

Clean Air Act (CAA) Section 111 Program Update

AAPCA September 2023

Outline

- ▶ Standards of Performance for New Stationary Sources
 - ▶ CAA 111 Program Overview
- ▶ CAA 111(b): New Source Performance Standards (NSPS)
 - ▶ Setting Standards
 - ▶ Reviewing Standards
- ▶ CAA 111(d): Emission Guidelines
 - ▶ Statutory Requirements
 - ▶ History
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Standards of Performance for New Stationary Sources

- ▶ CAA Section 111 was authorized in 1970
- ▶ Establishes a mechanism for controlling air pollution from stationary sources
 - ▶ Applies to any source category which the Administrator, in his judgment, finds “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare”
- ▶ Different approaches for new and existing sources
 - ▶ New sources under CAA section 111(b)
 - Federal standards for new, modified, and reconstructed sources
 - ▶ Existing sources under CAA section 111(d)
 - Emission guidelines for states to establish performance standards for existing sources

CAA 111(b): New Source Performance Standards

- ▶ From 1970-1980 EPA listed categories of sources for regulation under CAA section 111
 - ▶ For each category of sources, the EPA made a significant contribution finding (SCF)
 - ▶ SCF is a finding that the category of sources causes or contributes significantly to air pollution which may reasonably be anticipated to endanger public health and welfare
- ▶ After listing a source category for regulation, pursuant to the authority of CAA section 111(b), EPA promulgated new source performance standards (NSPS) for over 70 source categories
 - ▶ Standards apply to sources that commence construction, modification, or reconstruction *after the publication of proposed regulation*
 - ▶ Pollutants currently regulated vary by source category and include:
 - Criteria pollutants (PM, CO, Pb, SO₂, NO_x, VOC (as precursor to O₃ and impacts on PM formation)), fluorides, total reduced sulfur, sulfuric acid mist, landfill gases, and greenhouse gases (GHGs)
 - ▶ EPA is not obligated to make a SCF for individual pollutants emitted by a listed source category
- ▶ At least every 8 years, the Administrator shall review and, if appropriate, revise the standards

CAA 111(b): New Source Performance Standards

Setting Standards

- ▶ EPA sets a standard of performance for new, modified, and reconstructed stationary sources
- ▶ Standard reflects the degree of emission limitation achievable through the application of the best system of emission reduction (BSER) that the Administrator determines has been adequately demonstrated
- ▶ EPA may distinguish among classes, types, and sizes of sources
- ▶ Each new, modified, and reconstructed source must meet the standard
- ▶ EPA can delegate implementation and enforcement of the standards to the states
- ▶ Standards are incorporated in state air permits

Determining “BSER” takes into account:

- The costs of achieving emission reductions
- Non-air quality health and environmental impacts
- Energy requirements

CAA 111(b): New Source Performance Standards

Reviewing Standards

- ▶ Performance standards established pursuant CAA 111(b) are to be reviewed at least every eight years and revised, if appropriate
 - ▶ Exception where readily available information on the efficacy of standards of performance indicates review is not appropriate
- ▶ In reviewing an NSPS, we:
 - ▶ Evaluate BSER factors considering any advances in technology, changes in cost, and other factors
 - ▶ Evaluate whether information from the implementation and enforcement of current requirements indicate that emission limitations and percent reductions beyond those required by the standards are achieved in practice
- ▶ Where do we look for information?
 - ▶ **National databases:** National Emissions Inventory (NEI), Permit Data Base (RBLC database), Enforcement and Compliance History Online (ECHO), Applicability Determination Index (ADI)
 - ▶ **Publicly available data:** Such as air permits, source test data, compliance inspection reports, vendor emission control guarantees
 - ▶ **State/local rules, consent decrees**
 - ▶ **EPA's interaction with stakeholders from industries, environmental organizations, state, local, and Tribal governments**
 - ▶ **Other EPA actions can provide a strong technical basis to assess the availability and economic feasibility of employing new control technologies, or design or efficiency improvements that could result in a revised best system of emission reduction determination**
 - National Emissions Standards for Hazardous Air Pollutants (NESHAP) and Risk and Technology Review (RTR) (several source categories are covered by both NSPS and NESHAP rules)
 - Control Techniques Guidelines (CTGs), Alternative Control Techniques (ACTs,) SIP-based requirements

CAA 111(d): Emission Guidelines

Statutory Requirements

- ▶ Authorized for certain pollutants when EPA establishes new source performance standards for a source category
 - ▶ Pollutants for which air quality criteria have not been issued; and
 - ▶ Pollutants not included on the Section 112 hazardous air pollutant list (HAP list)
- ▶ Provides that EPA establish:
 - ▶ A procedure for states to submit plans to establish, implement, and enforce standards of performance for existing sources for certain air pollutants to which a Federal NSPS would apply if such existing source were a new source; and
 - ▶ Guidance about the appropriate level of the standard
- ▶ States then submit their plans to EPA for review and approval
- ▶ EPA evaluates the state plans and takes action through notice and comment rulemaking
- ▶ EPA has authority to prescribe a federal plan in cases where a state fails to submit a satisfactory plan and has the authority to enforce state plan provisions in cases where the state fails in enforcement

Elements of Emission Guidelines

- Description of the BSER that has been adequately demonstrated
- Degree of emission limitation achievable through application of the BSER (presumptive level of stringency for standards of performance)
- Compliance timeframes for standards of performance
- Other information to facilitate development of state plans

CAA 111 (d): Emission Guidelines

History

- ▶ EPA has established section 111 (d) emission guidelines (EGs) for some source categories and pollutants
 - ▶ Sulfuric acid plants - acid mist
 - ▶ Phosphate fertilizer plants – fluorides
 - ▶ Primary aluminum plants – fluorides
 - ▶ Kraft pulp plants – total reduced sulfur
 - ▶ Municipal solid waste landfills – landfill gases
 - ▶ Fossil-fuel fired electric generating units- greenhouse gases (carbon dioxide)
- ▶ EPA originally regulated GHGs from fossil-fuel fired electric generating units (EGUs) in a 2015 rule (Clean Power Plan) that EPA subsequently repealed and replaced with a 2019 rule (Affordable Clean Energy, or *ACE*). The *ACE* rule was initially vacated by the D.C. Circuit in early 2021. In June 2022, the Supreme Court subsequently reversed and remanded the D.C. Circuit’s opinion. On October 27, 2022, the D.C. Circuit amended its judgement and recalled the partial mandate vacating the *ACE* Rule, effectively reinstating *ACE*. On May 23, 2023, the EPA proposed to repeal the *ACE* Rule and to promulgate a new EG in order to regulate GHG emissions (in the form of carbon dioxide limitations) from existing fossil fuel-fired electric generating units. 88 FR 33240.
- ▶ On November 15, 2021, the EPA proposed EGs to regulate GHG emissions (in the form of methane limitations) from sources in the oil and natural gas source category (86 FR 63110) and provided a supplemental proposal for that sector on December 6, 2022 (87 FR 74702).

CAA 111 Program Update

2023 Finalized Rules

▶ Lead Acid Batteries NSPS Review

- ▶ Final rule published in *Federal Register* (FR) on 02/23/2023
 - Revised lead standards codified in new subpart 40 CFR part 60 subpart KKa.
 - <https://www.epa.gov/stationary-sources-air-pollution/lead-acid-battery-manufacturing-new-source-performance-standards>

▶ Plastic Parts for Business Machines (surface coating) NSPS Review

- ▶ Final rule published in FR on 03/27/2023
 - Revised volatile organic compounds (VOC) standards codified in new subpart 40 CFR part 60 subpart TTTa.
 - <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>

▶ Auto and Light-duty Truck Surface Coating NSPS Review

- ▶ Final rule published in FR on 05/09/2023
 - Revised VOC standards codified in new subpart 40 CFR part 60 subpart MMa.
 - <https://www.epa.gov/stationary-sources-air-pollution/automobile-and-light-duty-truck-surface-coating-operations-new>

▶ Steel Plant Electric Arc Furnaces NSPS Review

- ▶ Final rule published in the FR on 08/25/2023
 - Revised particulate matter (PM) standards codified in new subpart 40 CFR part 60 subpart AAb.
 - <https://www.epa.gov/stationary-sources-air-pollution/electric-arc-furnaces-eafs-and-argon-oxygen-decarburization>

CAA 111 Program Update

Upcoming Final Rule

▶ Crude oil and natural gas NSPS Review and Emission Guidelines (EG): Sector Climate Review

▶ Proposal published in the FR on 11/15/2021

- NSPS

- Proposed revised standards for VOC, GHGs (as methane limitations), and sulfur dioxide (SO₂). Revised standards will be codified in new subpart 40 CFR part 60 subpart OOOOb.
- Proposed amendments to NSPS subpart OOOOa to address certain inconsistencies between the VOC and methane standards resulting from the CRA disapproval of the 2020 Policy Rule

- EG

- Proposed EG for states to regulate GHG (in the form of methane emission limitations) from existing sources. EG will be codified in new subpart 40 CFR part 60 subpart OOOOc.

▶ Supplemental proposal published in FR on 12/6/2022

- Updated, strengthened, and expanded the November 2021 proposal

▶ Nearly 1 million comments received

- The Response to Comment document of the final rule will respond to **both** 2021 and 2022 proposals comments.

▶ Final rule expected in 2023

- ▶ **Amendments to Implementing Regulations for CAA 111(d) State Plan Processes (amendments to 40 CFR part 60 subpart Ba)**
 - ▶ General Provisions amendments addressing a court vacatur of timelines associated with plan submittal and processing of plans
 - ▶ Proposal published in the FR on 12/23/2022
 - ▶ Final rule expected in 2023
 - Final amendments will be applicable to Oil and Gas EGs and Fossil Fuel Fired EGUs EGs

- ▶ **Fossil Fuel-Fired Electric Utility Generating Units (EGUs) Greenhouse Gas NSPS and EGs**
 - ▶ Proposal published in the FR on 5/23/2023
 - NSPS
 - Proposed revised standards for GHGs (as CO₂ emission limitations) for new, modified and reconstructed combustion turbines.
 - Revised standards will be codified in new subpart 40 CFR part 60 subpart TTTTa
 - EG
 - Proposed EGs states to regulate existing coal-fired EGUs and large existing combustion turbines
 - EGs will be codified in new subpart 40 CFR part 60 subpart UUUUb
 - ▶ Comment period closed on 8/8/2023
 - Over 1.2 million comments received
 - ▶ Final rule expected in early 2024

CAA 111 Program Update

Upcoming Final Rules

▶ **Secondary Lead Smelters NSPS Review**

- ▶ Proposal published in FR on 12/01/2022
 - Proposed revised PM standards. Revised standards will be codified in new subpart 40 CFR 60 subpart La.
- ▶ Final rule is due November 2023

▶ **Bulk Gasoline Terminals NSPS Review**

- ▶ Proposal published in FR on 06/10/2022
 - Proposed revised VOC standards. Revised standards will be codified in new subpart 40 CFR 60 subpart XXa.
- ▶ Final rule is due February 2024

▶ **Synthetic Organic Chemical Manufacturing Industry (SOCMI) NSPS Review**

- ▶ Proposal published in FR on 04/25/2023
- ▶ Proposed revised VOC standards. Revised standards will be codified
 - Oxidation Unit Processes- 40 CFR part 60 subpart IIIa;
 - Distillation- 40 CFR part 60 subpart NNNa;
 - Reactor Processes- 40 CFR part 60 subpart RRRa; and
 - Equipment Leaks- 40 CFR part 60 subpart VVb
- ▶ Final rule is due in March 2024

▶ **Internal Combustion Engines NSPS Proposal**

- ▶ Proposal published in FR on 06/26/2023
 - Proposed amendment to NSPS for electronic reporting for 40 CFR 60 subparts IIII (Stationary Combustion Ignition ICE) and JJJJ (Stationary Spark Ignition ICE).
- ▶ Final rule planned for early 2024

CAA 111 Program Update

Upcoming Proposal

- ▶ **Volatile Organic Liquid Storage Vessels NSPS Review**
 - ▶ Review of VOC performance standards
 - ▶ Signature of proposal due Sept 29, 2023

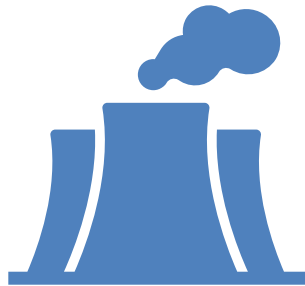
More Information

<https://www.epa.gov/stationary-sources-air-pollution/new-source-performance-standards>

Contact

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Section 112 Program Status

SEPTEMBER 2023
AAPCA MEETING

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

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

Recent and Upcoming CAA NESHAP Reviews

DATE	ACTION
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 Published in <i>Federal Register</i>
April 13, 2023	Commercial Sterilizers RTR proposal published in <i>Federal Register</i> (final due March 1, 2024)
April 24, 2023	MATS (Elec. Utilities) proposed review of RTR Published in <i>Federal Register</i> (final rule planned for March 2024)
April 25, 2023	Hazardous Organics NESHAP (HON) RTR, Polymers & Resins I RTR/TR, and Polymers and Resins II TR proposal published in <i>Federal Register</i> (final due March 29, 2024)
July 24, 2024	Primary Copper RTR supplemental proposal published in the <i>Federal Register</i> (final due May 2, 2024)
August 16, 2023	Coke Ovens Pushing Quenching and Battery Stacks RTR and Coke Oven Batteries TR proposal published in the <i>Federal Register</i> (final due May 23, 2024)

Recent and Upcoming CAA NESHAP Reviews

(cont.)

DATE	ACTION
February 1, 2024	Perchloroethylene Dry Cleaning Major and Area Source final TR due (pursuing extension until December 2024)
February 12, 2024	Hospital Sterilizers Area Source TR proposal (planned date, final 12/2024)
February 29, 2024	Gasoline Distribution Major Source and Gas Distribution Bulk Terminals Area Source final TR due
November 13, 2024	Chemical Manuf. Area Sources TR proposal due (final Sept. 17, 2025, per draft CD)
December 10, 2024	Oil and Gas TR proposal due (final rule due Dec. 10, 2025, per draft CD)
September 30, 2025	Secondary Lead TR proposal due (final due Sept. 30, 2026, per draft CD)
December 18, 2026	Marine Tank Vessel Loading Major Source final TR due
Negotiating or litigating schedule	Hazardous Waste Combustors RTR, Secondary Lead TR and RTR reconsideration, and Chemical Manufacturing Area Sources TR; Polyether Polyols TR
TBD	Primary Magnesium RTR (final date being renegotiated from May 2024 due to temporary facility shutdown and need for additional emissions testing)

Other Actions

- Recently proposed action to add requirements for facilities that reclassify from major source to area source status
- Recently proposed action regarding issues related to adding new pollutants to the CAA section 112(b) HAP list
- Court-ordered deadlines for setting new MACT standards for previously unregulated processes or pollutants in recently reviewed rules

Source Category	Court-Ordered Final Rule Date
Lime Manufacturing Plants	Requesting revised date of June 30, 2024
Integrated Iron and Steel	Requesting revised date of March 11, 2024
Plywood and Composite Wood Products	November 16, 2023
Taconite Iron Ore Processing	November 16, 2023
Rubber Tire Manufacturing	Requesting revised date of November 13, 2024

Other Upcoming Actions (cont.)

- Several reconsiderations are also underway:
 - Stationary Combustion Turbines: Establishing standards for previously unregulated HAP (proposal upcoming); also reviewing petition to delist source category
 - Miscellaneous Organics NESHAP, Ethylene Production, Petroleum Refineries, and Organic Liquids Distribution related to PRDs and flares (final rule upcoming)

Regulatory Requirements for New HAP Additions to Section 112

**Post Proposal Outreach
September 2023**

Outline

- Regulatory History of Hazardous Air Pollutants (HAP) Listing
- Overview of Proposed Requirements

Clean Air Act section 112 HAP

- Congress provided an initial list of HAP, and further provided guidelines for the listing of new HAP and delisting of existing HAP. These actions can be taken by:
 - Petitions from public
 - Administrator's own action
- The Administrator must grant the petition per section 112(b)(3) if he/she determines that the substance is an air contaminant and is known to cause or could reasonably be expected to cause adverse effects on human health or the environment
- To date, EPA has finalized four delisting actions. In 2022, the first HAP was added to the Section 112 HAP list.

Questions when a new HAP is listed

1. When is a new HAP officially a HAP?
2. Can a facility's status change from the addition of a new HAP? If so, when?
3. When/how is it included in previously promulgated rules?
4. What happens if a facility becomes a major source from a listing?
 - A. Is it an existing or new affected source?
 - B. When does it have to be in compliance?

Question and Answer Document- Interim Guidance

- January 5, 2022: published online, concurrent with listing action for 1-bromopropane
- Document provides guidance to EPA regional and state/local/tribal permitting authorities as well as to potentially impacted industries and the general public
- Addressed some, but not all, of the implementation questions
- Interpretation of full regulatory requirements left to states/regulatory authorities

Regulatory Requirements for New HAP- “Infrastructure”

- Proposes to codify positions included in Q and A document; provide rationale
- Proposes regulatory requirements for questions not answered in Q and A document
- Provides structure for future additions to the HAP list

When is a new HAP officially a HAP?

- On and after the effective date of a listing (30 days after FR notice)
 - Must be included in HAP actual/PTE calculations
 - Must be considered in Title V

A facility may immediately become a major source

- Before listing, a facility that was an area (“true” or “synthetic”), can become major solely from addition of new HAP in the calculation of actual or potential emissions
- Some individual NESHAP and the General Provisions provided compliance for sources that transition from area to major when source **“increases its emissions or PTE”**
- The HAP infrastructure rule creates term- “major source due to listing,” or ***MSDL***, to differentiate these facilities from others
- ***EPA concluded that no previous provisions directly address MSDL facilities***

What about previously promulgated NESHAP?

- No NESHAP promulgated before a HAP listing can retroactively include the new HAP
 - CAA section 112(d) requires EPA to consider each HAP prior to regulating
 - A newly listed HAP would not have been evaluated for MACT limits
 - Terms “Total HAP,” “volatile HAP,” do not include newly listed HAP
- Each NESHAP will be evaluated for the new HAP in the 8-year review cycle

MSDL Facilities

- These are the only facilities with potential for NESHAP applicability upon listing, but not directly for the new HAP
- Any major source NESHAP potentially applicable to emission sources
- Definition of “new” and “existing” in all NESHAP
 - Based on date source was constructed
 - Before new HAP, MSDL complied with area source requirements, with no knowledge that EPA action would change their status
- Compliance time periods vary

MSDL Facilities- Applicable requirements

- Considered whether MSDL should be subject to existing or new source MACT
- All MSDL facilities would be subject to existing source MACT
 - Facilities constructed with no reasonable belief that their status would change without action on their part
 - Clean Air Act links “new” with ability to consider “preconstruction”

MSDL Facilities- Compliance Period

- Four compliance options were discussed in the proposal
 1. No change
 2. Compliance based on time period for existing sources in “original NESHAP”
 3. One compliance date for all MSDL-created requirements
 4. Compliance date based on whether control device is required or not, with additional time being provided if installation of control is necessary
- Preferred option is Option 4

Next Steps

- No public hearing requested
- 60-day public comment period- ends November 13, 2023
- Final rule in 2024

- After listing of a new HAP, individual NESHAP will be evaluated for impact of newly listed HAP during regularly scheduled technology reviews or risk and technology reviews.

Questions?

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