-site exposure to assess the potential risk to the maximally exposed individual. The acute HQ is the estimated acute exposure divided by the acute dose-response value. In each case, the EPA calculated acute HQ values using best available, short-term dose-response 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

[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) titled *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] 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.*

assumptions for emissions rates, meteorology, and exposure location.

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://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary*) is defined as ''the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.'' *Id.* at page 2. Acute REL values are based on the most sensitive, relevant, adverse health effect reported in the peer-reviewed medical and toxicological literature. Acute REL values are designed to protect the most sensitive individuals in the population through the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact.

AEGL values were derived in response to recommendations from the National Research Council (NRC). The National Advisory Committee (NAC) for the Development of Acute Exposure Guideline Levels for Hazardous Substances, usually referred to as the AEGL Committee or the NAC/AEGL committee, developed AEGL values for at least 273 of the 329 chemicals on the AEGL priority chemical list. The last meeting of the NAC/AEGL Committee was in April 2010, and its charter expired in October 2011. The NAC/AEGL Committee ended in October 2011, but the AEGL program continues to operate at the EPA and works with the National Academies to publish final AEGLs, (*https://www.epa.gov/aegl*).

As described in *Standing Operating Procedures (SOP) of the National Advisory Committee on Acute Exposure Guideline Levels for Hazardous Chemicals* (*https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf*),[12] ''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.'' *Id.* at 2. 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 eight hours.'' *Id.* at 2.

The document lays out the purpose and objectives of AEGL by stating 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.'' *Id.* at 21. In detailing the intended application of AEGL values, the document states 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.'' *Id.* at 31.

The AEGL–1 value is then specifically defined as ''the airborne concentration (expressed as ppm (parts per million) or mg/m^3 (milligrams per cubic meter)) 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.'' *Id.* at 3. The document also notes 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.'' *Id.* Similarly, the document defines AEGL–2 values as ''the airborne concentration (expressed as parts per million or milligrams per cubic meter) 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.'' *Id.*

ERPG values are derived for use in emergency response, as described in the American Industrial Hygiene Association's Emergency Response Planning (ERP) Committee document titled, *ERPGS Procedures and Responsibilities* (*https://www.aiha.org/get-involved/AIHAGuidelineFoundation/EmergencyResponsePlanningGuidelines/Documents/ERPG%20Committee%20Standard%20Operating%20Procedures%20%20-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf*), which states that, ''Emergency Response Planning Guidelines were developed for emergency planning and are intended as health based guideline concentrations for single exposures to chemicals.'' [13] *Id.* at 1. 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.'' *Id.* at 2. 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 one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.'' *Id.* at 1.

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, we compare higher severity level AEGL–2 or ERPG–2 values 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 the same as the corresponding ERPG–1 values, and AEGL–2 values are often equal 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

[12] National Academy of Sciences (NAS), 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals,* page 2.

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

emissions data, generally we first develop estimates of maximum hourly emissions rates by multiplying the average actual annual hourly emissions rates by a default factor to cover routinely variable emissions. We choose the factor to use partially based on process knowledge and engineering judgment. The factor chosen also reflects a Texas study of short-term emissions variability, which showed that most peak emission events in a heavily-industrialized four-county area (Harris, Galveston, Chambers, and Brazoria Counties, Texas) were less than twice the annual average hourly emissions rate. The highest peak emissions event was 74 times the annual average hourly emissions rate, and the 99th percentile ratio of peak hourly emissions rate to the annual average hourly emissions rate was 9.[14] 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 this source category, the default factor of 10 was used.

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 (even under the conservative assumptions of the screening analysis), acute impacts were deemed negligible and no further analysis was performed for these HAP. In 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. 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 emissions 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. Recognizing that this level of data is rarely available, we instead rely on 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,[15] we generally examine a wider range of available acute health metrics (*e.g.,* RELs, AEGLs) 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 [16] for HAP have been developed, we consider additional acute values (*i.e.,* occupational and international values) to provide a more complete risk characterization.

4. How did we conduct the multipathway exposure and risk screening?

The EPA conducted a screening analysis examining the potential for significant human health risks due to exposures via routes other than inhalation (*i.e.,* ingestion). We first determined whether any sources in the source category emitted any HAP known to be persistent and bioaccumulative in the environment (PB–HAP). The PB–HAP compounds or compound classes are identified for the screening from the EPA's Air Toxics Risk Assessment Library (available at *http://www2.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library*).

For the POTW source category, we identified emissions of a single polycyclic organic matter (POM) species, specifically 2-methylnaphthalene. Because one or more of these PB–HAP are emitted by at least one facility in the POTW source category, we proceeded to the next step of the evaluation. In this step, we determined whether the facility-specific emissions rates of the emitted PB–HAP were large enough to create the potential for significant non-inhalation human health risks under reasonable worst-case conditions. To facilitate this step, we developed emissions rate screening levels for several PB–HAP using a hypothetical upper-end 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 PB–HAP with emissions rate screening levels are: Lead, cadmium, chlorinated dibenzodioxins and furans, mercury compounds, and POM. We conducted a sensitivity analysis on the screening scenario to ensure that its key design parameters would represent the upper end of the range of possible values, such that it would represent a conservative, but not impossible scenario. The facility-specific emissions rates of these PB–HAP were compared to the emission rate screening levels for these PB–HAP to assess the potential for significant human health risks via non-inhalation pathways. We call this application of the TRIM.FaTE model the Tier 1 TRIM-screen or Tier 1 screen.

For the purpose of developing emissions rates for our Tier 1 TRIM-screen, we derived emission levels for these PB–HAP (other than lead compounds) at which the maximum excess lifetime cancer risk would be 1-in-1 million (*i.e.,* for polychlorinated dibenzodioxins and furans and POM) or, for HAP that cause non-cancer health effects (*i.e.,* cadmium compounds and mercury compounds), the maximum HQ would be 1. If the emissions rate of any PB–HAP included in the Tier 1 screen exceeds the Tier 1 screening emissions rate for any facility, we conduct a second screen, which we call the Tier 2 TRIM-screen or Tier 2 screen.

In the Tier 2 screen, the location of each facility that exceeded the Tier 1 emission rate is used to refine the assumptions associated with the environmental scenario while maintaining the exposure scenario assumptions. A key assumption that is part of the Tier 1 screen is that a lake is located near the facility; we confirm the existence of lakes near the facility as part of the Tier 2 screen. We then adjust the risk-based Tier 1 screening level for each PB–HAP for each facility based on an understanding of how exposure concentrations estimated for the screening scenario change with meteorology and environmental assumptions. PB–HAP emissions that do not exceed these new Tier 2 screening levels are considered to pose no unacceptable risks. If the PB–HAP emissions for a facility exceed the Tier 2 screening emissions rate and data are available, we may decide to conduct a more refined Tier 3 multipathway

[14] Allen, et al., 2004. Variable Industrial VOC Emissions and their impact on ozone formation in the Houston Galveston Area. Texas Environmental Research Consortium. *https://www.researchgate.net/publication/237593060_Variable_Industrial_VOC_Emissions* and_their_Impact_on_Ozone_Formation_in_the_Houston_Galveston_Area.

[15] 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.*

[16] U.S. EPA. 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, 2009, and available online at *http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=211003.*

assessment. There are several analyses that can be included in a Tier 3 screen depending upon the extent of refinement warranted, including validating that the lake is fishable and considering plume-rise to estimate emissions lost above the mixing layer. If the Tier 3 screen is exceeded, the EPA may further refine the assessment. Notably, for the POTW source category, emissions of POM did not exceed the Tier 1 screening level. Therefore, the Tier 2 and 3 screening scenarios were not necessary.

For further information on the multipathway analysis approach, see the *Residual Risk Report,* which is available in the docket for this action.

5. How did we conduct the environmental risk screening assessment?

a. Adverse Environmental Effect

The EPA conducts a screening assessment to examine the potential for adverse environmental effects as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines ''adverse environmental effect'' as ''any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.''

b. Environmental HAP

The EPA focuses on seven HAP, which we refer to as ''environmental HAP,'' in its screening analysis: Five PB–HAP and two acid gases. The five PB–HAP are cadmium, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. The two acid gases are hydrogen chloride (HCl) and hydrogen fluoride (HF). The rationale for including these seven HAP in the environmental risk screening analysis is presented below.

HAP that persist and bioaccumulate are of particular environmental concern because they accumulate in the soil, sediment, and water. The PB–HAP are taken up, through sediment, soil, water, and/or ingestion of other organisms, by plants or animals (*e.g.,* small fish) at the bottom of the food chain. As larger and larger predators consume these organisms, concentrations of the PB–HAP in the animal tissues increases as does the potential for adverse effects. The five PB–HAP we evaluate as part of our screening analysis account for 99.8 percent of all PB–HAP emissions nationally from stationary sources (on a mass basis from the 2005 EPA NEI).

In addition to accounting for almost all of the mass of PB–HAP emitted, we note that the TRIM.FaTE model that we use to evaluate multipathway risk allows us to estimate concentrations of cadmium compounds, dioxins/furans, POM, and mercury in soil, sediment, and water. For lead compounds, we currently do not have the ability to calculate these concentrations using the TRIM.FaTE model. Therefore, to evaluate the potential for adverse environmental effects from lead compounds, we compare the estimated HEM-modeled exposures from the source category emissions of lead with the level of the secondary NAAQS for lead.[17] We consider values below the level of the secondary lead NAAQS to be unlikely to cause adverse environmental effects.

Due to their well-documented potential to cause direct damage to terrestrial plants, we include two acid gases, HCl, and HF in the environmental screening analysis. According to the 2005 NEI, HCl and HF account for about 99 percent (on a mass basis) of the total acid gas HAP emitted by stationary sources in the U.S. In addition to the potential to cause direct damage to plants, high concentrations of HF in the air have been linked to fluorosis in livestock. Air concentrations of these HAP are already calculated as part of the human multipathway exposure and risk screening analysis using the HEM3–AERMOD air dispersion model, and we are able to use the air dispersion modeling results to estimate the potential for an adverse environmental effect.

The EPA acknowledges that other HAP beyond the seven HAP discussed above may have the potential to cause adverse environmental effects. Therefore, the EPA may include other relevant HAP in its environmental risk screening in the future, as modeling science and resources allow. The EPA invites comment on the extent to which other HAP emitted by the source category may cause adverse environmental effects. Such information should include references to peer-reviewed ecological effects benchmarks that are of sufficient quality for making regulatory decisions, as well as information on the presence of organisms located near facilities within the source category that such benchmarks indicate could be adversely affected.

[17] The Secondary Lead NAAQS is a reasonable measure of determining whether there is an adverse environmental effect since it was established considering ''effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.''

c. Ecological Assessment Endpoints and Benchmarks for PB–HAP

An important consideration in the development of the EPA's screening methodology is the selection of ecological assessment endpoints and benchmarks. Ecological assessment endpoints are defined by the ecological entity (*e.g.,* aquatic communities, including fish and plankton) and its attributes (*e.g.,* frequency of mortality). Ecological assessment endpoints can be established for organisms, populations, communities or assemblages, and ecosystems.

For PB–HAP (other than lead compounds), we evaluated the following community-level ecological assessment endpoints to screen for organisms directly exposed to HAP in soils, sediment, and water:

- Local terrestrial communities (*i.e.,* soil invertebrates, plants) and populations of small birds and mammals that consume soil invertebrates exposed to PB–HAP in the surface soil;
- Local benthic (*i.e.,* bottom sediment dwelling insects, amphipods, isopods, and crayfish) communities exposed to PB–HAP in sediment in nearby water bodies; and
- Local aquatic (water-column) communities (including fish and plankton) exposed to PB–HAP in nearby surface waters.

For PB–HAP (other than lead compounds), we also evaluated the following population-level ecological assessment endpoint to screen for indirect HAP exposures of top consumers via the bioaccumulation of HAP in food chains:

- Piscivorous (*i.e.,* fish-eating) wildlife consuming PB–HAP-contaminated fish from nearby water bodies.

For cadmium compounds, dioxins/furans, POM, and mercury, we identified the available ecological benchmarks for each assessment endpoint. An ecological benchmark represents a concentration of HAP (*e.g.,* 0.77 ug of HAP per liter of water) that has been linked to a particular environmental effect level through scientific study. For PB–HAP we identified, where possible, ecological benchmarks at the following effect levels:

- *Probable effect levels (PEL):* Level above which adverse effects are expected to occur frequently;

• *Lowest-observed-adverse-effect level (LOAEL):* The lowest exposure level tested at which there are biologically significant increases in frequency or severity of adverse effects; and

• *No-observed-adverse-effect levels (NOAEL):* The highest exposure level tested at which there are no biologically significant increases in the frequency or severity of adverse effect.

We established a hierarchy of preferred benchmark sources to allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. In general, the EPA sources that are used at a programmatic level (*e.g.,* Office of Water, Superfund Program) were used in the analysis, if available. If not, the EPA benchmarks used in regional programs (*e.g.,* Superfund) were used. If benchmarks were not available at a programmatic or regional level, we used benchmarks developed by other federal agencies (*e.g.,* National Oceanic and Atmospheric Administration (NOAA)) or state agencies.

Benchmarks for all effect levels are not available for all PB–HAP and assessment endpoints. In cases where multiple effect levels were available for a particular PB–HAP and assessment endpoint, we use all of the available effect levels to help us to determine whether ecological risks exist and, if so, whether the risks could be considered significant and widespread.

d. Ecological Assessment Endpoints and Benchmarks for Acid Gases

The environmental screening analysis also evaluated potential damage and reduced productivity of plants due to direct exposure to acid gases in the air. For acid gases, we evaluated the following ecological assessment endpoint:

• Local terrestrial plant communities with foliage exposed to acidic gaseous HAP in the air.

The selection of ecological benchmarks for the effects of acid gases on plants followed the same approach as for PB–HAP (*i.e.,* we examine all of the available chronic benchmarks). For HCl, the EPA identified chronic benchmark concentrations. We note that the benchmark for chronic HCl exposure to plants is greater than the reference concentration for chronic inhalation exposure for human health. This means that where the EPA includes regulatory requirements to prevent an exceedance of the reference concentration for human health, additional analyses for adverse environmental effects of HCl would not be necessary.

For HF, the EPA identified chronic benchmark concentrations for plants and evaluated chronic exposures to plants in the screening analysis. High concentrations of HF in the air have also been linked to fluorosis in livestock. However, the HF concentrations at which fluorosis in livestock occur are higher than those at which plant damage begins. Therefore, the benchmarks for plants are protective of both plants and livestock.

e. Screening Methodology

For the environmental risk screening analysis, the EPA first determined whether any facilities in the POTW source category emitted any of the seven environmental HAP. For the POTW source category, we identified emissions of a single POM species, specifically 2-methylnaphthalene.

Because one or more of the seven environmental HAP evaluated are emitted by at least one facility in the source category, we proceeded to the second step of the evaluation.

f. PB–HAP Methodology

For cadmium, mercury, POM, and dioxins/furans, the environmental screening analysis consists of two tiers, while lead compounds are analyzed differently as discussed earlier. In the first tier, we determined whether the maximum facility-specific emission rates of each of the emitted environmental HAP were large enough to create the potential for adverse environmental effects under reasonable worst-case environmental conditions. These are the same environmental conditions used in the human multipathway exposure and risk screening analysis.

To facilitate this step, TRIM.FaTE was run for each PB–HAP under hypothetical environmental conditions designed to provide conservatively high HAP concentrations. The model was set to maximize runoff from terrestrial parcels into the modeled lake, which in turn, maximized the chemical concentrations in the water, the sediments, and the fish. The resulting media concentrations were then used to back-calculate a screening level emission rate that corresponded to the relevant exposure benchmark concentration value for each assessment endpoint. To assess emissions from a facility, the reported emission rate for each PB–HAP was compared to the screening level emission rate for that PB–HAP for each assessment endpoint. If emissions from a facility do not exceed the Tier 1 screening level, the facility ''passes'' the screen, and, therefore, is not evaluated further under the screening approach. If emissions from a facility exceed the Tier 1 screening level, we evaluate the facility further in Tier 2.

In Tier 2 of the environmental screening analysis, the emission rate screening levels are adjusted to account for local meteorology and the actual location of lakes in the vicinity of facilities that did not pass the Tier 1 screen. The modeling domain for each facility in the Tier 2 analysis consists of 8 octants. Each octant contains 5 modeled soil concentrations at various distances from the facility (5 soil concentrations × 8 octants = total of 40 soil concentrations per facility) and one lake with modeled concentrations for water, sediment, and fish tissue. In the Tier 2 environmental risk screening analysis, the 40 soil concentration points are averaged to obtain an average soil concentration for each facility for each PB–HAP. For the water, sediment, and fish tissue concentrations, the highest value for each facility for each pollutant is used. If emission concentrations from a facility do not exceed the Tier 2 screening level, the facility passes the screen, and typically is not evaluated further. If emissions from a facility exceed the Tier 2 screening level, the facility does not pass the screen and, therefore, may have the potential to cause adverse environmental effects. Such facilities are evaluated further to investigate factors such as the magnitude and characteristics of the area of exceedance. Notably, for the POTW source category, emissions of POM did not exceed the Tier 1 ecological screening level. Therefore, the Tier 2 screen was not necessary.

For further information on the environmental screening analysis approach, see the *Residual Risk Report,* which is available in the docket for this action.

6. How did we conduct facility-wide assessments?

To put the source category risks in context, we typically examine 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, we examine the HAP emissions not only from the source category emission points of interest, but also from all other emission sources at the facility for which we have data. Using the most current available NEI data at the time of the analysis, the EPA developed ''facility-wide'' emissions estimates. For this category, the latest available version of the NEI was the 2011 NEI Version 2. It is important to note that the NEI

facility-wide inventory may not always reflect the level of detail or be representative of the same temporal period that is found in the source category specific inventory. Further information on the NEI, which is developed from state/local/tribal submitted data, can be found on the EPA's Web site at: *https://www.epa.gov/air-emissions-inventories/national-emissions-inventory*.

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 the source category 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 *Residual Risk Report,* available through the docket for this action, provides the methodology and results of the facility-wide analyses, including all facility-wide risks and the percentage of source category contribution to facility-wide risks.

7. How did we consider uncertainties in risk assessment?

In the Benzene NESHAP, we concluded that risk estimation uncertainty should be considered in our decision-making under the ample margin of safety framework. Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health protective and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. A more thorough discussion of these uncertainties is included in the *Residual Risk Report,* which is available in the docket for this action.

a. Uncertainties in the RTR Emissions Dataset

Although the development of the RTR emissions dataset 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 datasets are accurate, errors in emission estimates, and other factors. The emission estimates considered in this analysis generally are annual totals for certain years, and they do not reflect short-term fluctuations during the course of a year or variations from year to year. The estimates of peak hourly emission rates for the acute effects screening assessment were based on an emission adjustment factor applied to the average annual hourly emission rates, which are intended to account for emission fluctuations due to normal facility operations.

b. Uncertainties in Dispersion Modeling

We recognize there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, we select some model options that have the potential to overestimate ambient air concentrations (*e.g.,* not including plume depletion or pollutant transformation). We select other model options that have the potential to underestimate ambient impacts (*e.g.,* not including building downwash). Other options that we select have the potential to either under- or overestimate ambient levels (*e.g.,* meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated by dispersion models, the approach we apply in the RTR assessments should yield unbiased estimates of ambient HAP concentrations.

c. Uncertainties in Inhalation Exposure

The EPA did not include the effects of human mobility on exposures in the assessment. Specifically, short-term mobility and long-term mobility between census blocks in the modeling domain were not considered.[18] The approach of not considering short or long-term population mobility does not bias the estimate of the theoretical MIR (by definition), 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 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-10 thousand or 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 is an unbiased estimate of average risk and incidence. We reduce this uncertainty by analyzing large census blocks near facilities using aerial imagery and adjusting the location of the block centroid to better represent the population in the block, as well as adding additional receptor locations where the block population is not well represented by a single location.

The assessment evaluates the cancer inhalation risks associated with pollutant exposures over a 70-year period, which is the assumed lifetime of an individual. In reality, both the length of time that modeled emission 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 domestic facilities) will influence the future risks posed by a given source or 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 the unlikely scenario where a facility maintains, or even increases, its emissions levels over a period of more than 70 years, residents live beyond 70 years at the same location, and the residents spend most of their days at that location, then the cancer inhalation risks could potentially be underestimated. However, annual cancer incidence estimates from exposures to emissions from these sources would not be affected by the length of time an emissions source operates.

The exposure estimates used in these analyses assume chronic exposures to ambient (outdoor) levels of pollutants. Because most people spend the majority

[18] Short-term mobility is movement from one micro-environment 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.

of their time indoors, actual exposures may not be as high, depending on the characteristics of the pollutants modeled. For many of the HAP, indoor levels are roughly equivalent to ambient levels, but for very reactive pollutants or larger particles, indoor levels are typically lower. This factor has the potential to result in an overestimate of 25 to 30 percent of exposures.[19]

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that the EPA conducts as part of the risk review under section 112 of the CAA that should be highlighted. 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 the presence of humans at the location of the maximum concentration. In the acute screening assessment that we conduct under the RTR program, we assume that peak emissions from the source category and worst-case meteorological conditions co-occur, thus, resulting in maximum ambient concentrations. These two events are unlikely to occur at the same time, making these assumptions conservative. We then include the additional assumption that a person is located at this point during this same time period. For this source category, 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 when peak emissions and worst-case meteorological conditions occur simultaneously.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and non-cancer 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's *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 variability in dose-response relationships is given in the *Residual Risk Report,* 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).[20] In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[21] 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 non-cancer 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 a continuous inhalation exposure (RfC) or a daily oral exposure (RfD) 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 and 1994) which considers uncertainty, variability, and gaps in the available data. 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,[22] *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 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. The 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

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

[20] IRIS glossary (*https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary*).

[21] 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.

[22] 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, *An Examination of EPA Risk Assessment Principles and Practices,* EPA/100/B–04/001, 2004, available at *https://nctc.fws.gov/resources/course-resources/pesticides/Risk%20Assessment/Risk%20Assessment%20Principles%20and%20Practices.pdf.*

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 appropriate human health effect dose-response assessment values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by this source category are lacking dose-response assessments. Accordingly, these pollutants cannot be included in the quantitative risk assessment, which could result in quantitative estimates understating HAP risk. To help to alleviate this potential underestimate, where we conclude similarity with a HAP for which a dose-response assessment value is available, we use that value as a surrogate for the assessment of the HAP for which no value is available. To the extent use of surrogates indicates appreciable risk, we may identify a need to increase priority for new IRIS assessment of that substance. We additionally note that, generally speaking, HAP of greatest concern due to environmental exposures and hazard are those for which dose-response assessments have been performed, reducing the likelihood of understating risk. Further, HAP not included in the quantitative assessment are assessed qualitatively and considered in the risk characterization that informs the risk management decisions, including with regard to consideration of HAP reductions achieved by various control options.

For a group of compounds that are unspeciated (*e.g.,* glycol ethers), we conservatively use the most protective reference value of an individual compound in that group to estimate risk. Similarly, for an individual compound in a group (*e.g.,* ethylene glycol diethyl ether) that does not have a specified reference value, we also apply the most protective reference value from the other compounds in the group to estimate risk.

e. Uncertainties in the Multipathway Assessment

For each source category, we generally rely on site-specific levels of PB–HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary. This determination is based on the results of a three-tiered screening analysis that relies on the outputs from models that estimate environmental pollutant concentrations and human exposures for four PB–HAP. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.[23]

Model uncertainty concerns whether the selected models are appropriate for the assessment being conducted and whether they adequately represent the actual processes that might occur for that situation. An example of model uncertainty is the question of whether the model adequately describes the movement of a pollutant through the soil. This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screen are appropriate and state-of-the-art for the multipathway risk assessments conducted in support of RTR.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the assessment at hand. For Tier 1 of the multipathway screen, we configured the models to avoid underestimating exposure and risk. This was accomplished by selecting upper-end values from nationally-representative datasets for the more influential parameters in the environmental model, including selection and spatial configuration of the area of interest, lake location and size, meteorology, surface water and soil characteristics, and structure of the aquatic food web. We also assume an ingestion exposure scenario and values for human exposure factors that represent reasonable maximum exposures.

In Tier 2 of the multipathway assessment, we refine the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values, and we identify the actual location of lakes near the facility rather than the default lake location that we apply in Tier 1. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, we decrease the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screen. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for Tier 1 and Tier 2.

For both Tiers 1 and 2 of the multipathway assessment, our approach to addressing model input uncertainty is generally cautious. We choose model inputs from the upper end of the range of possible values for the influential parameters used in the models, and we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying high risks for adverse impacts.

Despite the uncertainties, when individual pollutants or facilities do screen out, we are confident that the potential for adverse multipathway impacts on human health is very low. On the other hand, when individual pollutants or facilities do not screen out, it does not mean that multipathway impacts are significant, only that we cannot rule out that possibility and that a refined multipathway analysis for the site might be necessary to obtain a more accurate risk characterization for the source category.

For further information on uncertainties and the Tier 1 and 2 screening methods, refer to the risk document, Appendix 2, *Technical Support Document for TRIM-Based Multipathway Tiered Screening Methodology for RTR: Summary and Evaluation.*

f. Uncertainties in the Environmental Risk Screening Assessment

For each source category, we generally rely on site-specific levels of environmental HAP emissions to perform an environmental screening assessment. The environmental screening assessment is based on the outputs from models that estimate environmental HAP concentrations. The same models, specifically the

[23] In the context of this discussion, the term ''uncertainty'' as it pertains to exposure and risk encompasses both *variability* in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as *uncertainty* in being able to accurately estimate the true result.

TRIM.FaTE multipathway model and the AERMOD air dispersion model, are used to estimate environmental HAP concentrations for both the human multipathway screening analysis and for the environmental screening analysis. Therefore, both screening assessments have similar modeling uncertainties.

Two important types of uncertainty associated with the use of these models in RTR environmental screening assessments (and inherent to any assessment that relies on environmental modeling) are model uncertainty and input uncertainty.[24]

Model uncertainty concerns whether the selected models are appropriate for the assessment being conducted and whether they adequately represent the movement and accumulation of environmental HAP emissions in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screen are appropriate and state-of-the-art for the environmental risk assessments conducted in support of our RTR analyses.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the assessment at hand. For Tier 1 of the environmental screen for PB–HAP, we configured the models to avoid underestimating exposure and risk to reduce the likelihood that the results indicate the risks are lower than they actually are. This was accomplished by selecting upper-end values from nationally-representative datasets for the more influential parameters in the environmental model, including selection and spatial configuration of the area of interest, the location and size of any bodies of water, meteorology, surface water and soil characteristics, and structure of the aquatic food web. In Tier 1, we used the maximum facility-specific emissions for the PB–HAP (other than lead compounds, which were evaluated by comparison to the secondary lead NAAQS) that were included in the environmental screening assessment and each of the media when comparing to ecological benchmarks. This is consistent with the conservative design of Tier 1 of the screen. In Tier 2 of the environmental screening analysis for PB–HAP, we refine the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values, and we identify the locations of water bodies near the facility location. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, we decrease the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screen. To better represent widespread impacts, the modeled soil concentrations are averaged in Tier 2 to obtain one average soil concentration value for each facility and for each PB–HAP. For PB–HAP concentrations in water, sediment, and fish tissue, the highest value for each facility for each pollutant is used.

For the environmental screening assessment for acid gases, we employ a single-tiered approach. We use the modeled air concentrations and compare those with ecological benchmarks.

For both Tiers 1 and 2 of the environmental screening assessment, our approach to addressing model input uncertainty is generally cautious. We choose model inputs from the upper end of the range of possible values for the influential parameters used in the models, and we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying potential risks for adverse environmental impacts.

Uncertainty also exists in the ecological benchmarks for the environmental risk screening analysis. We established a hierarchy of preferred benchmark sources to allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. In general, EPA benchmarks used at a programmatic level (*e.g.,* Office of Water, Superfund Program) were used if available. If not, we used EPA benchmarks used in regional programs (*e.g.,* Superfund Program). If benchmarks were not available at a programmatic or regional level, we used benchmarks developed by other agencies (*e.g.,* NOAA) or by state agencies.

In all cases (except for lead compounds, which were evaluated through a comparison to the NAAQS), we searched for benchmarks at the following three effect levels, as described in section III.A.5 of this preamble:

1. A no-effect level (*i.e.,* NOAEL).

2. Threshold-effect level (*i.e.,* LOAEL).

3. Probable effect level (*i.e.,* PEL).

For some ecological assessment endpoint/environmental HAP combinations, we could identify benchmarks for all three effect levels, but for most, we could not. In one case, where different agencies derived significantly different numbers to represent a threshold for effect, we included both. In several cases, only a single benchmark was available. In cases where multiple effect levels were available for a particular PB–HAP and assessment endpoint, we used all of the available effect levels to help us to determine whether risk exists and if the risks could be considered significant and widespread.

The EPA evaluates the following seven HAP in the environmental risk screening assessment: Cadmium, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), lead compounds, HCl, and HF, where applicable. These seven HAP represent pollutants that can cause adverse impacts for plants and animals either through direct exposure to HAP in the air or through exposure to HAP that is deposited from the air onto soils and surface waters. These seven HAP also represent those HAP for which we can conduct a meaningful environmental risk screening assessment. For other HAP not included in our screening assessment, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, we may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond the seven HAP that we are evaluating may have the potential to cause adverse environmental effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

Further information on uncertainties and the Tier 1 and 2 environmental screening methods is provided in Appendix 5 of the document, *Technical Support Document for TRIM-Based Multipathway Tiered Screening Methodology for RTR: Summary of Approach and Evaluation.* Also, *see* the *Residual Risk Report,* available in the docket for this action.

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

As discussed in section II.A of this preamble, in evaluating and developing standards under CAA section 112(f)(2), we apply a two-step process to address residual risk. In the first step, the EPA

[24] In the context of this discussion, the term ''uncertainty,'' as it pertains to exposure and risk assessment, encompasses both variability in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as uncertainty in being able to accurately estimate the true result.

determines whether risks are acceptable. This determination ''considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual lifetime [cancer] risk (MIR) [25] of approximately [1-in-10 thousand] [*i.e.,* 100-in-1 million].'' 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions standards necessary to bring risks to an acceptable level without considering costs. In the second step of the process, the EPA considers whether the emissions standards provide an ample margin of safety ''in consideration of all health information, including the number of persons at risk levels higher than approximately 1-in-1 million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision.'' *Id.* The EPA must promulgate emission standards necessary to provide an ample margin of safety. After conducting the ample margin of safety analysis, we consider whether a more stringent standard is necessary to prevent, taking into consideration, costs, energy, safety, and other relevant factors, an adverse environmental effect.

In past residual risk actions, the EPA considered a number of human health risk metrics associated with emissions from the categories under review, including the MIR, the number of persons in various risk ranges, cancer incidence, the maximum non-cancer HI and the maximum acute non-cancer hazard. See, *e.g.,* 72 FR 25138, May 3, 2007; and 71 FR 42724, July 27, 2006. The EPA considered this health information for both actual and allowable emissions. *See, e.g.,* 75 FR 65068, October 21, 2010; 75 FR 80220, December 21, 2010; 76 FR 29032, May 19, 2011. The EPA also discussed risk estimation uncertainties and considered the uncertainties in the determination of acceptable risk and ample margin of safety in these past actions. The EPA considered this same type of information in support of this action.

The Agency is considering these various measures of health information to inform our determinations of risk acceptability and ample margin of safety under CAA section 112(f). 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, September 14, 1989. Similarly, with regard to the ample margin of safety determination, ''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 Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source category. In responding to comment on our policy under the Benzene NESHAP, the EPA explained that:

> ''[t]he 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 non-cancer 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'.''

See 54 FR at 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risks. The Benzene NESHAP explained that ''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 EPA stated in the Benzene NESHAP 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. We also consider the uncertainties associated with the various risk analyses, as discussed earlier in this preamble, in our determinations of acceptability and ample margin of safety.

The EPA notes that it has not considered certain health information to date in making residual risk determinations. At this time, we do not attempt to quantify those HAP risks that may be associated with emissions from other facilities that do not include the source categories in question, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in these categories.

The Agency understands the potential importance of considering an individual's total exposure to HAP in addition to considering exposure to HAP emissions from the source category and facility. We recognize that such consideration may be particularly important when assessing non-cancer risks, where pollutant-specific exposure health reference levels (*e.g.,* RfCs) are based on the assumption that thresholds exist for adverse health effects. For example, the Agency recognizes that, although exposures attributable to emissions from a source category or facility alone may not indicate the potential for increased risk of adverse non-cancer health effects in a population, the exposures resulting from emissions from the facility in combination with emissions from all of the other sources (*e.g.,* other facilities) to which an individual is exposed may be sufficient to result in increased risk of adverse non-cancer health effects. In May 2010, the SAB advised the EPA ''that RTR assessments will be most useful to decision makers and communities if results are presented in the broader context of aggregate and cumulative risks, including background concentrations and contributions from other sources in the area.'' [26]

[25] 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.

[26] The EPA's responses to this and all other key recommendations of the SAB's advisory on RTR risk assessment methodologies (which is available at: *http://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf*) are outlined in a memorandum to this rulemaking docket from David Guinnup titled, *EPA's Actions in Response to the*

Continued

In response to the SAB recommendations, the EPA is incorporating cumulative risk analyses into its RTR risk assessments, including those reflected in this proposal. The Agency is: (1) Conducting facility-wide assessments, which include source category emission points, as well as other emission points within the facilities; (2) considering sources in the same category whose emissions result in exposures to the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzing the ingestion route of exposure. In addition, the RTR risk assessments have always considered aggregate cancer risk from all carcinogens and aggregate non-cancer HI from all non-carcinogens affecting the same target organ system.

Although we are interested in placing source category and facility-wide HAP risks in the context of *total* HAP risks from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Because of the contribution to total HAP risk from emission sources other than those that we have studied in depth during this RTR review, such estimates of total HAP risks would have significantly greater associated uncertainties than the source category or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

C. How did we perform the technology review?

Our technology review focused on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the MACT standards were promulgated. Where we identified such developments, in order to inform our decision of whether it is ''necessary'' to revise the emissions standards, we analyzed the technical feasibility of applying these developments and the estimated costs, energy implications, non-air environmental impacts, as well as considering the emission reductions. We also considered the appropriateness of applying controls to new sources versus retrofitting existing sources.

Based on our analyses of the available data and information, we identified potential developments in practices, processes, and control technologies. For 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 development of the original MACT standards;
- Any improvements in add-on control technology or other equipment (that were identified and considered during development of the original MACT standards) that could result in additional emissions reduction;
- Any work practice or operational procedure that was not identified or considered during development of the original MACT standards;
- Any process change or pollution prevention alternative that could be broadly applied to the industry and that was not identified or considered during development of the original MACT standards; and
- Any significant changes in the cost (including cost effectiveness) of applying controls (including controls the EPA considered during the development of the original MACT standards).

In addition to reviewing the practices, processes, and control technologies that were considered at the time we originally developed (or last updated) the NESHAP, we reviewed a variety of data sources in our investigation of potential practices, processes, or controls to consider. Among the sources we reviewed were the NESHAP for various industries that were promulgated since the MACT standards being reviewed in this action. We reviewed the regulatory requirements and/or technical analyses associated with these regulatory actions to identify any practices, processes, and control technologies considered in these efforts that could be applied to emission sources in the POTW source category, as well as the costs, non-air impacts, and energy implications associated with the use of these technologies. Additionally, we requested information from facilities regarding developments in practices, processes, or control technology. Finally, we reviewed information from other sources, such as state and/or local permitting agency databases and industry-supported databases.

IV. Analytical Results and Proposed Decisions

A. What are the results of the risk assessment and analyses?

1. Inhalation Risk Assessment Results

Table 2 of this preamble provides an overall summary of the results of the inhalation risk assessment.

TABLE 2—POTW INHALATION RISK ASSESSMENT RESULTS

Maximum individual cancer risk (1-in-1 million) [1]	Estimated population at increased risk levels of cancer	Estimated annual cancer incidence (cases per year)	Maximum chronic non-cancer TOSHI [2]	Maximum screening acute non-cancer HQ [3]
Actual Emissions				
0.8	≥ 1-in-1 million: 0 ≥ 10-in-1 million: 0 ≥ 100-in-1 million: 0	0.0006	0.007	HQ_{REL} = 2 (formaldehyde).
Allowable Emissions [4]				
2	≥ 1-in-1 million: 240 ≥ 10-in-1 million: 0 ≥ 100-in-1 million: 0	0.001	0.01	

[1] Estimated maximum individual excess lifetime cancer risk due to HAP emissions from the source category.
[2] Maximum TOSHI. The target organ with the highest TOSHI for POTW source category for both actual and allowable emissions is the respiratory system.
[3] *See* section III.A.3 of this preamble for explanation of acute dose-response values. Acute assessments are not performed on allowable emissions.
[4] The development of allowable emission estimates can be found in the memorandum titled *Inputs to the Publicly Owned Treatment Works March 2016 Residual Risk Modeling,* June 2016 (Modeling Inputs Memo), which is available in the docket.

Key Recommendations of the SAB Review of RTR Risk Assessment Methodologies.

The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual emissions, the MIR posed for the POTW source category is 0.8-in-1 million, with emissions of formaldehyde from the primary clarifier accounting for the majority of the risk. The total estimated cancer incidence from POTW based on actual emission levels is 0.0006 excess cancer cases per year or one case every 1,667 years, with emissions of formaldehyde and acrylonitrile contributing 50 percent and 21 percent, respectively, to the cancer incidence.

When considering MACT-allowable emissions, the MIR is estimated to be up to 2-in-1 million, driven by emissions of formaldehyde from the primary clarifier. The cancer incidence is estimated to be 0.001 excess cancer cases per year, or one excess case in every 1,000 years. Approximately 240 people are estimated to have cancer risks greater than or equal to 1-in-1 million considering allowable emissions from the POTW source category.

The maximum modeled chronic non-cancer HI (TOSHI) for the source category based on actual emissions is estimated to be 0.007, driven by formaldehyde emissions from the primary clarifier. When considering MACT-allowable emissions, the maximum chronic non-cancer TOSHI is estimated to be 0.01, driven by formaldehyde emissions.

2. Acute Risk Results

Our screening analysis for worst-case acute impacts based on actual emissions indicates the potential for one pollutant, formaldehyde, from one facility, to have an HQ above 1, based on the formaldehyde REL. Six out of seven POTW treatment plants had an estimated worst-case HQ less than or equal to 1 for all HAP.

To better characterize the potential health risks associated with the estimated worst-case acute exposure to HAP from the POTW source category, and in response to a key recommendation from the SAB's peer review of the EPA's CAA section 112(f) RTR risk assessment methodologies, we examine a wider range of available acute health metrics than we do for our chronic risk assessments. This is because there generally are greater uncertainties associated with the use of acute reference values.

By definition, the acute CalEPA REL represents a health-protective level of exposure, with no risk anticipated below those levels, even for repeated exposures; however, the health risk from higher-level exposures is unknown. Therefore, when a CalEPA REL is exceeded and an AEGL–1 or ERPG–1 level (*i.e.,* levels at which mild effects are anticipated in the general public for a single exposure) is available, we have used them as a second comparative measure. For the purpose of characterizing public health risks in RTR assessments, we typically have not compared estimated maximum off-site 1-hour exposure levels to occupational levels. This is because occupational ceiling values are not generally considered protective for the general public since they are designed to protect the worker population (presumed healthy adults) against short-duration (less than 15-minutes) exposures. As a result, for most chemicals, the 15-minute occupational ceiling values are higher than a 1-hour AEGL–1 and/or ERPG–1, making comparisons to them irrelevant unless the AEGL–1 or ERPG–1 levels are also exceeded.

The worst-case maximum estimated 1-hour exposure to formaldehyde outside the POTW treatment plant fenceline exceeds the 1-hour REL by about a factor of 2 (HQ_{REL}=2) but is substantially less than the AEGL–1 and ERPG–1 values for formaldehyde (HQ_{AEGL-1} = 0.2 and HQ_{ERPG-1} = 0.2). All other HAP in this analysis have worst-case acute HQs of 1 or less, indicating little to no potential for acute health risk.

In characterizing the potential for acute non-cancer impacts of concern, it is important to remember the upward bias of these exposure estimates. First, peak 1-hour emissions were conservatively assumed to be 10 times the annual emission rate. It was then assumed that emissions from all emission points at a given POTW peaked concurrently, and at the same time worst-case hourly meteorology was occurring. Finally, it was assumed that a person would be located at the point of maximum concentration for at least an hour. When these factors are taken together, there is likely little potential for acute health risk from POTW emissions.

3. Multipathway Risk Screening Results

PB–HAP emissions of 2-methylnaphthalene (*i.e.,* the only PB–HAP emitted from the POTW source category) did not exceed the worst-case Tier I screening emission rate. No other PB–HAP are emitted by any source in the source category.

4. Environmental Risk Screening Results

As described in section III.A of this preamble, we conducted a screening-level evaluation of the potential for adverse environmental effects associated with emissions of 2-methylnaphthalene.

In the Tier 1 screening analysis for 2-methylnaphthalene, the modeled Tier 1 concentrations of this PB–HAP did not exceed any ecological benchmarks for any POTW in the source category.

5. Facility-Wide Risk Results

The facility-wide chronic MIR and TOSHI were estimated based on emissions from all sources at the identified facilities (both MACT and non-MACT sources). The results of the facility-wide assessment of cancer risks indicate that three facilities with POTW operations have a facility-wide cancer MIR greater than or equal to 1-in-1 million. The maximum facility-wide cancer MIR is 10-in-1 million, primarily driven by formaldehyde. The maximum facility-wide TOSHI for the source category is estimated to be 0.09, primarily driven by emissions of formaldehyde.

6. What demographic groups might benefit from this regulation?

To examine the potential for any environmental justice (EJ) concerns that might be associated with the source category, we performed a demographic analysis of the population close to the facilities. In this analysis, we evaluated the distribution of HAP-related cancer and non-cancer risks from the POTW source category across different social, demographic, and economic groups within the populations living near facilities identified as having the highest risks. The methodology and the results of the demographic analyses are included in a technical report, *Risk and Technology Review—Analysis of Socio-Economic Factors for Populations Living Near POTW Facilities,* available in the docket for this action.

The results of the demographic analysis are summarized in Table 3 of this preamble. These results, for various demographic groups, are based on the estimated risks from actual emissions levels for the population living within 50 km of the facilities.

TABLE 3—POTW DEMOGRAPHIC RISK ANALYSIS RESULTS

	Nationwide	Population with cancer risk at or above 1-in-1 million due to POTW	Population with chronic hazard index above 1 due to POTW
Total Population	312,861,265	0	0
Race by Percent			
White	72	0	0
All Other Races	28	0	0
Race by Percent			
White	72	0	0
African American	13	0	0
Native American	1.1	0	0
Other and Multiracial	14	0	0
Ethnicity by Percent			
Hispanic	17	0	0
Non-Hispanic	83	0	0
Income by Percent			
Below Poverty Level	14	0	0
Above Poverty Level	+86	0	0
Education by Percent			
Over 25 and without High School Diploma	15	0	0
Over 25 and with a High School Diploma	85	0	0

The results of the POTW source category demographic analysis indicate that emissions from the source category expose no person to a cancer risk at or above 1-in-1 million or to a chronic non-cancer TOSHI greater than 1. The demographics of the population living within 50 km of POTW can be found in Table 2 of the document: *Risk and Technology Review—Analysis of Socio-Economic Factors for Populations Living Near Publicly Owned Treatment Works.*

B. What are our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effects?

1. Risk Acceptability

As noted in section II.A.1 of this preamble, the EPA sets standards under CAA section 112(f)(2) using ''a two-step standard-setting approach, with an analytical first step to determine an 'acceptable risk' that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on MIR of approximately 1 in 10 thousand.'' 54 FR 38045, September 14, 1989.

In determining whether risks are acceptable for the POTW source category, the EPA considered all available health information including any uncertainty in risk estimates. Also, as noted in section IV.A of this preamble, the Agency estimated risk from both actual and allowable emissions. While there are uncertainties associated with both the actual and allowable emissions, we consider the allowable emissions to be an upper bound, based on the conservative methods we used to calculate allowable emissions.

The estimated inhalation cancer risk based on actual emissions is less than 1-in-1 million. Additionally, the estimated inhalation cancer risk based on allowable emissions is 10-in-1 million. Both of these results are considerably less than the presumptive limit of acceptability (*i.e.,* 100-in-1 million). The maximum chronic inhalation non-cancer hazard indices for both the actual and allowable emissions are less than 1, indicating that chronic exposures are without appreciable risk of non-cancer health effects.

The multipathway screening analysis indicates that PB–HAP emissions did not exceed the screening emission rates for any PB–HAP evaluated.

The screening assessment of worst-case acute inhalation exposures resulting from actual emissions indicates that the worst-case maximum estimated 1-hour exposure to formaldehyde outside the facility fence line exceeds the 1-hour REL by a factor of 2 ($HQ_{REL} = 2$). It is important to note that this highest offsite HQ value assumes an hourly emissions multiplier of 10 times the annual emissions rate, while also assuming that a person will be present at the location of highest exposure for at least 1 hour when emissions from all emission points are at their peak. We further assume these peak emissions are occurring at same time worst-case meteorology is occurring. Finally, it is important to note that this conservatively estimated 1-hour formaldehyde concentration is well below the AEGL–1 and ERPG–1 for formaldehyde. Taken together, we believe there is little potential for acute health risk from formaldehyde. All other HAP in this analysis have worst-case acute HQ values outside facility fencelines of 1 or less indicating little potential risk of acute health effects.

Considering all of the health risk information and factors discussed above, including the uncertainties discussed in section III.A.7 of this preamble, the EPA proposes that additional standards are not necessary to bring risk to an acceptable level because cancer risks are well below the presumptive limit of acceptability, and

other health risk information indicates there is minimal likelihood of adverse non-cancer (including chronic, acute, and multipathway) health effects due to HAP emissions from this source category.

2. Ample Margin of Safety Analysis

In the ample margin of safety analysis, we evaluate available control technologies and other measures (including those evaluated under the technology review, as well as the risk reductions achieved by such potential additional measures, to determine whether additional standards are required to reduce risks further. In conducting the ample margin of safety analysis we consider the costs and economic impacts and technological feasibility of additional standards.

We are proposing that the 2002 POTW NESHAP requirements provide an ample margin of safety to protect public health. As explained in section IV.A of this preamble, we estimate that the MIR in the exposed population is less than 1-in-1 million at the actual emission levels. Additionally, the chronic non-cancer TOSHI is less than 1 and there is negligible potential for acute risk. Thus, EPA proposes that standards in the 2002 POTW NESHAP achieve the goal of providing the maximum feasible protection against risks to health from HAP.

Moreover, as noted in our discussion of the technology review in section IV.C of this preamble, no additional measures were identified for reducing HAP emissions from the POTW source category. Therefore, we propose that the 2002 standards provide an ample margin of safety to protect public health.

Although we are proposing to find that the 2002 standards provide an ample margin of safety to protect public health, we are proposing additional standards under CAA section 112(d)(6) that address HAP emissions from collection systems and all treatment units located at the POTW treatment plant. This is described more fully in Section IV.C.1 below. We are proposing that POTW develop and implement pretreatment programs to reduce organic HAP emissions from collection systems as wastewater is conveyed from an industrial user to the POTW treatment plant. All of the POTW identified as subject to the POTW NESHAP already have pretreatment programs in place; therefore, no additional emission reductions are expected. However, requiring control of emissions from collection systems by implementing pretreatment programs will allow POTW to limit potential future increases in emissions since the POTW will set limits on pollutants discharged to collection systems from industrial users. As noted above, we are proposing that the MACT standards, prior to the implementation of these proposed standards for collection systems, provide an ample margin of safety to protect public health. Therefore, we are proposing that, after the implementation of these standards for collection systems, the rule will continue to provide an ample margin of safety to protect public health. Consequently, it will not be necessary to conduct another residual risk review under CAA section 112(f) for this source category 8 years following promulgation of the new standards for collection systems, merely due to the addition of these MACT requirements. While our decisions on risk acceptability and ample margin of safety are supported even in the absence of these standards for collection systems, if we finalize the proposed requirements for these emission sources they will further strengthen our conclusions that risk is acceptable and the standards provide an ample margin of safety to protect public health.

Although we did not identify any new technologies to reduce risk for this source category, we are specifically requesting comment on whether there are additional control measures that may be able to reduce risks from the source category. We request any information on potential emission reductions of such measures, as well as the cost and health impacts of such reductions to the extent they are known.

3. Adverse Environmental Effects

Based on the results of our environmental risk screening assessment, we conclude that there is not an adverse environmental effect as a result of HAP emissions from the POTW source category. We are proposing that it is not necessary to set a more stringent standard to prevent, taking into consideration costs, energy, safety and other relevant factors, an adverse environmental effect.

C. What are the results and proposed decisions based on our technology review?

As described in section III.C of this preamble, our technology review focused on identifying developments in the practices, processes, and control technologies for the POTW source category. The EPA reviewed various information sources regarding POTW emission sources that are currently regulated by the POTW NESHAP, which include, but are not limited to, influent waste stream conveyance channels, bar screens, grit chambers, grinders, pump stations, aerated feeder channels, primary clarifiers, primary effluent channels, and primary screening stations.

As discussed further in sections II.C and D of this preamble, we conducted a search of the RBLC Clearinghouse, other regulatory actions (MACT standards, area source standards, and residual risk standards) subsequent to promulgation of the 2002 POTW NESHAP, literature related to research conducted for emission reductions from POTW emission sources, and state permits. Further, we reviewed the responses to the 2015 ICR to determine the technologies and practices reported by POTW.

We reviewed these data sources for information on add-on control technologies, other treatment units, work practices, procedures, and process changes or pollution prevention alternatives that were not considered during the development of the POTW NESHAP. We also looked for information on improvements in add-on control technology, other treatment units, work practices, procedures, and process changes or pollution prevention alternatives that have occurred since development of the POTW NEHSAP. Regarding work practices or pollution prevention alternatives, we examined data provided by the POTW in the 2015 ICR for the POTW NESHAP related to the pretreatment programs they implement.

As found during the development of the POTW NESHAP, there are generally two different control options that may be used at POTW: pretreatment programs and add-on controls (*i.e.,* covers or covers vented to a control device). The following sections summarize our technology review with respect to these work practices and controls as they can be used at industrial (Group 1) POTW and non-industrial (Group 2) POTW. (See section IV.D.2 of this preamble for a discussion of the proposed terminology change from ''industrial'' and ''non-industrial'' POTW to ''Group 1'' and ''Group 2'' POTW.)

1. Pretreatment Requirements

The applicability of the 2002 POTW NESHAP to a particular POTW depends in part on whether the POTW has or is required to develop a pretreatment program. However, we are proposing to remove having a pretreatment program as a condition for the applicability of the NESHAP and make it a requirement of the NESHAP. *See* section IV.D.1 of this preamble for a discussion of these changes. This section describes the

inclusion of pretreatment requirements as a requirement of the rule.

In the 2015 ICR for the POTW NESHAP, the EPA requested data related to any pretreatment programs the POTW had developed and implemented. All 17 of the POTW that responded to the ICR included information about their specific pretreatment programs, and all six of the sources subject to the POTW NESHAP have pretreatment requirements established for all industrial wastewaters they receive. The pretreatment requirements established by the POTW are based on the National Pretreatment Program, which was developed under the CWA to prevent pollutants from being introduced into a POTW that could interfere with the operation of the POTW, or could be passed through the treatment process and impact the use or disposal of sludge or be discharged to surface waters (40 CFR 403.5).

Under the Pretreatment Program, POTW subject to the requirement to develop a pretreatment program must identify their industrial users and control, through permits, orders, or other means, the contribution of pollutants to the POTW in order to ensure compliance with all national pretreatment standards and requirements. The industrial discharger must comply with the general requirements and specific prohibitions of EPA's regulations at 40 CFR part 403.5, categorical pretreatment standards spelled out for industrial categories at 40 CFR Subchapter N—Effluent Guidelines and Standards, and specific local limits that must be developed in defined circumstances. The specific prohibitions address characteristics of the wastewater streams and include specifications such as flashpoint, pH, solids size (to avoid obstructions), flowrates, and temperature of the wastewater. The specific prohibitions also prohibit ''Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.'' (40 CFR 403.5(b)(7).) The categorical pretreatment standards are specific standards established by the EPA for certain industries. These standards vary in format and can be concentration-based limits, mass limits, production-based limits, best management practices, discharge prohibitions, or a combination of these formats. There are 35 different industries with established categorical pretreatment standards. The third component in the pretreatment requirements consists of the local limits that must be established by the POTW in the circumstances spelled out in the regulations. Local limits may need to be developed to address specific concerns of the POTW, related to the general and specific prohibitions. In addition to ensuring that industrial users' discharges to the POTW do not pass through the POTW and result in the violation of the POTW's discharge permit, such limits may be necessary in the following circumstances: to protect the POTW operations, maintain the POTW's discharge levels, avoid sludge contamination, and ensure worker health and safety. The local limits may be expressed as case-by-case discharge limits, management practices, or specific prohibitions.

In this action, we are proposing that POTW develop and implement a pretreatment program as specified in 40 CFR part 403 (General Pretreatment Regulations for Existing and New Sources of Pollution). CAA section 112(n)(3) provides that the EPA may include pretreatment requirements as a control requirement when establishing standards for POTW under CAA section 112, stating: ''When promulgating any standard under this section applicable to publicly owned treatment works, the Administrator may provide for control measures that include pretreatment of discharges causing emissions of hazardous air pollutants and process or product substitutions or limitations that may be effective in reducing such emissions.'' We are proposing to add pretreatment requirements in this rulemaking because pretreatment will reduce HAP emissions from both the collection systems and the POTW treatment plant operations (including both primary and secondary treatment) by limiting the quantity of HAP in the wastewater before it is even discharged to the collection system or arrives at the POTW treatment plant. This requirement is consistent with CAA section 112(n)(3) and will serve to reduce pollutant loading into the POTW which will reduce emissions throughout all stages of treatment.

Adding this pretreatment requirement to the POTW NESHAP will not add any additional required actions or increase costs or burden for the POTW because all of the POTW that are currently subject to this rule have established pretreatment programs under the CWA; however, it will ensure that pretreatment is appropriately associated to HAP reduction requirements and remains in effect even if changes occur in CWA regulations. The pretreatment requirements are being applied to both industrial (Group 1) and non-industrial (Group 2) POTW for existing and new or reconstructed POTW.

We are requesting comment on the option of having an additional requirement that applicable POTW specifically evaluate the volatile organic HAP specific to each applicable industrial user because organic HAP that volatilize readily are most likely to result in air emissions from the water as it moves through a collection system and the POTW treatment plant. Because the CWA's National Pretreatment Program does not traditionally address air emissions, we understand that the existing pretreatment requirements for each industrial user do not necessarily reduce HAP emissions. Therefore, we are requesting comment on requiring POTW to develop pretreatment requirements that are specifically designed to reduce HAP emissions from POTW by requiring the POTW to evaluate and set local limits for volatile organic HAP. We are also requesting comment on any specific controls or operational practices that can be required to address VOC and HAP emissions from collection systems. Additionally, we are requesting comment on ways to harmonize the pretreatment programs as a means to meet both CAA and CWA requirements.

2. Industrial (Group 1) POTW

Industrial (Group 1) POTW are those POTW that receive a wastewater stream that is subject to control under another NESHAP and the treatment and controls at the POTW are used to comply with the other NESHAP requirements. We are changing the name of the subcategory in this action, which is discussed in more detail in section IV.D of this preamble. As discussed in section II.B.1 of this preamble, the 2002 requirements for industrial (Group 1) POTW are different for existing and new or reconstructed sources.

Existing industrial (Group 1) sources. At the time the 2002 NESHAP was prepared, there were no known industrial (Group 1) POTW in existence because the compliance dates for most of the NESHAP had not occurred yet. As a result of this technology review, two industrial (Group 1) POTW have been identified that are existing sources under the rule. As required, these POTW comply with the wastewater treatment requirements as specified in the other applicable NESHAP for which they act as control.

In reviewing the requirements for existing industrial (Group 1) POTW and the situations at these sources, we have identified an issue with the 2002 NESHAP requirements that could affect existing industrial (Group 1) POTW,

especially considering the new requirements being proposed for existing industrial (Group 1) and non-industrial (Group 2) POTW (*see* section IV.C.3 of this preamble). The two identified existing industrial (Group 1) POTW receive wastewater from several other industrial users at their primary treatment units, in addition to the wastewater received that is regulated by another NESHAP. Because an existing industrial (Group 1) POTW is currently only required to comply with the other applicable NESHAP, the requirements under the POTW NESHAP for primary treatment units at the POTW treatment plant do not currently apply. One of the identified existing industrial (Group 1) POTW receives wastewater from a pulp and paper plant, subject to 40 CFR part 63, subpart S (National Emission Standards of Hazardous Air Pollutants from the Pulp and Paper Industry). The subpart S wastewater is hard piped to the industrial (Group 1) POTW and is introduced into the biological treatment unit at the industrial (Group 1) POTW, as specified in 40 CFR 63.446(e)(2). Because the biological treatment unit is considered secondary treatment, there are no NESHAP requirements on the primary treatment units at this POTW. The wastewater streams entering the primary treatment units are not specifically regulated by another NESHAP. In this situation, the primary treatment units are an uncontrolled HAP emissions source even though the POTW is an industrial (Group 1) POTW and subject to another NESHAP.

Therefore, we are proposing to revise the requirements for an existing industrial (Group 1) POTW so that the POTW must comply with both the requirements for existing non-industrial (Group 2) POTW (*see* section IV.C.3 of this preamble) and the other applicable NESHAP. This proposed revision to the standards ensures that the primary treatment units are still subject to requirements, regardless of where the other NESHAP wastewater stream initially enters the POTW treatment plant for treatment. We believe all of the existing industrial (Group 1) POTW can meet the proposed requirements for existing non-industrial (Group 2) sources, and would, therefore, incur minimal cost burden associated with recordkeeping and reporting as described in section IV.D.5 of this preamble.

New or reconstructed industrial (Group 1) sources. At the time the 2002 NESHAP was prepared, we anticipated one new industrial (Group 1) POTW would become subject to the regulation. However, during this review we did not identify any new or reconstructed industrial (Group 1) POTW. During our review of the requirements for the existing industrial (Group 1) POTW, we identified an issue that could affect new industrial (Group 1) POTW. The issue is with the requirement in the 2002 rule that specifies that the source should meet the most stringent requirements of either the other applicable NESHAP, or the requirements for new or reconstructed non-industrial (Group 2) POTW in the POTW NESHAP (*i.e.,* cover primary treatment units and route emissions to a control device; or meet 0.014 HAP fraction emitted limit). Similar to the issue identified for existing industrial (Group 1) POTW, we found that an industrial (Group 1) POTW could send wastewater regulated by another NESHAP directly to a secondary treatment unit, resulting in no overlapping requirements between the other NESHAP requirements and the new or reconstructed source non-industrial (Group 2) POTW NESHAP requirements, which only apply to primary treatment units. Therefore, requiring the source to comply with the provision that is the most stringent could be confusing, and is potentially difficult to determine because non-POTW NESHAP requirements could apply to secondary treatment units only and not affect primary treatment units. We considered various other possible applicable NESHAP and the requirements in those NESHAP and decided that similar inconsistencies could occur with other applicable NESHAP. In some cases, it is possible that the requirement to comply with the most stringent NESHAP could be read to allow a source to inappropriately avoid compliance with one of the applicable NESHAP, since the demonstration of most stringent is not clear, not obvious, or not well defined.

Therefore, we are proposing to remove the requirement to comply with the most stringent NESHAP and are revising the requirement for new or reconstructed industrial (Group 1) POTW to require the POTW to meet the requirements of both the other applicable NESHAP, and the requirements of the POTW NESHAP. Meeting the requirements of both the other applicable NESHAP and the POTW NESHAP makes the rule clearer and more consistent with the standards in other applicable NESHAP and the POTW NESHAP.

3. Non-Industrial (Group 2) POTW

In the 2002 regulation, non-industrial (Group 2) POTW are those POTW that receive wastewater from industrial users but do not receive any wastewater streams that must be controlled pursuant to another NESHAP. In this action, we are changing this terminology as discussed in more detail in section IV.D of this preamble. As discussed in section II.B.4 of this preamble, requirements for non-industrial (Group 2) POTW are different for existing and new or reconstructed sources.

Existing non-industrial (Group 2) sources. During our review, four existing non-industrial (Group 2) POTW were identified. Treatment units at POTW can be covered, which suppresses the volatilization of HAP, keeping the HAP in the water and preventing emissions to the air. Also, covered units can be vented and, if vented, emissions are either routed to the atmosphere or a control device. The use of covers and controls has increased since the initial development of the POTW NESHAP. For example, in the original review for development of the 2002 rule, there was only one POTW that had covers on all primary treatment units. Other than grate covers (which do not control emissions and which we do not consider to be ''covers'' as we are using that term), no other covers were identified during the initial development of the 2002 rule. During this review, we found two POTW subject to the POTW NESHAP that cover all treatment units to address odor concerns. Also, more POTW now have at least some treatment units covered. There are two POTW subject to this rule that do not have covers on any treatment units.

When vented to an add-on control device, the exhaust stream from under a cover may be routed to a caustic scrubber, a carbon adsorber, or to a secondary wastewater treatment unit such as an aeration basin where the exhaust stream is used as feed air for biological treatment. Add-on control devices such as caustic scrubbers and carbon adsorbers are typically used at POTW treatment plants to control odors. While caustic scrubbers are not expected to be effective in controlling volatile HAP, properly designed and operated carbon adsorbers are commonly used in other industries to control volatile organic compounds (VOC) and HAP emissions. However, as installed at POTW to assist in odor control, carbon adsorbers are not typically designed or operated to provide HAP emission reduction.

Some POTW route collected gases to biological treatment processes to control odors, and this technique has been found to reduce emissions of HAP. To use biological treatment as a control for HAP emissions, treatment units must be covered, and the gases collected under the cover must be routed to the

biological treatment unit. Based on the literature search conducted as part of the technology review, biological treatment processes employing activated sludge basins can achieve a VOC control efficiency greater than 85-percent under certain conditions, and in one case, a pilot-study biological treatment system employing biofilters was able to achieve greater than 99-percent control of certain HAP. Outside of this one study, the literature on biological treatment using biofilters indicated VOC and HAP control efficiencies of between 40-percent and 83-percent. The memorandum titled *Technology Review Memorandum for the Publicly Owned Treatment Works Source Category (Technology Review Memo),* November 2016 in the docket for this action presents the literature review and information found on biological treatment systems.

Detailed ICR responses regarding the use of control measures to control HAP were received for four POTW subject to the POTW NESHAP and eight synthetic area or area sources. For these 12 sources, all except two sources route some portion of emissions to caustic scrubbers, caustic scrubbers followed by carbon adsorbers (2-stage control), or route gases to biological treatment. However, covers are not used consistently throughout the POTW; only the two POTW subject to the POTW NESHAP mentioned previously cover all their processes and collect all gases and route those gases to controls. These two POTW use covers and controls to address concerns related to odor. They do not specifically operate the controls to reduce HAP emissions and do not have any data specific to HAP reductions that could be achieved by the controls they currently use. Several other POTW were found to use partial covers and send some emissions to controls. Two other POTW subject to the POTW NESHAP and six out of eight area sources indicated the use of add-on control devices and several reported routing gases to biological treatment, but not all of the HAP emissions would be captured and controlled for these sources, because not all the treatment units are covered at these POTW. Also, of the 12 facilities that responded to the ICR, only three sources (all area sources operated by the City of San Diego) claimed any HAP reduction from their odor control devices. No indication of the VOC or HAP control efficiency for these three facilities was available. Responses to the 2015 ICR are located in the docket. *See Information Collection and Additional Data Received for the Publicly Owned Treatment Works Source Category Risk and Technology Review, October 2016 located in the docket for this rulemaking.*

In this action, the EPA is soliciting comments on the effectiveness of caustic scrubbers and carbon adsorbers to co-control HAP while primarily functioning as odor control devices. In addition, the EPA is requesting quantitative feedback on the effectiveness of using covers to suppress emissions, and identification of any other key operating parameters that may affect HAP emissions levels such as ventilation rates or control device maintenance practices.

In addition to an evaluation of the use of covers and controls to reduce HAP emissions, the EPA evaluated the HAP fraction emitted up to, but not including, secondary treatment. Data were available for two of the non-industrial (Group 2) POTW, and their HAP fractions were 0.04 and 0.03. Additionally, since we are proposing that existing industrial (Group 1) POTW must comply with both the other applicable NESHAP and the HAP fraction emitted standard in the POTW NESHAP, we evaluated available primary treatment emissions data for one of the existing industrial (Group 1) POTW. The primary treatment units at that POTW are not currently subject to regulation under another NESHAP; therefore, the emissions from primary treatment units at that industrial (Group 1) POTW are comparable to emissions from primary treatment units at the non-industrial (Group 2) POTW. That industrial (Group 1) POTW has a HAP fraction of 0.005. *See HAP Emissions from the Publicly Owned Treatment Works Source Category,* November 2016 located in the docket for this rulemaking.

These HAP fractions are lower than the HAP fraction found for the sources investigated during the development of the 2002 POTW NESHAP. At that time, the average HAP fraction of the six POTW thought to be major sources was 0.166. The available data for this proposal provides an average HAP fraction of 0.0225. However, because of the limited data and the fact that these HAP fractions are based on calculations using data from a moment in time and do not reflect the variability in operation, we are proposing a standard at twice the highest HAP fraction for which we have data. Therefore, with this action, we are proposing that existing non-industrial (Group 2) POTW must operate with an annual rolling average HAP fraction emitted from primary treatment units of 0.08 or less. By proposing to require that POTW achieve a HAP fraction that is twice the maximum HAP fraction reported by ICR respondents, we intend to address variability in wastewater influent concentrations and in treatment operations. Moreover, as proposed the rule is expected to allow POTW the flexibility to use various control schemes, including the use of add-on controls such as scrubbers or biological treatment to comply with the standard. At the same time, because the risk analysis for allowable emissions also was assessed at twice the level of actual emissions (see section III.A of this preamble) the proposed standards should ensure that emissions will not exceed the level of acceptable risk found during the risk assessment. Also, note that this proposed standard achieves at least the same level of protection as a standard based on a MACT floor calculation. *See Memorandum Providing Calculations for Total HAP Emissions from Publicly Owned Treatment Works Wastewater,* October 2016, located in the docket for this rulemaking.

We believe that the existing industrial (Group 1) and existing non-industrial (Group 2) sources identified as subject to this proposed rule can meet this HAP fraction emission limit. However, we request comment and data on whether this is true for the POTW that would be subject to this proposed standard. We are also taking comment on whether we should provide an alternative to the 0.08 HAP fraction emitted for existing non-industrial (Group 2) sources. One alternative under consideration is to allow POTW to choose to cover the primary clarifier instead of meeting the 0.08 HAP fraction emitted standard. Data collected in the 2015 ICR indicate that primary clarifiers are the largest emission source at the POTW, and several existing sources already have covers on their primary clarifiers.

We also are taking comment on a second alternative that would require existing sources to meet the same cover and control requirements as new sources by requiring them to cover their primary treatment units and to route the air in the headspace from all covered units, except the primary clarifier, to a control device via a closed vent system. The 2002 POTW NESHAP requires a cover on primary clarifiers, but does not require routing the air collected under the cover to a control device. When the 2002 POTW NESHAP was developed, data from the industry indicated that the only potential major source with covers excluded routing air from the covered primary clarifier to a control device. A primary clarifier is designed to operate with a quiescent surface in order to

promote the settling of solids. Pulling air could potentially cause turbulence on the surface of the water, thus reducing the efficiency of the primary clarifier.

EPA has determined that cover and control of the primary treatment units is an expensive option, and believes that the flexibility to develop a compliance plan to meet the HAP fraction emitted standard will allow subject facilities more latitude to develop a compliance approach to meet the HAP fraction standard. However, EPA is aware that many current facilities do have a cover and control system in place to control odors, and if those systems can be modified or operated in a manner to control HAP emissions then this alternative might be viable for some existing sources. More details related to the costs of covers and controls is located in the *Technology Review Memo,* located in the docket for this rulemaking.

New or reconstructed non-industrial (Group 2) POTW. There were no new or reconstructed non-industrial (Group 2) POTW identified during the technology review. Also, there were no new practices or control technologies that would warrant a change in the 2002 requirements for new or reconstructed non-industrial (Group 2) POTW. Thus, we are not proposing any changes in the standard for new or reconstructed non-industrial (Group 2) POTW as a result of this technology review.

D. What other actions are we proposing?

In addition to the proposed actions described above, we are proposing additional revisions. We are proposing to revise the applicability criteria to clear up confusion related to what emission sources are included in the major source calculations and to remove the applicability condition that affected sources must have a pretreatment program. We are also proposing to revise the subcategory names and definitions to further clarify the difference between them. We are proposing revisions to the startup, shutdown, and malfunction (SSM) provisions of the MACT rule in order to ensure that they are consistent with the court decision in *Sierra Club* v. *EPA,* 551 F. 3d 1019 (D.C. Cir. 2008), which vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM. We are also proposing electronic reporting for certain records. Finally, we are proposing various other technical corrections. Our analyses and proposed changes related to these issues are presented below.

1. Applicability Criteria

There are currently three criteria that a POTW must meet in order to be subject to the POTW NESHAP: (1) You must own or operate a POTW that includes a POTW treatment plant; (2) your POTW is a major source of HAP emissions or any industrial (Group 1) POTW regardless of whether or not it is a major source of HAP emissions; and (3) your POTW is required to develop and implement a pretreatment program as defined by 40 CFR 403.8.

The EPA is proposing to revise the first and second applicability criteria in order to clarify the original intent of the rule by revising 40 CFR 63.1580(a)(1) and (2) to state, ''(1) You own or operate a POTW that is a major source of HAP emissions; or (2) you own or operate a Group 1 POTW regardless of whether or not it is a major source of HAP.'' *See* section IV.D.2 of this preamble for proposed revisions to the subcategory names.

We are proposing this change because during our review of the 2002 POTW NESHAP, we found several instances where a POTW might not realize they are subject to the standards, or where the applicability criteria could be misinterpreted, thus being read as excluding facilities that should be covered by this NESHAP. In addition, several EPA regional offices expressed concerns that POTW were underrepresenting their HAP emissions and raised questions about whether emissions from equipment comprising the collection systems should be included in those calculations. For instance, one region discussed obtaining measurements of high concentrations of benzene and VOC from perforated manhole covers. Upon further inspection, the elevated readings were attributed to an industrial user that was discharging pretreated wastewater into the collection system for treatment at a nearby POTW. However, that POTW was not accounting for emissions from collection systems and, to their knowledge, had not exceeded the major source threshold. In another region, a pump station located outside the POTW treatment plant had potential emissions that would exceed the major source threshold. However, because these emissions were not part of the POTW treatment plant, they had not been previously considered when determining whether the POTW was a major source of HAP emissions.

The 2002 applicability criteria in 40 CFR 63.1580(a)(2) state that it is the emissions from the entire POTW, not just the POTW treatment plant, that must be considered when determining whether the POTW is a major source. Further, this same provision states that any ''industrial'' (Group 1) POTW, which treats a wastewater stream which is regulated by another NESHAP or MACT, is subject to the rule whether or not it is a major source of HAP. The EPA recognizes that the current wording may cause confusion regarding what emissions sources must be included in the calculation and is proposing revisions to avoid such confusion.

The EPA is also proposing to revise the third applicability criterion in order to clarify the original intent of the rule by revising 40 CFR 63.1580(a) to state, ''You are subject to this subpart if your publicly owned treatment works (POTW) has a design capacity to treat at least 5 million gallons of wastewater per day and treats wastewater from an industrial user, and either paragraph (a)(1) or (a)(2) is true:.'' This proposed revision removes the requirement that a POTW develop and implement a pretreatment program from the applicability criteria, and instead clarifies the original intent of the rule, which is to limit applicability to POTW which treat at least 5 MGD.

The EPA also identified a potential scenario that could inadvertently allow major source POTW to avoid applicability to the rule based on the current third criteria. The 2002 POTW NESHAP states that in order to be subject to the rule, the POTW must be required to develop and implement a pretreatment program (40 CFR 63.1580(a)(3)). During review, we identified a potential scenario where a POTW is a major source of HAP emissions, but is not required to develop a pretreatment program by the EPA or state pretreatment program Approval Authority. In this scenario, the POTW might interpret the third criterion as not applying to them. For instance, 40 CFR 403.10(e) allows a state to assume responsibility for implementing the POTW Pretreatment Program requirements set forth in 403.8(f) in lieu of requiring the POTW to develop a POTW. Only five states have used their authority under this provision (Connecticut, Vermont, Alabama, Mississippi, and Nebraska). Similarly, other approved State Programs which implement their State Pretreatment Program traditionally by approving POTW pretreatment program development must also have procedures to carry out the activities set for in 403.8(f) in the absence of a POTW Pretreatment Program. However, the third applicability criterion in the 2002 POTW NESHAP was not intended to exclude POTW where states or the EPA, in the absence of a POTW approved

Pretreatment Program or a state approved pretreatment program, directly oversee the industrial pretreatment requirements. Instead, the EPA stated in the response to comments from the previous rulemaking [27] that the Agency added the third applicability criterion to the final rule to limit applicability to those POTW that are required to develop and implement a pretreatment program in order to eliminate all POTW with a total design flow less than 5 MGD because it was not likely that a small POTW would have sufficient emissions to trigger major source status. The EPA continues to believe that small POTW that do not trigger major source status should be excluded from the requirements in the POTW NESHAP.

We are proposing to revise the criteria to include POTW that have a design capacity of 5 MGD or greater and that treat wastewater from industrial users. These are equivalent criteria for which POTW are required to develop and implement pretreatment programs as defined in 40 CFR 403.8. However, by not stating that the ''POTW is required to develop or implement,'' we are clarifying that any POTW that is a major source of HAP emissions and meets the general requirements for the development of a pretreatment program is subject to the proposed rule, regardless of whether the state has implemented its own pretreatment program under 40 CFR 403.10(e).

It is not our intent that the requirements apply to small POTW that are not a major source of HAP emissions. Therefore, we are requesting comment on whether these proposed revisions to the applicability criteria inadvertently include POTW that would otherwise have not been included in a major source rule or inadvertently exclude sources that should be covered because they are a Group 1 POTW or are a major source of HAP emissions. Finally, we are requesting comment on whether there is a more appropriate design capacity threshold than the 5 MGD threshold proposed in this rulemaking.

2. Definitions of Subcategories

The EPA is proposing to revise the names and definitions for the subcategories identified in the POTW NESHAP in order to clear up any confusion related to applicability of the rule. The POTW NESHAP has historically subcategorized requirements based on whether or not a POTW is used as a control device to comply with specific requirements in another source category's NESHAP by classifying a POTW as either an ''industrial POTW treatment plant'' or ''non-industrial POTW treatment plant'' (40 CFR 63.1581). The 1998 proposal described how the EPA determined these subcategories for the POTW source category by stating that ''the industrial POTW treatment plant subcategory would include only those POTW treatment plants that are treating a specific regulated industrial waste stream to allow an industrial user to comply with another NESHAP'' (63 FR 66089). We further explained that any POTW not in the industrial POTW treatment plant subcategory would be classified as a non-industrial POTW treatment plant, which accepts waste from industrial users whose waste is not specifically regulated under another NESHAP. While the intent of the subcategorization was explained in the 1998 proposal and the terms are defined in the rule (in 40 CFR 63.1595), there is a potential for confusion related to applicability under the subcategories because the terms ''industrial'' and ''non-industrial'' have common, everyday meanings that are not exactly aligned with how those terms are defined in the rule. For example, a person might incorrectly assume that the term ''industrial POTW'' includes any POTW that accepts waste from an industrial user, even if the industrial user is not subject to another NESHAP, and that a ''non-industrial POTW'' is one that does not take any waste from any industrial users.

To clear up this confusion, we are proposing to change the names and definitions of the subcategories in the POTW source category. A ''Group 1 POTW treatment plant'' is one that accepts a waste stream(s) regulated under another NESHAP from an industrial user for treatment. In this instance, the POTW acts as the control mechanism by which the industrial user is able to comply with the specific requirements for that waste stream in the other NESHAP. For example, a pulp mill may choose to send a waste stream regulated by 40 CFR part 63, subpart S (Pulp and Paper Industry NESHAP) to a local POTW for treatment in lieu of constructing an onsite wastewater treatment facility to comply with the requirements of subpart S. In this example, the POTW is in a contractual agreement with the pulp mill that the POTW will meet the specific requirements for that waste stream and becomes subject to the Pulp and Paper Industry NESHAP in addition to the POTW NESHAP. A Group 1 POTW treatment plant does not have to have HAP emissions in excess of the major source threshold but is instead considered subject to this proposed rule because it is also subject to requirements in another NESHAP. If the Group 1 POTW treatment plant accepts multiple waste streams that are regulated under multiple NESHAP, we are proposing that the POTW would meet the requirements of each appropriate NESHAP for each individual waste stream.

A ''Group 2 POTW treatment plant'' is one that accepts a waste stream(s) that is not specifically regulated by another NESHAP or one that accepts wastewater from an industrial facility that complies with the specific wastewater requirements in their applicable NESHAP prior to discharging the wastewater to the POTW collection system. These waste streams can come from an industrial or commercial source. For example, a chemical plant sends a waste stream to a POTW that is not regulated by any of the chemical manufacturing source categories for treatment as a permitted discharge through the POTW's pretreatment program. In most cases, these waste streams are pretreated at the industrial facility in order to meet specific water quality requirements issued by the POTW through a Significant Industrial User (SIU) permit. Pretreatment programs are discussed in section IV.C.1 of this preamble.

The EPA is proposing the ''Group 1'' and ''Group 2'' names rather than a new pair of descriptive names because (1) the non-descriptive names ''Group 1'' and ''Group 2'' will alert persons to the fact that they need to look to the specific definitions of the subcategories in the rule, and (2) we could not identify any descriptive names that did not create the potential for confusion similar to the current ''industrial'' and ''non-industrial'' labels. The EPA requests ideas for descriptive names for the two subcategories that would not create a potential for confusion.

3. Startup, Shutdown, and Malfunction

In its 2008 decision in *Sierra Club* v. *EPA,* 551 F.3d 1019 (D.C. Cir. 2008), 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. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must

[27] *See National Emission Standards for Hazardous Air Pollutants (NESHAP): Publicly Owned Treatment Works—Background Information for Final Standards Summary of Public Comments and Responses.* EPA–453/R–99–008 October 1999.

be continuous in nature and that the SSM exemption violates the CAA's requirement that some CAA section 112 standards apply continuously.

We are proposing the elimination of the SSM exemption in this rule. Consistent with *Sierra Club* v. *EPA,* we are proposing standards in this rule that apply at all times. We are also proposing several revisions to Table 1 to Subpart VVV of Part 63 (the General Provisions Applicability Table) as is explained in more detail below. 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 and revise certain recordkeeping and reporting requirements related to the SSM exemption as further described below.

The EPA has attempted to ensure that the provisions we are proposing to eliminate are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether we have successfully done so.

In developing the standards in this rule, the EPA has taken into account startup and shutdown periods and has not proposed alternate standards for those periods. Periods of startup and shutdown at POTW are highly infrequent events. At all times, a plant subject to 40 CFR part 63, subpart VVV must comply with the pretreatment requirements and either the cover and closed vent system standard or the HAP fraction emissions standard.

For pretreatment requirements, startup and shutdown at the POTW do not impact the effect of pretreatment requirements, because these require POTW to apply pretreatment standards on the industrial users. The industrial users meet these standards before the wastewater enters the collection system of the POTW and so those industrial users' ability to meet the pretreatment requirements is not dependent on the operational status of the POTW.

For compliance using covers and closed vent systems routed to a control device, startup and shutdown of the POTW does not affect performance of the control device. The control system can and must be operated when wastewater first enters the system. In the unlikely event of shutdown of the POTW, the control system must be operated until the final wastewaters are treated. Because the physical and chemical characteristic of the gases in the closed vent system are not sufficiently different during startup and shutdown, the emission control system will achieve the same level of emission control that it achieves during normal operation. Therefore, there is no need for an alternative standard during startup and shutdown that is different from the standards for normal operation.

It is possible that control devices (*e.g.,* flares, carbon absorbers, or scrubbers) that receive emissions through the closed vent systems could have startup and shutdown events. This equipment must meet the requirements of 40 CFR part 63, subpart DD (because DD is incorporated by reference into subpart VVV). Subpart DD requires that control devices are operating to fully control emissions when emissions are routed to them, as specified in 40 CFR 63.693 of subpart DD, except for a limited number of hours per year for routine maintenance for control devices controlling tank emissions (40 CFR 63.693(b)(3)).

For compliance using the alternative HAP fraction emissions standard, compliance may be achieved by a combination of a cover and closed vent system to a control device, a biological treatment phase, pretreatment, or modifications to the wastewater treatment process. The covers, closed vents, and the range of potential control devices would all be available throughout startup and shutdown of the POTW. Therefore, we do not expect there to be any significant difference in the emissions due to a startup or shutdown. In addition, compliance with the HAP fraction emissions standard is demonstrated based on a 12-month rolling average. Because the averaging period is annual, any increases in the HAP fraction emitted that do occur during startup or shutdown periods (which are short), can easily be balanced by the longer periods of normal operation and lower HAP fraction emitted during the rest of the averaging period.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead, they are, by definition, sudden, infrequent and not reasonably preventable failures of emissions control, process, or monitoring equipment. (See 40 CFR 63.2, definition of Malfunction). The EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards. Under CAA 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 CAA section 112 that directs the Agency to consider malfunctions in determining the level ''achieved'' by the best performing sources when setting emission standards. As the District of Columbia Circuit Court has recognized, the phrase ''average emissions limitation achieved by the best performing 12 percent of'' sources ''says nothing about how the performance of the best units is to be calculated.'' *Nat'l Ass'n of Clean Water Agencies* v. *EPA,* 734 F.3d 1115, 1141 (D.C. Cir. 2013). While the EPA accounts for variability in setting emissions standards, nothing in CAA section 112 requires the Agency to consider malfunctions as part of that analysis. A malfunction should not be treated in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a ''normal or usual manner'' and no statutory language compels the EPA to consider such events in setting CAA section 112 standards.

Further, accounting for malfunctions in setting emission standards 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 (D.C. 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 (D.C. 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, emissions during a malfunction event can be significantly higher than emissions at any other time of source operation. For example, if an air pollution control

device with 99-percent removal goes off-line as a result of a malfunction (as might happen if, for example, the bags in a baghouse catch fire) and the emission unit is a steady state type unit that would take days to shut down, the source would go from 99-percent control to zero control until the control device was repaired. The source's emissions during the malfunction would be 100 times higher than during normal operations. As such, the emissions over a 4-day malfunction period would exceed the annual emissions of the source during normal operations. As this example illustrates, accounting for malfunctions could lead to standards that are not reflective of (and significantly less stringent than) levels that are achieved by a well-performing non-malfunctioning source. It is reasonable to interpret CAA section 112 to avoid such a result. The EPA's approach to malfunctions is consistent with CAA section 112 and is a reasonable interpretation of the statute.

Similar to startup and shutdown events, malfunctions of the POTW do not impact the effect of pretreatment requirements, because these require POTW to apply pretreatment standards on the industrial users. The industrial users meet these standards before the wastewater enters the collection system of the POTW.

In the case of a POTW that uses covers, closed vent systems, and control devices, the covers and closed vents are typically constructed without moving parts and are frequently permanent structures made of concrete. While malfunctions are theoretically possible, the EPA found no information from affected facilities that malfunctions have actually happened in such systems.

The control devices used to comply with the standards in 40 CFR part 63, subpart VVV are subject to the control device standards in 40 CFR part 63, subpart DD (because subpart DD is incorporated by reference into subpart VVV). A malfunction of control devices that are subject to subpart DD that results in a failure to meet a standard would be subject to the excess emissions recordkeeping and reporting requirements for the relevant device under subpart DD.

For POTW that are complying with the HAP fraction emissions alternative standard, the standard is an annual rolling average of the HAP fraction emitted. A malfunction event at a facility that is properly maintained and operated is likely to result in only a small and short-term increase in emissions that is unlikely to cause an exceedance of the annual standard. In the event that a malfunction causes an exceedance, the facility would report the nature of the malfunction in the excess emission report.

In the unlikely 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 (see 40 CFR 63.2, definition of Malfunction).

If the EPA determines in a particular case that an enforcement action against a source for violation of an emission standard is warranted, the source can raise any and all defenses in that enforcement action and the Federal District Court will determine what, if any, relief is appropriate. The same is true for citizen enforcement actions. Similarly, the presiding officer in an administrative proceeding can consider any defense raised and determine whether administrative penalties are appropriate.

In summary, the EPA interpretation of the CAA and, in particular, CAA section 112 is reasonable and encourages practices that will avoid malfunctions. Administrative and judicial procedures for addressing exceedances of the standards fully recognize that violations may occur despite good faith efforts to comply and can accommodate those situations.

The EPA is proposing changes to the SSM provisions of 40 CFR part 63, subpart VVV to comport with the *Sierra Club* court ruling and harmonize with certain provisions of 40 CFR part 63, subpart DD. Subpart VVV incorporates some requirements of subpart DD by reference. In 2015 (see 80 FR 14248), the SSM provisions of subpart DD were revised. The changes proposed here for the SSM provisions in subpart VVV are congruent to the changes already promulgated under subpart DD. This section describes how we propose to revise subpart VVV to harmonize with the SSM changes that have already been promulgated in subpart DD.

a. 40 CFR 63.1583 and 63.1586 General Duty

We are proposing to revise the General Provisions Table, Table 1 to Subpart VVV of part 63, (hereafter referred to as Table 1) entry for 40 CFR 63.6(e)(1)(i) by changing the ''yes'' in column 2 to a ''no.'' Section 63.6(e)(1)(i) describes the general duty to minimize emissions. Some of the language in that section is no longer necessary or appropriate in light of the elimination of the SSM exemption. We are proposing instead to add general duty regulatory text at 40 CFR 63.1583(d) and 63.1586(e) that reflects the general duty to minimize emissions while eliminating the reference to periods covered by an SSM exemption in Table 1. The current language in 40 CFR 63.6(e)(1)(i) characterizes what the general duty entails during periods of SSM. With the elimination of the SSM exemption, there is no need to differentiate between normal operations, startup and shutdown, and malfunction events in describing the general duty. Therefore, the language the EPA is proposing for 40 CFR 63.1583(d) and 63.1586(e) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise Table 1 by adding an entry for 40 CFR 63.6(e)(1)(ii) and designating in column 2 that it does not apply with a ''no.'' Section 63.6(e)(1)(ii) imposes requirements that are not necessary with the elimination of the SSM exemption or are redundant with the general duty requirement being added at 40 CFR 63.1583(d) and 63.1586(e).

b. SSM Plan

We are proposing to revise Table 1 by adding an entry for 40 CFR 63.6(e)(3) and designating that it does not apply. Generally, these paragraphs require development of an SSM plan and specify SSM recordkeeping and reporting requirements related to the SSM plan. As noted, the EPA is proposing to remove the SSM exemptions. Therefore, affected units will be subject to an emission standard during such events. The applicability of a standard during such events will ensure that sources have ample incentive to plan for and achieve compliance and thus the SSM plan requirements are no longer necessary.

c. Compliance With Standards

We are proposing to revise table 1 by adding an entry for 40 CFR 63.6(f)(1) and designating that it does not apply. The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the court in *Sierra Club* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standards apply

continuously. Consistent with *Sierra Club,* the EPA is proposing to revise standards in this rule to apply at all times.

We are proposing to leave unchanged the Table 1 entry for 40 CFR 63.6(h) because the existing rule indicated that opacity standards are not applicable. The current language of 40 CFR 63.6(h)(1) exempts sources from opacity standards during periods of SSM. Generally, POTW do not have visible emissions.

d. 40 CFR 63.1590 Performance Testing

We are proposing to revise the Table 1 entry for 40 CFR 63.7(e)(1) by changing the ''yes'' in column 2 to a ''no.'' Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to revise the language used to incorporate the performance testing requirements at 40 CFR 63.694, the performance testing provisions for control devices in 40 CFR part 63, subpart DD. The performance testing requirements in subpart DD differ from the General Provisions performance testing provisions in several respects. The performance testing provisions in 40 CFR 63.694(l) of subpart DD (incorporated by reference) provide that performance tests be based on representative performance (*i.e.,* performance based on normal operating conditions) and exclude periods of startup and shutdown unless specified by the Administrator. And as in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. The EPA is proposing to revise the language incorporating those sections of subpart DD that require the owner or operator to record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Section 63.7(e) requires that the owner or operator make available to the Administrator such records ''as may be necessary to determine the condition of the performance test'' available to the Administrator upon request, but does not specifically require the information to be recorded. The regulatory text the EPA is proposing to incorporate builds on that requirement and makes explicit the requirement to record the information.

e. Monitoring

We are proposing to revise the table 1 entry for 40 CFR 63.8 by adding specific table entries for 63.8(c)(1)(i) and (iii) and indicating ''no'' in column 2. The cross-references to the general duty and SSM plan requirements in those subparagraphs are not necessary in light of other requirements of 40 CFR 63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the requirements of a quality control program for monitoring equipment (40 CFR 63.8(d)).

We are proposing to revise Table 1 by adding an entry for 40 CFR 63.8(d)(3) and indicating ''no'' in column 2. The final sentence in 40 CFR 63.8(d)(3) refers to the General Provisions' SSM plan requirement which is no longer applicable. The EPA is proposing to add language to Table 1 that is identical to 40 CFR 63.8(d)(3), except that the final sentence is replaced with the following sentence: ''The program of corrective action should be included in the plan required under § 63.8(d)(2).''

f. 40 CFR 63.1589 Recordkeeping

We are proposing to revise the Table 1 entry for 40 CFR 63.10(b)(2)(i) by changing the ''yes'' in column 2 to a ''no.'' Section 63.10(b)(2)(i) describes the recordkeeping requirements during startup and shutdown. These recording provisions are no longer necessary because the EPA is proposing that recordkeeping and reporting applicable to normal operations will apply to startup and shutdown. In the absence of special provisions applicable to startup and shutdown, such as a startup and shutdown plan, there is no reason to retain additional recordkeeping for startup and shutdown periods.

We are proposing to revise Table 1 to add an entry for 40 CFR 63.10(b)(2)(ii) and indicating ''no'' in column 2. Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction. The EPA is proposing that the requirements of 40 CFR 63.696(h) and 40 CFR 63.1589(d) be the applicable recordkeeping requirements. The regulatory text we are proposing to make applicable differs from the General Provisions it is replacing in that the General Provisions requires the creation and retention of a record of the occurrence and duration of each malfunction of process, air pollution control, and monitoring equipment. The EPA is proposing that 40 CFR 63.696(h) and 40 CFR 63.1589(d) apply to any failure to meet an applicable standard and is requiring that the source record the date, time, and duration of the failure rather than the ''occurrence.'' The requirements under 40 CFR 63.696(h) and 40 CFR 63.1589(d) also provide that sources keep records that include a list of the affected source or equipment and actions taken to minimize emissions, an estimate of the quantity of each regulated pollutant emitted over the standard for which the source failed to meet the standard, and a description of the method used to estimate the emissions. Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing to require that sources keep records of this information to ensure that there is adequate information to allow the EPA to determine the severity of any failure to meet a standard, and to provide data that may document how the source met the general duty to minimize emissions when the source has failed to meet an applicable standard.

We are proposing to revise the General Provisions table (Table 1 entry for 40 CFR 63.10(b)(2)(iv) by changing the ''yes'' in column 2 to a ''no.'' When applicable, the provision requires sources to record actions taken during SSM events when actions were inconsistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required. The requirement previously applicable under 40 CFR 63.10(b)(2)(iv)(B) to record actions to minimize emissions and record corrective actions is now applicable as a record required by 40 CFR 63.696(h) and 40 CFR 63.1589(d).

We are proposing to revise the General Provisions Table 1 entry for 40 CFR 63.10(b)(2)(v) by adding an entry and indicating ''no'' in column 2. When applicable, the provision requires sources to record actions taken during SSM events to show that actions taken were consistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required.

We are proposing to revise Table 1 by adding an entry for 40 CFR 63.10(c)(15) and indicating ''no'' in column 2. The EPA is proposing that 40 CFR 63.10(c)(15) no longer apply. When applicable, the provision allows an owner or operator to use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e), to also satisfy the requirements of 40 CFR 63.10(c)(10) through (12). The EPA is proposing to eliminate this

requirement because SSM plans would no longer be required, and therefore 40 CFR 63.10(c)(15) no longer serves any useful purpose for affected units.

g. 40 CFR 63.1590 Reporting

We are proposing to revise the Table 1 entry for 40 CFR 63.10(d)(5) by adding an entry and indicating ''no'' in column 2. Section 63.10(d)(5) describes the reporting requirements for startups, shutdowns, and malfunctions. Rather than rely on the General Provisions reporting requirement, the EPA is proposing that the existing incorporation in 40 CFR 63.693 of subpart DD adequately provides for reporting of a failure to meet a standard when control devices are being used and 40 CFR 63.1590(a) when there is a failure to meet the standard when other compliance methods are used. Section 63.693 requires that sources that fail to meet an applicable standard at any time must report the information concerning such events in the semi-annual report required for affected facilities under 40 CFR 63.697(b)(3) and (b)(4). The current provisions in subpart DD that we are proposing, which apply when control devices are used as the compliance measure, state that the report must contain the number, date, time, duration, and the cause of such events (including unknown cause, if applicable), a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions. We are proposing a similar report in 40 CFR 63.1590(a) that contains the same reporting elements, but applies when another compliance measure other than a control device, is used. This report is required annually.

Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this requirement to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source met the general duty to minimize emissions during a failure to meet an applicable standard.

We will no longer require owners or operators to determine whether actions taken to correct a malfunction are consistent with an SSM plan, because plans would no longer be required. The proposed amendments, therefore, eliminate the cross reference to 40 CFR 63.10(d)(5)(i) that contains the description of the previously required SSM report format and submittal schedule from this section. These specifications are no longer necessary because the events will be reported in otherwise required reports with similar format and submittal requirements.

We are proposing to revise the Table 1 entry for 40 CFR 63.10(d)(5)(ii) by adding an entry and indicating ''no'' in column 2. Section 63.10(d)(5)(ii) describes an immediate report for SSM when a source failed to meet an applicable standard but did not follow the SSM plan. We will no longer require owners and operators to report when actions taken during a SSM were not consistent with an SSM plan, because plans would no longer be required.

We are proposing to revise the Table 1 entry for 40 CFR 63.10(d)(5)(i) by changing the ''yes'' in column 2 to ''no.'' Section 63.10(d)(5)(i) describes the reporting requirements for SSM when a source failed to meet an applicable standard and was subject to 40 CFR 63.6(e)(3). To replace the General Provisions requirement, the EPA is proposing to revise reporting requirements in 40 CFR 63.1590(f) and (g), which referred to SSM plans. The revised language for 40 CFR 63.1590(f) and (g) is proposed to be in 63.1590(b) and (f) respectively. Also, a report has been added at 63.1590(a)(4) for each failure to meet an applicable standard at an affected source, the owner or operator must report the failure and event to the Administrator in an annual Compliance Report. The report must contain the date, time, duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this requirement to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source met the general duty to minimize emissions during a failure to meet an applicable standard.

We are proposing to revise Table 1 by adding an entry for 40 CFR 63.10(d)(5)(ii) and indicating ''no'' in column 2. Section 63.10(d)(5)(ii) describes an immediate report for SSM when a source failed to meet an applicable standard, was subject to 40 CFR 63.6(e)(3), but did not follow the plan. We will no longer require owners or operators to report when actions taken during SSM were not consistent with an SSM plan, because plans would no longer be required.

4. Electronic Reporting

Through this proposal, the EPA is proposing that owners and operators of POTW treatment plants submit electronic copies of required performance test reports and annual reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). The EPA believes that the electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability, will further assist in the protection of public health and the environment, and will ultimately result in less burden on the regulated community. Under current requirements, paper reports are often stored in filing cabinets or boxes, which make the reports more difficult to obtain and use for data analysis and sharing. Electronic storage of such reports would make data more accessible for review, analyses, and sharing. Electronic reporting can also eliminate paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public.

In 2011, in response to Executive Order 13563, the EPA developed a plan [28] to periodically review its regulations to determine if they should be modified, streamlined, expanded, or repealed in an effort to make regulations more effective and less burdensome. The plan includes replacing outdated paper reporting with electronic reporting. In keeping with this plan and the White House's Digital Government Strategy,[29] in 2013 the EPA issued an Agency-wide policy specifying that new regulations will require reports to be electronic to the maximum extent

[28] *EPA's Final Plan for Periodic Retrospective Reviews,* August 2011. Available at: *https://www.epa.gov/sites/production/files/2015-09/documents/eparetroreviewplan-aug2011_0.pdf.*

[29] *Digital Government: Building a 21st Century Platform to Better Serve the American People,* May 2012. Available at: *https://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government-strategy.pdf.*

possible. By requiring electronic submission of specified reports in this proposed rule, the EPA is taking steps to implement this policy.

The EPA Web site that stores the submitted electronic data, WebFIRE, will be easily accessible to everyone and will provide a user-friendly interface that any stakeholder could access. By making data readily available, electronic reporting increases the amount of data that can be used for many purposes. One example is the development of emissions factors. An emissions factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant (*e.g.,* kilograms of particulate emitted per megagram of coal burned). Such factors facilitate the estimation of emissions from various sources of air pollution and are an important tool in developing emissions inventories, which in turn are the basis for numerous efforts, including trends analysis, regional and local scale air quality modeling, regulatory impact assessments, and human exposure modeling. Emissions factors are also widely used in regulatory applicability determinations and in permitting decisions.

The EPA has received feedback from stakeholders asserting that many of the EPA's emissions factors are outdated or not representative of a particular industry emission source. While the EPA believes that the emissions factors are suitable for their intended purpose, we recognize that the quality of emissions factors varies based on the extent and quality of underlying data. We also recognize that emissions profiles on different pieces of equipment can change over time due to a number of factors (fuel changes, equipment improvements, industry work practices), and it is important for emissions factors to be updated to keep up with these changes. The EPA is currently pursuing emissions factor development improvements that include procedures to incorporate the source test data that we are proposing be submitted electronically. By requiring the electronic submission of the reports identified in this proposed action, the EPA would be able to access and use the submitted data to update emissions factors more quickly and efficiently, creating factors that are characteristic of what is currently representative of the relevant industry sector. Likewise, an increase in the number of test reports used to develop the emissions factors will provide more confidence that the factor is of higher quality and representative of the whole industry sector.

Additionally, by making the records, data, and reports addressed in this proposed rulemaking readily available, the EPA, the regulated community, and the public will benefit when the EPA conducts its CAA-required technology and risk-based reviews. As a result of having performance test reports and air emission reports readily accessible, our ability to carry out comprehensive reviews will be increased and achieved within a shorter period of time. These data will provide useful information on control efficiencies being achieved and maintained in practice within a source category and across source categories for regulated sources and pollutants. These reports can also be used to inform the technology-review process by providing information on improvements to add-on control technology and new control technology.

Under an electronic reporting system, the EPA's Office of Air Quality Planning and Standards (OAQPS) would have air emissions and performance test data in hand; OAQPS would not have to collect these data from the EPA Regional Offices or from delegated air agencies or industry sources in cases where these reports are not submitted to the EPA Regional Offices. Thus, we anticipate fewer or less substantial ICRs in conjunction with prospective CAA-required technology and risk-based reviews may be needed. We expect this to result in a decrease in time spent by industry to respond to data collection requests. We also expect the ICRs to contain less extensive stack testing provisions, as we will already have stack test data electronically. Reduced testing requirements would be a cost savings to industry. The EPA should also be able to conduct these required reviews more quickly, as OAQPS will not have to include the ICR collection time in the process or spend time collecting reports from the EPA Regional Offices. While the regulated community may benefit from a reduced burden of ICRs, the general public benefits from the Agency's ability to provide these required reviews more quickly, resulting in increased public health and environmental protection.

Electronic reporting could minimize submission of unnecessary or duplicative reports in cases where facilities report to multiple government agencies and the agencies opt to rely on the EPA's electronic reporting system to view report submissions. Where air agencies continue to require a paper copy of these reports and will accept a hard copy of the electronic report, facilities will have the option to print paper copies of the electronic reporting forms to submit to the air agencies, and, thus, minimize the time spent reporting to multiple agencies. Additionally, maintenance and storage costs associated with retaining paper records could likewise be minimized by replacing those records with electronic records of electronically submitted data and reports.

Air agencies could benefit from more streamlined and automated review of the electronically submitted data. For example, because the performance test data would be readily-available in a standard electronic format, air agencies would be able to review reports and data electronically rather than having to conduct a review of the reports and data manually. Having reports and associated data in electronic format will facilitate review through the use of software ''search'' options, as well as the downloading and analyzing of data in spreadsheet format. Additionally, air agencies would benefit from the reported data being accessible to them through the EPA's electronic reporting system wherever and whenever they want or need access (as long as they have access to the Internet). The ability to access and review air emission report information electronically will assist air agencies to more quickly and accurately determine compliance with the applicable regulations, potentially allowing a faster response to violations which could minimize harmful air emissions. This benefits both air agencies and the general public.

The proposed electronic reporting of data is consistent with electronic data trends (*e.g.,* electronic banking and income tax filing). Electronic reporting of environmental data is already common practice in many media offices at the EPA. The changes being proposed in this rulemaking are needed to continue the EPA's transition to electronic reporting.

5. Reporting

In addition to the changes made to reporting to address the court decision in *Sierra Club* v. *EPA,* 551 F. 3d 1019 (D.C. Cir. 2008) on SSM requirements described in section IV.D.3 of this preamble, we are proposing several other changes to the reporting requirements. We are proposing to add an annual report; to remove language that is redundant with 40 CFR part 63, subpart A, general provision requirements; and to not delegate the approval of the Inspection and Monitoring Plan. We are also asking for comment on requiring specific test methods and modeling procedures instead of allowing the POTW to specify

their methods in the Inspection and Monitoring Plan. Our analyses and proposed changes related to these issues are presented below.

Annual Report. EPA is proposing to add a requirement to submit an annual report. The proposed contents for the annual report include general identification information for the POTW; information on the monthly HAP fraction emitted calculation results; and cover inspection results for new or reconstructed POTW, depending on which compliance method the POTW selects. Also, we are proposing to include a requirement to report information about periods when the POTW has a failure to meet a standard as part of the annual report. The failure to meet report is discussed in more detail in section IV.D.3.g. We are also proposing that the annual report be submitted electronically. The rationale and benefits of having this report submitted electronically is discussed in section IV.D.4 of this preamble.

EPA is proposing the annual report to address the changes in SSM requirements as described in section IV.D.3.g, to receive timely compliance information from the POTW, and as a method to collect additional information to enhance our ability to carry out comprehensive reviews within a shorter period of time. These data will provide useful information on HAP fraction emissions and inspection results across regulated POTW. These reports can be used to inform the technology-review process, reduce the need for complex ICRs, and could result in a decrease in time spent by industry in responding to data collection requests.

For existing POTW, it is proposed that the initial annual report will cover the first year after the compliance date, which is one year after promulgation, and 3 months are proposed to allow time for the POTW to compile and prepare the information for submittal. Therefore, the first annual report for existing POTW must be submitted to the Administrator 27 months after the promulgation of this rulemaking. For new POTW, the initial annual report must be submitted 15 months after the POTW becomes subject to the rule. The initial annual report must cover the 12-month period following the day the new POTW becomes subject, with 3 months proposed to allow the POTW time to compile and prepare the submittal. All subsequent annual reports, for new or existing POTW, must be submitted annually thereafter.

General Provision requirements. EPA is proposing to revise the reporting and notification requirements in 40 CFR 63.1590 and 63.1591 by removing those requirements that are redundant to requirements that are included in the General Provisions (40 CFR 63, subpart A) and marked as applicable in Table 1 of the POTW NESHAP. Specifically, much of the language in the 2002 POTW NESHAP requirements in 40 CFR 63.1590(a), (b), (d), and 40 CFR 63.1591(a) and (b) is the same or very similar to the requirements in the general provisions at 40 CFR 63.9(h)(2), (h)(3), (a)(4), (a)(4), and (b)(2), respectively. EPA has simplified the language by removing these redundant requirements and removed possible confusion caused by two sets of requirements.

In addition to removing these redundant requirements, EPA is proposing to add provisions that provide specific information on what is required in the Notification of Compliance Status for POTW, see 63.1591(b). We have proposed that submitting an Inspection and Monitoring Plan required for POTW meeting the HAP fraction emitted standard satisfies the requirement for submitting a Notification of Compliance Status. We have also clarified in the proposed rule, for new or reconstructed POTW that select the cover and control compliance option, the Notification of Compliance Status report must include a description of the POTW treatment units and installed covers, in addition to the performance test results.

Inspection and Monitoring Plan. The Inspection and Monitoring Plan is required in 40 CFR 63.1588(c) for a POTW meeting the HAP fraction emitted standard. It requires the POTW to document their plan for determining the HAP faction emitted, including the test methods and equipment to be used to collect the necessary data, the method for calculating the HAP fraction emitted, and the method that will be used to demonstrate continuous compliance with the HAP fraction emitted standard. The Inspection and Monitoring Plan must be submitted for approval. EPA is proposing in this rulemaking that the Inspection and Monitoring Plan can only be approved by the EPA and the authority to approve this plan cannot be delegated to a state, local or tribal agency. Because the methods and procedures used to determine the HAP fraction emitted are critical in accurately determining whether the POTW is in compliance, and the continuous compliance monitoring methods proposed by the POTW in their Inspection and Monitoring Plan could vary widely, EPA is retaining this authority to ensure that consistent and accurate test and monitoring methods are used. EPA considers it necessary to keep this approval authority so that all Inspection and Monitoring Plans can be reviewed consistently by one agency.

Test Methods and Modeling Procedures/Software. In the Inspection and Monitoring Plans, the POTW must specify the test methods they will use to determine flowrates and HAP concentrations of incoming wastewater streams, as well as how they will model and determine their HAP emissions. We are considering requiring specific test methods that must be used to determine the flowrate of wastewater to the POTW and the HAP concentrations in incoming wastewater streams. We are also considering requiring specific modeling procedures and/or software to be used to determine HAP emissions. By specifying the specific test methods and modeling procedures to be used for this data and not allowing POTW to select any method they choose, EPA can ensure consistency and accuracy of the data used to determine compliance with the rule. EPA requests comment on whether we should require specific test methods and modeling procedures/software in the final regulation. We request comment on which test methods or modeling procedures/software should be required. We are interested in information on test methods and modeling procedures/software with respect to their accuracy, what are typically used at POTW, and whether there are specific methods that are required in Title V or NPDES permit requirements.

6. Other Corrections or Clarifications

The EPA is also proposing the following technical corrections:

- Revising all references to ''new or reconstructed POTW'' to refer to ''new POTW'' because the definition of ''new'' includes reconstructed POTW.
- Combining text from 40 CFR 63.1581 and 63.1582 because the language was redundant and confusing. Revising 40 CFR 63.1581 to include all combined text. Revising 40 CFR 63.1583(c) to include the text from the current 40 CFR 63.1582(c).
- Revising 40 CFR 63.1586(b)(1) to require covers ''designed and operated to prevent exposure of the wastewater to the atmosphere.'' instead of ''designed and operated to minimize exposure of the wastewater to the atmosphere.'' This clarification has also been made to the definition of ''cover'' in 40 CFR 63.1595.
- Revising 40 CFR 63.1587 to include compliance requirements that are currently found in 40 CFR 63.1584 and 63.1587 and deleting 40 CFR 63.1584.
- Revising all references to ''annual'' rolling average to ''12-month'' rolling

average to clarify that the HAP fraction must be determined on a monthly basis and not an annual basis.

• Revising all references to ''annual HAP mass loadings'' and ''annual HAP emissions'' to now state ''monthly HAP mass loadings'' and ''monthly HAP emissions'' to further clarify that the HAP faction must be determined on a monthly basis.

• Clarifying method for calculating the HAP fraction emitted. Moving the detailed instructions about how the HAP fraction emitted should be calculated from 40 CFR 63.1588(c)(4) to 40 CFR 63.1588(c)(3). The requirements in 40 CFR 63.1588(c)(3) specifically address how the HAP fraction emitted should be calculated, while the requirements in 40 CFR 63.1588(c)(4) are about monitoring for continuous compliance.

• Revising 40 CFR 63.1588(a)(3) to clarify that a cover defect must be repaired within 45 ''calendar'' days; currently the paragraph says ''45 days.''

• Adding definitions of existing source/POTW and new source/POTW to 40 CFR 63.1595 to clarify the date that determines whether a POTW is existing or new.

• Revising the definition of ''affected source'' in 40 CFR 63.1595 to clarify that the affected source is the source that is subject to the rule.

• Revising references to ''POTW treatment plant'' to refer to ''POTW'' to clarify that the rule applies to all parts of the POTW and not just the treatment plant portion. Updating the title of 40 CFR 63.1588 to ''How do Group 1 and Group 2 POTW demonstrate compliance?'' from ''What inspections must I conduct?'' The new title better reflects the contents of this section.

• Removing the details on how to calculate the HAP fraction emitted from the definition of HAP fraction emitted. The procedure for how to calculate the HAP fraction emitted is provided within the text of the rule. Having a summarized version of this procedure in the definition was redundant and could cause confusion where the language was not the same.

• Revising two references to dates to insert the actual date. The phrase ''six months after October 26, 1999'' was replaced with ''April 26, 2000''; and the phrase ''60 days after October 26, 1999'' was replaced with ''December 27, 1999''. These changes do not result in a change in the date, it only clarifies the specific dates being referenced.

• Clarifying that the reports required in 40 CFR 63.1589(b)(1) include the records associated with the HAP loading and not just the records associated with the HAP emissions determination.

• Removing definition of ''Reconstruction'' in 40 CFR 63.1595 as ''Reconstruction'' is already defined in the General Provisions of 40 CFR 63.2.

E. What compliance dates are we proposing?

The EPA is proposing that all of the amendments being proposed in this action would be effective on the date 30 days after these proposed amendments are final, *see* 40 CFR 63.1587. Additionally, the EPA is proposing a 12-month compliance schedule so that existing non-industrial (Group 2) POTW treatment plants have time to develop the recordkeeping and reporting systems needed to comply with the requirements of the HAP fraction emission limit. Likewise, industrial (Group 1) POTW treatment plants need time to develop methods to demonstrate compliance with both the POTW NESHAP and the other applicable NESHAP, including development of the recordkeeping and reporting systems, and 12 months will provide industrial (Group 1) POTW the time needed to make these changes. Finally, POTW need time to examine their SIU pretreatment permits and evaluate if additional limits should be incorporated, and issue those revised permits. We estimate that 12 months should provide the time necessary to perform this evaluation and revise permits, as needed. Table 4 below describes the compliance dates and applicable standards for new and existing sources based on their subcategory and date of construction or reconstruction.

TABLE 4 TO SUBPART VVV OF PART 63—COMPLIANCE DATES AND REQUIREMENTS

If the construction/reconstruction date is . . .	Then the owner or operators must comply with . . .	And the owner or operators must achieve compliance . . .
Group 1 POTW:		
(1) After December 27, 2016.	(i) New source requirements in §§ 63.1583(b); 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	Upon initial startup.
(2) After December 1, 1998 but on or before December 27, 2016.	(i) New source requirements in § 63.1583(b) but instead of complying with both requirements, you must comply with the most stringent requirement [1]. (ii) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	(i) Upon initial startup through the date 12 months after the final rule is published in the **Federal Register**. (ii) On or before date 12 months after the final rule is published in the **Federal Register**.
(3) On or before December 1, 1998.	(i) Existing source requirements in § 63.1583(a) but instead of complying with both requirements, you must comply with only the other applicable NESHAP. (ii) Existing source requirements in §§ 63.1583(a); 63.1586(a) and (d); and 63.1588 through 63.1591.	(i) By the compliance date specified in the other applicable NESHAP. (ii) On or before date 12 months after the final rule is published in the **Federal Register**.
Group 2 POTW:		
(4) After December 27, 2016.	(i) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	Upon initial startup.
(5) After December 1, 1998 but on or before December 27, 2016.	(i) New source requirements in § 63.1586(b) or (c) [1] ..... (ii) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	(i) Upon initial startup through the date 12 months after the final rule is published in the **Federal Register**. (ii) On or before date 12 months after the final rule is published in the **Federal Register**.
(6) On or before December 1, 1998.	(i) Existing source requirements in §§ 63.1586(a) and (d); and 63.1588 through 63.1591.	On or before date 12 months after the final rule is published in the **Federal Register**.

[1] **Note:** This represents the requirements in the original 1999 NESHAP, which are applicable until 12-months after the final rule is published in the **Federal Register**. During those 12-months, you must transition to the new requirements in Table 2 (2)(ii) and (5)(ii) for Group 1 and Group 2 POTW, respectively.

The tasks necessary for existing and new POTW to comply with electronic reporting of annual reports requires two years for compliance. The EPA is proposing that the compliance date for electronically submitting annual reports would be two years after the date the final rule is published in the **Federal Register** or once the form has been available in CEDRI for at least 1 year, whichever date is later. Prior to that date, you must submit these reports to the Administrator at the address listed in 40 CFR 63.13, unless another format is agreed upon with the Administrator. We will post the date that each form becomes available on the CEDRI Web site (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) and notice will be sent out through the Clearinghouse for Inventories and Emissions Factors (CHIEF) Listserv (*https://www.epa.gov/chief/chief-listserv*). This extended compliance period affords you more time to reprogram systems that collect data for periodic reports and to become familiar with the new reporting form. This time extension will also allow air agencies more time to implement electronic reporting and to begin making any needed permit revisions to accommodate electronic reporting. In addition, it will provide sufficient time for you and us to conduct beta testing of the CEDRI form in advance of initial reporting. We believe that this will instill confidence that any technical issues with the forms will be resolved prior to requiring the use of the forms for compliance purposes, such that use of the forms will not interfere with your ability to comply with the requirement for electronic submittal.

The tasks necessary to comply with the other proposed amendments require no time or resources. Therefore, the EPA believes that existing facilities will be able to comply with the other proposed amendments, including those related to SSM periods, as soon as the final rule is effective, which will be the date 30 days after publication of the final rule. Therefore, the EPA is specifically soliciting comment and additional data on the burden of complying with the other proposed amendments.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

The EPA estimates, based on the responses to the 2015 ICR and the 2011 NEI, that there are six POTW that are engaged in treatment of industrial wastewater and are currently subject to the POTW NESHAP. Two of these facilities are considered industrial (Group 1) POTW, while the remaining four are considered non-industrial (Group 2) POTW. The EPA estimates that all six POTW currently subject to the POTW NESHAP would be affected by the proposed pretreatment requirements, and the two industrial (Group 1) POTW would be affected by the requirement for these facilities to comply with both the requirements for existing non-industrial (Group 2) POTW (*see* section IV.C.3 of this preamble) and the other applicable NESHAP. In addition, the EPA estimates that the four existing non-industrial (Group 2) POTW would be affected by the proposed requirement to meet the 0.08 HAP fraction emitted limit. The EPA is not currently aware of any planned or potential new or reconstructed industrial (Group 1) or non-industrial (Group 2) POTW.

B. What are the air quality impacts?

The EPA estimates that annual organic HAP emissions from the six POTW subject to the rule are approximately 20 tpy; there are no expected inorganic HAP emissions from this category. The EPA does not anticipate any additional emission reductions from the proposed changes to the rule because each of the subject facilities is currently able to meet the proposed emission limits and there are no anticipated new or reconstructed facilities.

C. What are the cost impacts?

The six POTW subject to this proposal will incur costs to meet recordkeeping and reporting requirements. Nationwide annual costs associated with the proposed requirements are estimated to be $10,530 per year. We believe that the six POTW which are known to be subject to this proposed rule can meet these proposed requirements without incurring additional capital or operational costs. Therefore, the only costs associated with this proposed rule are related to recordkeeping and reporting. For further information on the proposed requirements for this rule, see section IV of this preamble. For further information on the costs associated with the proposed requirements of this rule, see the document titled *Supporting Statement for Publicly Owned Treatment Works* in the docket. The *Technology Review Memo* in the docket for this action presents cost estimates associated with the regulatory options that were not selected for inclusion in this proposed rule.

D. What are the economic impacts?

The economic impact analysis is designed to inform decision makers about the potential economic consequences of a regulatory action. For the current proposal, the EPA estimated the annual cost of recordkeeping and reporting as a percentage of reported sewage fees received by the affected POTW. For the proposed regulations, costs are expected to be less than 0.05 percent of collected sewage fees, based on publicly available financial reports from the fiscal year ending in 2015 for the affected entities.

In addition, the EPA performed a screening analysis for impacts on small businesses by comparing estimated population served by the affected entities to the population limit set forth by the U.S. Small Business Administration. The screening analysis found that the population served for all affected entities is greater than the limit qualifying a public entity as small.

More information and details of EPA's analysis of the economic impacts, including the conclusions stated above, is provided in the technical document ''Economic Impact Analysis for the Publicly Owned Treatment Works National Emissions Standards for Hazardous Air Pollutants Risk and Technology Review,'' which is available in the docket for this proposed rule (Docket ID No. EPA–HQ–OAR–2016–0490).

E. What are the benefits?

As all affected entities are already in compliance with the proposed regulations, no additional emissions reductions are expected, but the proposed requirements will ensure that future emissions do not increase beyond current levels. Moreover, the EPA believes that the electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends of data availability, will further assist in the protection of public health and the environment, and will ultimately result in less burden on the regulated community. See section IV.D.4 of this preamble for more information.

VI. Request for Comments

We solicit comments on all aspects of this proposed action. In addition to general comments on this proposed action, we are also interested in additional data that may improve the risk assessments and other analyses. We are specifically interested in receiving any improvements to the data used in the site-specific emissions profiles used

for risk modeling. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Section VII of this preamble provides more information on submitting data.

In addition to the requests for comment in this section, the EPA requests comments on topics already identified in these sections:

The EPA requests identification of any additional POTW that are subject to the POTW NESHAP, other than those listed in the list of facilities in the POTW RTR database. The database can be found in the docket for this action. In addition, the EPA is not currently aware of any planned or potential new or reconstructed industrial (Group 1) or non-industrial (Group 2) POTW. Thus, the EPA requests comment on any other POTW that are subject to the POTW NESHAP or could potentially become subject in the future.

The EPA requests comment on the extent to which HAP emissions from other POTW not evaluated in the environmental risk screening assessment may cause adverse environmental effects. Such information should include references to peer-reviewed ecological effects benchmarks that are of sufficient quality for making regulatory decisions, as well as information on the presence of organisms located near facilities within the source category that such benchmarks indicate could be adversely affected.

We are requesting comment on whether POTW should evaluate volatile organic HAP and set limits within the pretreatment programs for these pollutants.

We are soliciting comment on the effectiveness of caustic scrubbers and carbon adsorbers to co-control HAP while primarily functioning as odor control devices. In addition, we are requesting quantitative feedback on the effectiveness of using covers only to suppress emissions, and identification of any other key operating parameters that may affect HAP emissions levels such as ventilation rates or control device maintenance practices.

We are also requesting comment on whether we should provide an alternative to the 0.08 HAP fraction emitted standard that would require either covering the primary clarifier, or would require covering and control of all primary treatment units (except primary clarifiers, which would only require covering). The second alternative would keep the requirements for existing sources consistent with those for new sources, namely to cover and control their primary treatment units or to meet the HAP fraction standard.

We do not intend to include small POTW that are not a major source of HAP emissions. Therefore, we request comment on whether the proposed revisions to the applicability criteria inadvertently include POTW that would otherwise have not been included in a major source rule.

We are requesting comment on any specific test methods or emission estimation software that EPA could require for determining the HAP fraction emitted. Additionally, we are requesting comment on whether EPA should specify test methods and emission estimation software instead of allowing the POTW to submit site-specific methods with the Inspection and Monitoring Plan.

We are requesting comment on our proposal that subject POTW would be in compliance with all of the amendments by 1 year after publication of the final rule. We believe that is enough time for (1) non-industrial (Group 2) POTW treatment plants need to set up recordkeeping and reporting systems to comply with the HAP fraction emission limit; (2) industrial (Group 1) POTW treatment plants to develop recordkeeping and reporting systems to comply with both the POTW NESHAP and the other applicable NESHAP; and (3) POTW to examine their SIU pretreatment permits and evaluate if additional limits should be incorporated and issue those revised permits. The EPA also believes that existing facilities will be able to comply with the other proposed amendments, including those related to SSM periods, as soon as the final rule is effective, which will be the date 30 days after publication of the final rule. The EPA is specifically soliciting comment and additional data on the burden of complying with the other proposed amendments.

VII. Submitting Data Corrections

The site-specific emissions profiles used in the source category risk and demographic analyses and instructions are available for download on the RTR Web site at *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html*. The data files include detailed information for each HAP emissions release point for the facilities in the source category.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any ''improved'' data that you have, 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 site, complete the following steps:

1. Within this downloaded file, enter suggested revisions to the data fields appropriate for that information.

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–2016–0490 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at that facility. We request that all data revision comments be submitted in the form of updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR Web site at *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html*.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders*.

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

This action is not a significant regulatory action and, therefore, was not submitted to OMB for review.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 1891.08. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The information to be collected includes annual reports of the HAP fraction emitted, an inspection and monitoring plan explaining how compliance with the HAP fraction emitted limit will be achieved, and pretreatment reports required under 40

CFR part 403. This information will be used to ensure that the requirements are being implemented and are complied with on a continuous basis. Specifically, the information will be used to: (1) Identify sources subject to the standards; (2) ensure that the POTW NESHAP is being properly applied; and (3) ensure that the POTW NESHAP is being complied with.

Respondents/affected entities: The respondents to the recordkeeping and reporting requirements are owners and operators of POTW. The North American Industry Classification System code for the respondents affected by the standard is 221320 (Sewage Treatment Facilities), which corresponds to the United States Standard Industrial Classification code 4952 (Sewerage Systems).

Respondent's obligation to respond: Respondents are obligated to respond in accordance with the reporting requirements under 40 CFR 63.1590(a)(2), 63.1590(e), and 63.1590(g).

Estimated number of respondents: Six.

Frequency of response: Twelve per year.

Total estimated burden: Ninety-nine hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $10,350 (per year), includes $0 annualized capital or operation and maintenance costs.

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.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to *oria_submissions@omb.eop.gov*, Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than January 26, 2017. The EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. There are no small entities affected in this regulated industry. See the technical document, *Economic Impact Analysis for the Publicly Owned Treatment Works National Emissions Standards for Hazardous Air Pollutants Risk and Technology Review* which is available in the docket for this proposed rule (Docket ID No. EPA–HQ–OAR–2016–0490) for more detail.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

E. Executive Order 13132: Federalism

This action 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.

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

This action does not have tribal implications as specified in Executive Order 13175. As discussed in section II.B.1 of this preamble, we have identified only seven POTW that are subject to this proposed rule and none of those POTW are owned or operated by tribal governments. Thus, Executive Order 13175 does not apply to this action.

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

The action is not subject to Executive Order 13045 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's health and risk assessments are contained in sections III.A and B and sections IV.A and B of this preamble and the *Residual Risk Report* memorandum contained in the docket for this rulemaking.

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

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in section III.A.6 of this preamble and in the corresponding technical report, *Risk and Technology Review—Analysis of Socio-Economic Factors for Populations Living Near Publicly Owned Treatment Works,* available in the docket for this action. The proximity results indicate, for eight of the 11 demographic categories, that the population percentages within 5 km and 50 km of source category emissions are greater than the corresponding national percentage for those same demographics. However, the results of the risk analysis presented in section III.A.6 of this preamble and in the corresponding technical report indicate that there are no people exposed to a cancer risk greater than or equal to 1-in-1 million as a result of emissions from POTW.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: December 8, 2016.

Gina McCarthy,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency proposes to amend part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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

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

■ 2. Subpart VVV of part 63 is revised to read as follows:

Subpart VVV—National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works

Sec.

Applicability

Group 1 POTW Description and Requirements

Group 1 and Group 2 POTW Requirements

General Requirements

Table 1 to Subpart VVV of Part 63—Applicability of 40 CFR Part 63 General Provisions to Subpart VVV

Table 2 to Subpart VVV of Part 63—Compliance Dates and Requirements

Subpart VVV—National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works

Applicability

§ 63.1580 Am I subject to this subpart?

(a) You are subject to this subpart if your publicly owned treatment works (POTW) has a design capacity to treat at least 5 million gallons of wastewater per day and treats wastewater from an industrial or commercial facility; and either paragraph (a)(1) or (2) of this section is true:

(1) You own or operate a POTW that is a major source of HAP emissions; or

(2) You own or operate a Group 1 POTW regardless of whether or not it is a major source of hazardous air pollutants (HAP).

(b) If your existing POTW is not located at a major source as of October 26, 1999, but thereafter becomes a major source for any reason other than reconstruction, then, for the purpose of this subpart, your POTW would be considered an existing source.

Note to Paragraph (b): See § 63.2 of the National Emission Standards for Hazardous Air Pollutants (NESHAP) General Provisions in subpart A of this part for the definitions of major source and area source.

(c) If you commence construction or reconstruction of your POTW after December 1, 1998, then the requirements for a new POTW apply.

§ 63.1581 Does the subpart distinguish between different types of POTW?

Yes, POTW are divided into two subcategories: Group 1 POTW and Group 2 POTW, as described in paragraphs (a) through (c) of this section.

(a) Your POTW is a Group 1 POTW if an industrial discharger complies with its NESHAP by using the treatment and control located at your POTW. Your POTW accepts the regulated waste stream and provides treatment and controls as an agent for the industrial discharger. Group 1 POTW is defined in § 63.1595.

(b) Your POTW is a Group 2 POTW if you treat wastewater that is not subject to control by another NESHAP or the industrial facility does not comply with its NESHAP by using the treatment and controls located at your POTW. Group 2 POTW is defined in § 63.1595.

(c) If, in the future, an industrial discharger complies with its NESHAP by using the treatment and control located at your POTW, then your Group 2 POTW becomes a Group 1 POTW on the date your POTW begins treating that regulated industrial wastewater stream.

Group 1 POTW Description and Requirements

§ 63.1582 [Reserved]

§ 63.1583 What are the emission points and control requirements for a Group 1 POTW?

(a) The emission points and control requirements for an existing Group 1 POTW are both those specified by the appropriate NESHAP for which the POTW treats regulated industrial wastewater and those emission points and control requirements set forth in § 63.1586(a) and (d).

(b) The emission points and control requirements for a new Group 1 POTW are both those specified by the appropriate NESHAP for which the POTW treats regulated industrial wastewater and those emission points and control requirements set forth in § 63.1586(b) or (c), and (d), as applicable.

(c) If your Group 1 POTW accepts one or more specific regulated industrial waste streams as part of compliance with one or more other NESHAP, then you are subject to all the requirements of each appropriate NESHAP for each waste stream and the applicable requirements set forth in § 63.1586.

(d) 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. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

§ 63.1584 [Reserved]

§ 63.1585 How does a Group 1 POTW demonstrate compliance?

(a) A Group 1 POTW demonstrates compliance by operating treatment and control devices that meet all requirements specified in the appropriate NESHAP.

(b) A Group 1 POTW must also demonstrate compliance by meeting the requirements specified in § 63.1586, as applicable, as well as the applicable requirements in §§ 63.1587 through 63.1595.

Group 1 and Group 2 POTW Requirements

§ 63.1586 What are the emission points and control requirements for Group 1 and Group 2 POTW?

(a) Existing Group 1 and Group 2 POTW must demonstrate that the HAP fraction emitted from all emission points up to, but not including, the secondary influent pumping station or the secondary treatment units does not exceed 0.08 on a 12-month rolling average. You must demonstrate that for your POTW, the sum of all HAP emissions from these emission points divided by the sum of all HAP mass loadings to the POTW results in a 12-month rolling average of the fraction emitted no greater than 0.08. You may use any combination of pretreatment, wastewater treatment plant modifications, and control devices to achieve this performance standard.

(b) Except as provided in paragraph (c) of this section, new Group 1 and Group 2 POTW must install covers on the emission points up to, but not including, the secondary influent pumping station or the secondary treatment units. These emission points are treatment units that include, but are not limited to, influent waste stream conveyance channels, bar screens, grit chambers, grinders, pump stations, aerated feeder channels, primary clarifiers, primary effluent channels, and primary screening stations. In addition, all covered units, except primary clarifiers, must have the air in the headspace underneath the cover ducted to a control device in accordance with the standards for closed-vent systems and control devices in § 63.693, except you may substitute visual inspections for leak detection rather than Method 21 of appendix A–7 of part 60 of this chapter. Covers must meet the following requirements:

(1) Covers must be tightly fitted and designed and operated to prevent exposure of the wastewater to the atmosphere. This includes, but is not limited to, the absence of visible cracks, holes, or gaps in the roof sections or between the roof and the supporting wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) If wastewater is in a treatment unit, each opening in the cover must be maintained in a closed, sealed position, unless plant personnel are present and conducting wastewater or sludge sampling, or equipment inspection, maintenance, or repair.

(c) As an alternative to the requirements in paragraph (b) of this section, a new Group 1 and Group 2 POTW may comply by demonstrating, for all emission points up to the secondary influent pumping station or the secondary treatment units, that the HAP fraction emitted does not exceed 0.014 on a 12-month rolling average. You must demonstrate that for your POTW, the sum of all HAP emissions from these units divided by the sum of all HAP mass loadings to the POTW results in a 12-month rolling average of the HAP fraction emitted of no greater than 0.014. You may use any combination of pretreatment, wastewater treatment plant modifications, and control devices to achieve this performance standard.

(d) Existing and new Group 1 and Group 2 POTW must develop and implement a pretreatment program as defined by § 403.8 of this chapter.

(e) 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. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of the applicable standard have been met. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

§ 63.1587 When do I have to comply?

Sources subject to this subpart are required to achieve compliance on or before the dates specified in table 2 to this subpart.

§ 63.1588 How do Group 1 and Group 2 POTW demonstrate compliance?

(a) If you are complying with § 63.1586(b) by using covers, you must conduct the following inspections:

(1) You must visually check the cover and its closure devices for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the supporting wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) You must perform an initial visual inspection within 60 calendar days of becoming subject to this NESHAP and perform follow-up inspections at least once per year, thereafter.

(3) In the event that you find a defect on a treatment unit in use, you must repair the defect within 45 calendar days. If you cannot repair within 45 calendar days, you must notify the EPA or the designated state authority immediately and report the reason for the delay and the date you expect to complete the repair. If you find a defect on a treatment unit that is not in service, you must repair the defect prior to putting the treatment unit back in wastewater service.

(b) If you own or operate a control device used to meet the requirements for § 63.1586(b), you must comply with the inspection and monitoring requirements of § 63.695(c).

(c) To comply with the performance standard specified in § 63.1586(a) or (c), you must develop, to the satisfaction of the Administrator, an Inspection and Monitoring Plan. This Inspection and Monitoring Plan must include, at a minimum, the following:

(1) A method to determine the influent HAP mass loading, *i.e.,* the monthly mass quantity for each HAP entering the wastewater treatment plant.

(2) A method to determine your POTW's monthly HAP emissions for all units up to but not including the secondary influent pumping station or the secondary treatment units. The method you use to determine your HAP emissions, such as modeling or direct source measurement, must:

(i) Be approved by the Administrator for use at your POTW;

(ii) Account for all factors affecting emissions from your plant including, but not limited to, emissions from wastewater treatment units; emissions resulting from inspection, maintenance, and repair activities; fluctuations (*e.g.,* daily, monthly, annual, seasonal) in your influent wastewater HAP concentrations; annual industrial loading; performance of control devices; or any other factors that could affect your annual HAP emissions; and

(iii) Include documentation that the values and sources of all data, operating conditions, assumptions, etc., used in your method result in an accurate estimation of monthly emissions from your plant.

(3) A method to demonstrate that your POTW meets the HAP fraction emitted standards specified in § 63.1586(a) or (c), *i.e.,* the sum of all monthly HAP emissions over a 12-month period from paragraph (c)(2) of this section divided by the sum of all monthly HAP mass loadings over a 12-month period from paragraph (c)(1) of this section results in a fraction emitted of 0.08 or less to demonstrate compliance with § 63.1586(a) or 0.014 or less to demonstrate compliance with § 63.1586(c). The Inspection and Monitoring plan must require, at a minimum, that you perform the calculations shown in paragraphs (c)(3)(i) through (viii) of this section by the end of each month for the previous month. This calculation shall demonstrate that your 12-month rolling average of the HAP fraction emitted is 0.08 or less when demonstrating compliance with § 63.1586(a) or 0.014 or less when demonstrating compliance with § 63.1586(c).

(i) Determine the average daily flow in million gallons per day (MGD) of the wastewater entering your POTW for the previous month;

(ii) Determine the concentration of each HAP in your influent listed in Table 1 to subpart DD of this part for the previous month;

(iii) Using the previous month's information in paragraphs (c)(3)(i) and (ii) of this section, determine a total monthly flow-weighted loading in pounds per day (lbs/day) of each HAP entering your POTW for the previous month;

(iv) Sum up the values for each individual HAP loading in paragraph (c)(3)(iii) of this section and determine a total monthly flow-weighted loading value (lbs/day) for all HAP entering your POTW for the previous month;

(v) Based on the previous month's information in paragraph (c)(3)(iii) of this section along with source testing and emission modeling, for each HAP, determine the monthly emissions (lbs/day) from all wastewater treatment units up to, but not including, secondary treatment units for the previous month;

(vi) Sum the values of emissions for each individual HAP determined in paragraph (c)(3)(v) of this section and calculate the total monthly emissions value for the previous month for all HAP from all wastewater treatment units up to, but not including, secondary treatment units;

(vii) Calculate the HAP fraction emitted value for the previous month, using Equation 1 of this section as follows:

$$f_e \text{ monthly} = \Sigma E / \Sigma L \quad \text{(Eq. 1)}$$

Where:

f_e monthly = HAP fraction emitted for the previous month

ΣE = Total HAP emissions value from paragraph (c)(3)(vi) of this section

ΣL = Total monthly loading from paragraph (c)(3)(iv) of this section

(viii) Average the HAP fraction emitted value for the month determined in paragraph (c)(3)(vii) of this section, with the values determined for the previous 11 months, to calculate a 12-month rolling average of the HAP fraction emitted.

(4) A method to demonstrate, to the satisfaction of the Administrator, that your POTW is in continuous compliance with the requirements of § 63.1586(a) or (c). Continuous compliance means that your emissions, when averaged over the course of a 12-month period, do not exceed the level of emissions that allows your POTW to comply with § 63.1586(a) or (c) on a monthly basis. For example, you may identify a parameter(s) that you can monitor that assures your emissions, when averaged over a 12-month period, will meet the requirements in § 63.1586(a) or (c) each month. Some example parameters that may be considered for monitoring include your wastewater influent HAP concentration and flow, industrial loading from your permitted industrial dischargers, and your control device performance criteria. Where emission reductions are due to proper operation of equipment, work practices, or other operational procedures, your demonstration must specify the frequency of inspections and the number of days to completion of repairs.

(d) Prior to receiving approval on the Inspection and Monitoring Plan, you must follow the plan submitted to the Administrator as specified in § 63.1590(e) or (f), as applicable.

§ 63.1589 What records must I keep?

(a) To comply with the equipment standard specified in § 63.1586(b), you must prepare and maintain the records required in paragraphs (a)(1) through (4) of this section:

(1) A record for each treatment unit inspection required by § 63.1588(a). You must include a treatment unit identification number (or other unique identification description as selected by you) and the date of inspection.

(2) For each defect detected during inspections required by § 63.1588(a), you must record the location of the defect, a description of the defect, the date of detection, the corrective action taken to repair the defect, and the date the repair to correct the defect is completed.

(3) If repair of the defect is delayed as described in § 63.1588(a)(3), you must also record the reason for the delay and the date you expect to complete the repair.

(4) If you own or operate a control device used to meet the requirements for § 63.1586(b), you must comply with the recordkeeping requirements of § 63.696(a), (b), (g), and (h).

(b) To comply with the performance standard specified in § 63.1586(a) or (c), you must prepare and maintain the records required in paragraphs (b)(1) through (3) of this section:

(1) A record of the methods and data used to determine your POTW's monthly HAP loading and emissions as determined in § 63.1588(c)(1) and (2);

(2) A record of the methods and data used to determine that your POTW meets the HAP fraction emitted standard (either 0.08 or 0.014), as determined in § 63.1588(c)(3); and

(3) A record of the methods and data that demonstrates that your POTW is in continuous compliance with the requirements of § 63.1588(c)(4).

(c) To comply with the requirement to meet the pretreatment program requirements defined by § 403.8 of this chapter as specified in § 63.1586(d), you must maintain records as required in part 403 of this chapter.

(d) An owner or operator must record the malfunction information specified in paragraphs (d)(1) through (3) of this section.

(1) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure, record the date, time, and duration of the failure.

(2) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(3) Record actions taken to minimize emissions in accordance with § 63.1583(d) or § 63.1586(e) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

§ 63.1590 What reports must I submit?

(a) You must submit annual reports containing the information specified in paragraphs (a)(1) through (4) of this section, if applicable. You must submit annual reports following the procedure specified in paragraph (a)(5) of this section. For existing units, the initial annual report is due no later than date 27 months after the final rule is published in the **Federal Register** and must cover the 12-month timeframe beginning date 12 months after the final rule is published in the **Federal Register**. For new units, the initial annual report is due 15 months after your POTW becomes subject to the requirements in this subpart and must cover the first 12 months of operation after your POTW becomes subject to the requirements of this subpart. Subsequent annual reports are due by the same date each year as the initial annual report and must contain information for the 12-month period following the 12-month period included in the previous annual report.

(1) The general information specified in paragraphs (a)(1)(i) and (ii) of this section must be included in all reports.

(i) The company name, POTW treatment plant name, and POTW treatment plant address; and

(ii) Beginning and ending dates of the reporting period.

(2) The monthly HAP fraction emitted as calculated in § 63.1588(c)(3)(vii) for each month in the 12-month period covered by the annual report.

(3) If you use covers to comply with the requirements of § 63.1586(b), you must submit the following:

(i) The dates of each visual inspection conducted;

(ii) The defects found during each visual inspection; and

(iii) For each defect found during a visual inspection, how the defects were repaired, whether the repair has been completed and either the date each repair was completed or the date each repair is expected to be completed.

(4) If a source fails to meet an applicable standard, report such events in the annual report. Report the number of failures to meet an applicable standard. For each instance, report the date, time, and duration of each failure. For each failure, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutants emitted over any emission limit, and a description of the method used to estimate the emissions.

(5) You must submit the report to the Administrator at the appropriate address listed in § 63.13, unless the Administrator agrees to or specifies an alternate reporting method. Beginning on the date 2 years after date the final rule is published in the **Federal Register** or once the reporting form has been available in CEDRI for 1 year, whichever is later, you must submit subsequent annual reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*)). You must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*). The date forms become available in CEDRI will be listed on the CEDRI Web site. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted.

(b) If you own or operate a control device used to meet the requirements of § 63.1586(b), you must submit the notifications and reports required by § 63.697(b), including a notification of performance tests; a performance test report; a malfunction report; and a summary report. These notifications and reports must be submitted to the Administrator, except for performance test reports. Within 60 calendar days after the date of completing each performance test (as defined in § 63.2) required by subpart DD of this part, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1) or (2) of this section.

(1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results of the performance test to the EPA via CEDRI. Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site.

(2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13 subpart A of this part, unless the Administrator agrees to or specifies an alternate reporting method.

(3) If you claim that some of the performance test information being submitted under paragraph (b)(1) of this section is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage medium to the EPA. The electronic medium must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (b)(1) of this section.

(c) You must comply with the delay of repair reporting required in § 63.1588(a)(3).

(d) You may apply to the Administrator for a waiver of recordkeeping and reporting requirements by complying with the requirements of § 63.10(f). Electronic reporting to the EPA cannot be waived.

(e) To comply with the performance standard specified in § 63.1586(a), you must submit, for approval by the Administrator, an Inspection and Monitoring Plan explaining your compliance approach by date 180 days after the final rule is published in the **Federal Register**.

(f) To comply with the performance standard specified in § 63.1586(c), you must submit, for approval by the Administrator, an Inspection and Monitoring Plan explaining your compliance approach 90 calendar days prior to beginning operation of your new POTW or by date 180 days after the final rule is published in the **Federal Register**, whichever is later.

(g) To comply with the pretreatment requirements specified in § 63.1586(d), you must submit the reports required by § 403.12 this chapter.

General Requirements

§ 63.1591 What are my notification requirements?

(a) You must submit an initial notification as required in § 63.9(b).

(b) You must submit a notification of compliance status as required in § 63.9(h), as specified below:

(1) If you comply with § 63.1586(a) or (c) by meeting the applicable HAP fraction emitted standard, submission of the Inspection and Monitoring Plan as required in § 63.1588(c) and § 63.1590(e) and (f), as applicable, meets the requirement for submitting a notification of compliance status report in § 63.9(h).

(2) If you comply with § 63.1586(b) and use covers on the emission points and route air in the headspace underneath the cover to a control device, you must submit a notification of compliance status as specified in § 63.9(h) that includes a description of the POTW treatment units and installed covers, as well as the information required for control devices including the performance test results.

(c) You must notify the Administrator, within 30 calendar days of discovering that you are out of compliance with an applicable requirement of this subpart, including the following:

(1) The HAP fraction emitted standard as specified in § 63.1586(a) or (c), as applicable.

(2) The requirement to route the air in the headspace underneath the cover of all units equipped with covers, except primary clarifiers, to a control device as specified in § 63.1586(b).

(3) The requirement to develop and implement a pretreatment program as specified in § 63.1586(d).

(4) The requirement to operate and maintain the affected source as specified in § 63.1586(e).

(5) The requirement to inspect covers annually and repair defects as specified in § 63.1588(a).

(6) The requirement to comply with the inspection and monitoring

requirements of § 63.695(c) as specified in § 63.1588(b).

(7) The procedures specified in an Inspection and Monitoring Plan prepared as specified in § 63.1588(c).

(8) The requirements specified in an appropriate NESHAP for which the Group 1 POTW treats regulated industrial waste as specified in § 63.1583(a) or (b), as applicable.

§ 63.1592 Which General Provisions apply to my POTW?

(a) Table 1 to this subpart lists the General Provisions (40 CFR part 63, subpart A) that do and do not apply to POTW.

(b) Unless a permit is otherwise required by law, the owner or operator of a Group 1 POTW that is not a major source is exempt from the permitting requirements established by 40 CFR part 70.

§ 63.1593 [Reserved]

§ 63.1594 Who enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable state, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a state, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under subpart E of this part, the authorities listed in (b)(1) through (5) of this section are retained by the Administrator of U.S. EPA and cannot be delegated to the state, local, or tribal agency.

(1) Approval of alternatives to the requirements in §§ 63.1580, 63.1583, and 63.1586 through 63.1588.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

§ 63.1595 List of definitions.

Affected source means a POTW that has a design capacity of 5 million gallons of wastewater per day or more, treats industrial wastewater, and is either a Group 1 POTW or a major source that is a Group 2 POTW.

Cover means a device that prevents or reduces air pollutant emissions to the atmosphere by forming a continuous barrier over the waste material managed in a treatment unit. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the treatment unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the treatment unit, or a cover may be formed by structural features permanently integrated into the design of the treatment unit. The cover and its closure devices must be made of suitable materials that will prevent exposure of the waste material to the atmosphere and will maintain the integrity of the cover and its closure devices throughout its intended service life.

Existing source or Existing POTW means a POTW that commenced construction on or before December 1, 1998, and has not been reconstructed after December 1, 1998.

Fraction emitted means the fraction of the mass of HAP entering the POTW wastewater treatment plant which is emitted prior to secondary treatment.

Group 1 POTW means a POTW that accepts a waste stream regulated by another NESHAP and provides treatment and controls as an agent for the industrial discharger. The industrial discharger complies with its NESHAP by using the treatment and controls located at the POTW. For example, an industry discharges its benzene-containing waste stream to the POTW for treatment to comply with 40 CFR part 61, subpart FF—National Emission Standard for Benzene Waste Operations. This definition does not include POTW treating waste streams not specifically regulated under another NESHAP.

Group 2 POTW means a POTW that does not meet the definition of a Group 1 POTW. A Group 2 POTW can treat a waste stream that is either:

(1) Not specifically regulated by another NESHAP, or

(2) from an industrial facility that complies with the specific wastewater requirements in their applicable NESHAP prior to discharging the waste stream to the POTW collection system.

New source or New POTW means any POTW that commenced construction or reconstruction after December 1, 1998.

Publicly owned treatment works (POTW) means a treatment works, as that term is defined by section 112(e)(5) of the Clean Air Act, which is owned by a municipality (as defined by section 502(4) of the Clean Water Act), a state, an intermunicipal or interstate agency, or any department, agency, or instrumentality of the federal government. This definition includes any intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment. The wastewater treated by these facilities is generated by industrial, commercial, and domestic sources. As used in this regulation, the term POTW refers to both any publicly owned treatment works which is owned by a state, municipality, or intermunicipal or interstate agency and, therefore, eligible to receive grant assistance under the Subchapter II of the Clean Water Act, and any federally owned treatment works as that term is described in section 3023 of the Solid Waste Disposal Act.

POTW treatment plant means that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.

Secondary treatment means treatment processes, typically biological, designed to reduce the concentrations of dissolved and colloidal organic matter in wastewater.

Waste and wastewater means a material, or spent or used water or waste, generated from residential, industrial, commercial, mining, or agricultural operations or from community activities that contain dissolved or suspended matter, and that is discarded, discharged, or is being accumulated, stored, or physically, chemically, thermally, or biologically treated in a publicly owned treatment works.

TABLE 1 TO SUBPART VVV OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART VVV

General provisions reference	Applicable to subpart VVV	Explanation
§ 63.1	.....	Applicability.

TABLE 1 TO SUBPART VVV OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART VVV—Continued

General provisions reference	Applicable to subpart VVV	Explanation
§ 63.1(a)(1)	Yes	Terms defined in the Clean Air Act.
§ 63.1(a)(2)	Yes	General applicability explanation.
§ 63.1(a)(3)	Yes	Cannot diminish a stricter NESHAP.
§ 63.1(a)(4)	Yes	Not repetitive. Doesn't apply to section 112(r).
§ 63.1(a)(5)	Yes	Section reserved.
§ 63.1(a)(6)–(8)	Yes	Contacts and authorities.
§ 63.1(a)(9)	Yes	Section reserved.
§ 63.1(a)(10)	Yes	Time period definition.
§ 63.1(a)(11)	Yes	Postmark explanation.
§ 63.1(a)(12)–(14)	Yes	Time period changes. Regulation conflict. Force and effect of subpart A.
§ 63.1(b)(1)	Yes	Initial applicability determination of subpart A.
§ 63.1(b)(2)	Yes	Section reserved.
§ 63.1(b)(3)	No	Subpart VVV specifies recordkeeping of records of applicability determination.
§ 63.1(c)(1)	Yes	Requires compliance with both subpart A and subpart VVV.
§ 63.1(c)(2)(i)	No	State options regarding title V permit. Unless required by the State, area sources subject to subpart VVV are exempted from permitting requirements.
§ 63.1(c)(2)(ii)–(iii)	No	State options regarding title V permit.
§ 63.1(c)(3)	Yes	Section reserved.
§ 63.1(c)(4)	Yes	Extension of compliance.
§ 63.1(c)(5)	No	Subpart VVV addresses area sources becoming major due to increase in emissions.
§ 63.1(d)	Yes	Section reserved.
§ 63.1(e)	Yes	Title V permit before a relevant standard is established.
§ 63.2	Yes	Definitions.
§ 63.3	Yes	Units and abbreviations.
§ 63.4		Prohibited activities and circumvention.
§ 63.4(a)(1)–(3)	Yes	Prohibits operation in violation of subpart A.
§ 63.4(a)(4)	Yes	Section reserved.
§ 63.4(a)(5)	Yes	Compliance dates.
§ 63.4(b)	Yes	Circumvention.
§ 63.4(c)	Yes	Severability.
§ 63.5		Preconstruction review and notification requirements.
§ 63.5(a)(1)	Yes	Construction and reconstruction.
§ 63.5(a)(2)	Yes	New source—effective dates.
§ 63.5(b)(1)	Yes	New sources subject to relevant standards.
§ 63.5(b)(2)	Yes	Section reserved.
§ 63.5(b)(3)	Yes	No new major sources without Administrator approval.
§ 63.5(b)(4)	Yes	New major source notification.
§ 63.5(b)(5)	Yes	New major sources must comply.
§ 63.5(b)(6)	Yes	New equipment added considered part of major source.
§ 63.5(c)	Yes	Section reserved.
§ 63.5(d)(1)	Yes	Implementation of section 112(l)(2)—application of approval of new source construction.
§ 63.5(d)(2)	Yes	Application for approval of construction for new sources listing and describing planned air pollution control system.
§ 63.5(d)(3)	Yes	Application for reconstruction.
§ 63.5(d)(4)	Yes	Administrator may request additional information.
§ 63.5(e)	Yes	Approval of reconstruction.
§ 63.5(f)(1)	Yes	Approval based on State review.
§ 63.5(f)(2)	Yes	Application deadline.
§ 63.6		Compliance with standards and maintenance requirements.
§ 63.6(a)	Yes	Applicability of compliance with standards and maintenance requirements.
§ 63.6(b)	Yes	Compliance dates for new and reconstructed sources.
§ 63.6(c)	Yes	Compliance dates for existing sources apply to existing Group 1 POTW.
§ 63.6(d)	Yes	Section reserved.
§ 63.6(e)	Yes, except as noted	Operation and maintenance requirements apply to new sources.
§ 63.6(e)(1)(i)	No	General duty; See § 63.1583(d) and § 63.1586(e) for general duty requirements.
§ 63.6(e)(1)(ii)	No	Requirement to correct malfunctions.
§ 63.6(e)(3)	No	SSM plans are not required.
§ 63.6(f), except as noted	Yes, except as noted	Compliance with non-opacity emission standards applies to new sources.
§ 63.6(f)(1)	No	Standards apply at all times.
§ 63.6(g)	Yes	Use of alternative non-opacity emission standards applies to new sources.
§ 63.6(h)	No	POTW do not typically have visible emissions.
§ 63.6(i)	Yes	Extension of compliance with emission standards applies to new sources.
§ 63.6(j)	Yes	Presidential exemption from compliance with emission standards.
§ 63.7		Performance testing requirements.
§ 63.7(a)	Yes	Performance testing is required for new sources.

TABLE 1 TO SUBPART VVV OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART VVV—Continued

General provisions reference	Applicable to subpart VVV	Explanation
§ 63.7(b)	Yes	New sources must notify the Administrator of intention to conduct performance testing.
§ 63.7(c)	Yes	New sources must comply with quality assurance program requirements.
§ 63.7(d)	Yes	New sources must provide performance testing facilities at the request of the Administrator.
§ 63.7(e)	Yes, except as noted	Requirements for conducting performance tests apply to new sources.
§ 63.7(e)(1)	No	The performance testing provisions of § 63.694 for control devices are incorporated by reference into subpart DD of this part.
§ 63.7(f)	Yes	New sources may use an alternative test method.
§ 63.7(g)	Yes	Requirements for data analysis, recordkeeping, and reporting associated with performance testing apply to new sources.
§ 63.7(h)	Yes	New sources may request a waiver of performance tests.
§ 63.8		Monitoring requirements.
§ 63.8(a)	Yes	Applicability of monitoring requirements.
§ 63.8(b)	Yes	Monitoring shall be conducted by new sources.
§ 63.8(c)	Yes, except as noted	New sources shall operate and maintain continuous monitoring systems (CMS).
§ 63.8(c)(1)(i)	No	See § 63.1583(d) for general duty requirement with respect to minimizing emissions and continuous monitoring requirements.
§ 63.8(c)(1)(iii)	No	See the applicable CMS quality control requirements under § 63.8(c) and (d).
§ 63.8(d)	Yes, except as noted	New sources must develop and implement a CMS quality control program.
§ 63.8(d)(3)	No	The owner or operator must keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, and make them available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator must keep previous (*i.e.,* superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under § 63.8(d)(2).
§ 63.8(e)	Yes	New sources may be required to conduct a performance evaluation of CMS.
§ 63.8(f)	Yes	New sources may use an alternative monitoring method.
§ 63.8(g)	Yes	Requirements for reduction of monitoring data.
§ 63.9		Notification requirements.
§ 63.9(a)	Yes	Applicability of notification requirements.
§ 63.9(b)	Yes, except as noted	Initial Notification due February 23, 2000 or 60 days after becoming subject to this subpart.
§ 63.9(c)	Yes	Request for extension of compliance with subpart VVV.
§ 63.9(d)	Yes	Notification that source is subject to special compliance requirements as specified in § 63.6(b)(3) and (4).
§ 63.9(e)	Yes	Notification of performance test.
§ 63.9(f)	No	POTW do not typically have visible emissions.
§ 63.9(g)	Yes	Additional notification requirements for sources with continuous emission monitoring systems.
§ 63.9(h)	Yes, except as noted	Notification of compliance status when the source becomes subject to subpart VVV. See exceptions in § 63.1591(b).
§ 63.9(i)	Yes	Adjustments to time periods or postmark deadlines or submittal and review of required communications.
§ 63.9(j)	Yes	Change of information already provided to the Administrator.
§ 63.10		Recordkeeping and reporting requirements.
§ 63.10(a)	Yes	Applicability of notification and reporting requirements.
§ 63.10(b)(1)–(2)	Yes, except as noted	General recordkeeping requirements.
§ 63.10(b)(2)(i)	No	Recordkeeping for occurrence and duration of startup and shutdown.
§ 63.10(b)(2)(ii)	No	Recordkeeping for failure to meet a standard, see § 63.696.
§ 63.10(b)(2)(iii)	Yes	Maintenance records.
§ 63.10(b)(2)(iv)	No	Actions taken to minimize emissions during SSM.
§ 63.10(b)(2)(v)	No	Actions taken to minimize emissions during SSM.
§ 63.10(b)(2)(vi)	Yes	Recordkeeping for CMS malfunctions.
§ 63.10(b)(2)(vii)–(ix)	Yes	Other CMS requirements.
§ 63.10(b)(3)	No	Recording requirement for applicability determination.
§ 63.10(c)	Yes, except as noted	Additional recordkeeping requirements for sources with continuous monitoring systems.
§ 63.10(c)(8)	No	See § 63.696(h) for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the volume of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.

TABLE 1 TO SUBPART VVV OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART VVV—Continued

General provisions reference	Applicable to subpart VVV	Explanation
§ 63.10(c)(7)	No	See § 63.696(h) for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the volume of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§ 63.10(c)(15)	No	Use of SSM plan.
§ 63.10(d)	Yes, except as noted	General reporting requirements.
§ 63.10(d)(5)	No	See § 63.697(b) for malfunction reporting requirements.
§ 63.10(e)	Yes	Additional reporting requirements for sources with continuous monitoring systems.
§ 63.10(f)	Yes	Waiver of recordkeeping and reporting requirements.
§ 63.11	Yes	Control device and equipment leak work practice requirements.
§ 63.11(a) and (b)	Yes	If a new source uses flares to comply with the requirements of subpart VVV, the requirements of § 63.11 apply.
§ 63.11(c), (d) and (e)	Yes	Alternative work practice for equipment leaks.
§ 63.12	Yes	State authority and designation.
§ 63.13	Yes	Addresses of State air pollution control agencies and EPA Regional Offices.
§ 63.14	Yes	Incorporation by reference.
§ 63.15	Yes	Availability of information and confidentiality.

TABLE 2 TO SUBPART VVV OF PART 63—COMPLIANCE DATES AND REQUIREMENTS

If the construction/reconstruction date is . . .	Then the owner or operators must comply with . . .	And the owner or operators must achieve compliance . . .
Group 1 POTW:		
(1) After [date of publication of the final rule in the **Federal Register**].	(i) New source requirements in §§ 63.1583(b); 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	Upon initial startup.
(2) After December 1, 1998 but on or before [date of publication of the final rule in the **Federal Register**].	(i) New source requirements in § 63.1583(b) but instead of complying with both requirements, you must comply with the most stringent requirement [1].	(i) Upon initial startup through the date 12 months after the final rule is published in the **Federal Register**.
	(ii) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	(ii) On or before date 12 months after the final rule is published in the **Federal Register**.
(3) On or before December 1, 1998	(i) Existing source requirements in § 63.1583(a) but instead of complying with both requirements, you must comply with only the other applicable NESHAP.	(i) By the compliance date specified in the other applicable NESHAP.
	(ii) Existing source requirements in §§ 63.1583(a); 63.1586(a) and (d); and 63.1588 through 63.1591.	(ii) On or before date 12 months after the final rule is published in the **Federal Register**.
Group 2 POTW:		
(4) After [date of publication of the final rule in the **Federal Register**].	(i) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	Upon initial startup.
(5) After December 1, 1998 but on or before [date of publication of the final rule in the **Federal Register**].	(i) New source requirements in § 63.1586(b) or (c) [1].	(i) Upon initial startup through the date 12 months after the final rule is published in the **Federal Register**.
	(ii) New source requirements in §§ 63.1586(b) or (c); 63.1586(d); and 63.1588 through 63.1591.	(ii) On or before date 12 months after the final rule is published in the **Federal Register**.
(6) On or before December 1, 1998	(i) Existing source requirements in §§ 63.1586(a) and (d); and 63.1588 through 63.1591.	On or before date 12 months after the final rule is published in the **Federal Register**.

[1] **Note:** This represents the requirements in the original 1999 NESHAP, which are applicable until 12-months after the final rule is published in the **Federal Register**. During those 12-months, you must transition to the new requirements in Table 2 (2)(ii) and (5)(ii) for Group 1 and Group 2 POTW, respectively.

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