

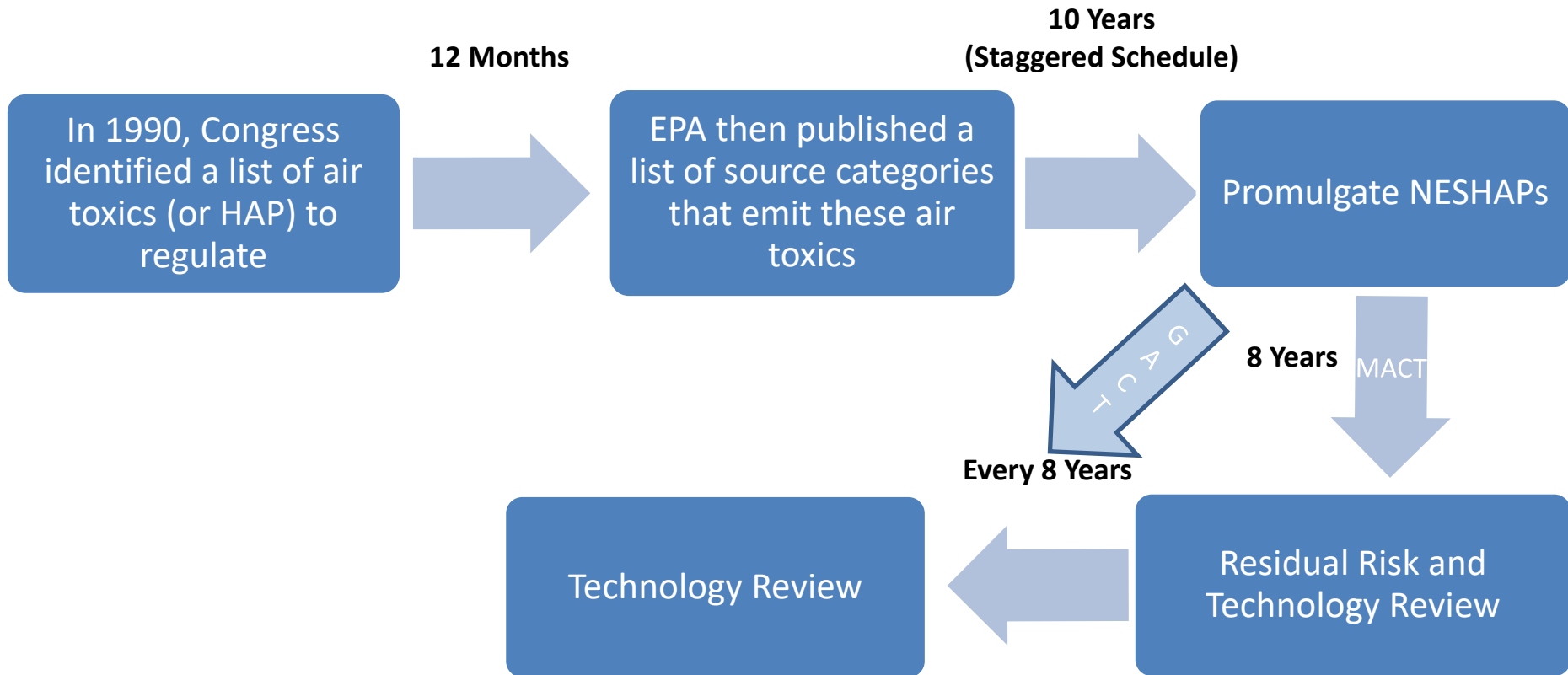
Air Toxics Residual Risk and Technology Review Program Status

AAPCA SPRING MEETING
APRIL 6, 2023

Key Terminology

- HAP: Hazardous Air Pollutants
- NESHAP: National Emissions Standards for Hazardous Air Pollutants
- MACT: Maximum Achievable Control Technology
(MACT standards generally apply to “major sources” of HAP)
- GACT: Generally Available Control Technology *(GACT Standards generally apply to “area sources” of HAP)*
- RTR: Residual Risk and Technology Review
- TR: Technology Review

CAA Section 112 Rulemaking (After 1990)



Residual Risk Framework

- ▶ CAA requires EPA to determine whether promulgation of additional standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect
- ▶ Residual risk assessment focus: Identify and address, as appropriate, remaining (*i.e.*, “residual”) risk after MACT implementation as required under section 112(f)(2) of CAA
- ▶ Two-step residual risk decision-making process
 - ▶ Developed in Benzene NESHAP (54 FR 38044, September 14, 1989)
 - ▶ Subsection 112(f)(2)(B) expressly incorporates EPA’s interpretation of CAA from Benzene NESHAP

Residual Risk Framework (cont.)

Step 1: Determine “acceptable risk”

- ▶ Acceptability determination: Consider “all of the health information, including risk estimation uncertainty” (54 FR 38044, September 14, 1989)
 - ▶ Cancer (maximum individual risk, incidence, populations)
 - ▶ Chronic noncancer (hazard index, target organs, populations)
 - ▶ Acute (1-hour hazard quotient)
 - ▶ Multipathway
- ▶ “Includes presumptive limit on maximum individual lifetime (cancer) risk (MIR) of approximately 1 in 10 thousand” (100-in-1 million) as upper end of range of acceptability; not a rigid line; “weigh it with a series of other health measures and factors”
- ▶ If risks are unacceptable, CAA requires standards to bring risks to acceptable level without considering costs

Residual Risk Framework (cont.)

Two Step Process

Step 2: Determine “ample margin of safety”

- ▶ Ample margin of safety determination: “EPA strives to provide protection to greatest number of persons possible to individual lifetime (Cancer) risk level no higher than approximately 1-in-1 million”
- ▶ If maximum individual lifetime cancer risk is > 1 -in-1 million, evaluate if additional standards necessary to provide ample margin of safety
- ▶ Consider same health information as considered in acceptability
- ▶ Consider costs, feasibility, economic impacts and uncertainties
- ▶ In addition to ample margin analysis, evaluate whether more stringent standard is necessary to prevent adverse environmental effects (considering costs, energy, safety and other relevant factors)

Technology Review (TR)

- ▶ Under CAA section 112(d)(6), reviews focus on developments in practices, processes, and controls that reduce HAP, including:
 - ▶ New or previously unidentified practices, processes or control technology
 - ▶ Improvements in performance of the practices, processes or control technology considered during MACT development
 - ▶ Changes in cost, availability or other factor that led to rejection in original rule
- ▶ To aid in decision-making process, evaluate each cost-effective development for feasibility of broad application, cost-effectiveness, and economic impacts
- ▶ As part of technology review, as required under the *LEAN v EPA* court decision (*LEAN Decision*), we establish new MACT standards under CAA section 112(d)(2)-(3) or 112(h) for previously unregulated HAPs
 - ▶ EPA added 1-bromopropane (1-BP) to the HAP list. In each subsequent technology review, we will determine whether 1-BP is emitted and establish standards as appropriate, similar to other unregulated HAPs
- ▶ Separate from technology review, evaluate each rule to determine consistency with legal requirements, and amend rules as appropriate

What Else Do We Include in NESHAP and Reviews?

- ▶ Environmental justice
 - ▶ Demographics of populations near facilities
 - ▶ Outreach
- ▶ Fenceline monitoring
- ▶ Requirements for facilities to demonstrate compliance with the standards
 - ▶ Emission testing
 - ▶ Continuous emissions monitoring
 - ▶ Continuous parameter monitoring
 - ▶ Electronic reporting
- ▶ Removal of startup, shutdown, and malfunction exemptions
- ▶ Requirements for facilities to keep records and report information

Program Status

RTRs required for every major source NESHAP within 8 years of promulgation of each NESHAP

TRs are required for every NESHAP (major and area) no less often than every 8 years

Finalized RTRs (residual risk review and initial TR) for about 104 of 115 major source categories

Second TRs are complete or underway for some categories with completed RTRs, as are initial TRs for area source NESHAPs (GACT)

Completed TRs for about 25 of 70 area source categories (many were completed for NESHAPs regulating major and area sources)

Program Status (cont.)

- RTRs required for 11 additional major source categories
 - Haz. Waste Combustors; Recip. Internal Combustion Engines; Polyvinyl Chloride; Boilers (3 categories); Brick; Clay Ceramics; Primary Magnesium; Primary Copper; Coke Ovens-Pushing Quenching and Battery Stacks
- RTRs also required for several area source categories: Area Source Boilers; Gold Mines; Electric Arc Furnaces

Note: Categories shown in blue are known to include small entities

Recent and Upcoming Actions

DATE	ACTION
December 21, 2022	Completed reconsideration of Miscellaneous Organics NESHAP RTR related to Ethylene Oxide health benchmark
December 21, 2022	Completed Site Remediation Reconsideration (removal of RCRA/CERCLA exemptions)
January 5, 2023	Proposed Lime Manufacturing TR
February 22, 2023	Miscellaneous Coating Manufacturing Final TR (published in <i>Federal Register</i>)
February 23, 2023	Lead Acid Battery Manufacturing Area Sources Final TR (published in <i>Federal Register</i>)
March 8, 2023	Wood Preserving Area Sources Final TR
Spring 2023	MATS (Elec. Utilities) RTR review undergoing OMB review

Recent and Upcoming Actions (cont.)

- Multiple RTRs/TRs have court deadlines

DATE	ACTION
March 31, 2023	Hazardous Organics NESHAP (HON) RTR , Polymers & Resins I RTR/TR, and Polymers and Resins II TR proposals (<i>Final due March 29, 2024</i>)
Spring 2023	Commercial Sterilizers NESHAP technology review (<i>Received deadline suit; proposal undergoing OMB review</i>)
May 2, 2024	Primary Copper RTR Final rule (<i>if proposal issued by July 31, 2023; if not, final due date will be August 31, 2023</i>)
May 23, 2024	Coke Ovens Pushing Quenching and Battery Stacks RTR and Coke Oven Batteries TR- Final rule
May 31, 2024	Primary Magnesium RTR (<i>supp. proposal planned for September 2023</i>)
December 10, 2024	Oil and Gas TR proposal (<i>final rule due by December 10, 2025 , per draft consent decree</i>)
Negotiating Schedules	Hazardous Waste Combustors RTR, Secondary Lead TR and RTR reconsideration , and Chemical Manufacturing Area Sources TR

Recent and Upcoming Actions (cont.)

- Court-ordered deadlines for establishing new MACT standards for previously unregulated processes or pollutants

Source Category	Court-Ordered Final Rule Date
Lime Manufacturing Plants	Tentative August 2023
Integrated Iron and Steel	October 26, 2023
Plywood and Composite Wood Products	November 16, 2023
Taconite Iron Ore Processing	November 16, 2023
Rubber Tire Manufacturing	March 29, 2024

- Collected information and new data for Integrated Iron and Steel, Plywood, Taconite, and Rubber Tire Manufacturing

Recent and Upcoming Actions (cont.)

- Conducting 2nd TRs for categories with completed RTRs and initial technology reviews for several area source categories

Source Category	Consent Decree Due Date
Gasoline Distribution Major Source NESHAP and Gas Distribution Bulk Terminals Area Source NESHAP	August 30, 2023 (final)
Perc. Dry Cleaning Major/Area Source NESHAP	June 1, 2023 (final)
Marine Tank Vessel Loading Major Source NESHAP	December 18, 2026 (final)

Recent and Upcoming Actions (cont.)

- Several reconsiderations are also underway:
 - **Stationary Combustion Turbines:** Establishing standards for previously unregulated HAP; also reviewing petition to delist source category
 - **Miscellaneous Organics NESHAP, Ethylene Production, Petroleum Refineries, and Organic Liquids Distribution** related to PRDs and flares
- Polyether Polyols and **Hospital Sterilizers:** Other actions for key categories scheduled for next few years include technology reviews

For
More
Information

Brian Shrager

U.S. EPA/OAQPS/SPPD

Section 112 Coordinator

shrager.brian@epa.gov