

Over its 50-year history, several rules issued by the U.S. Environmental Protection Agency (EPA) have reshaped the power sector. But for at least a few modern rules, the road has been full of turns. *Notes: CAA = Clean Air Act; BSER = best system of emission reduction; CO<sub>2</sub> = carbon dioxide; GHG = greenhouse gases; FIP = federal implementation plan; PM = particulate matter; ppb = parts per billion; NO<sub>2</sub> = nitrogen dioxide; NO<sub>x</sub> = nitrogen oxides; SO<sub>2</sub> = sulfur dioxide.* —**Sonal Patel** is POWER's senior associate editor.

## NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

**July 2009**—EPA proposes a revision to the NO<sub>x</sub> primary NAAQS.

**Feb. 2010**—EPA finalizes a NO<sub>2</sub> NAAQS revision, establishing a new 1-hour standard at a level of 100 ppb.

**Oct. 2015**—EPA finalizes primary and secondary NAAQS for ozone, setting a 70 ppb level.

**July 2017**—EPA reviews NAAQS for NO<sub>x</sub>.

**April 2018**—In a final decision, EPA retains existing 2010 NO<sub>x</sub> NAAQS.

**April 2020**—EPA proposes to retain current primary and secondary PM NAAQS standards.

**July 2020**—EPA proposes to retain current 2015 ozone standards.

**Dec. 2009**—EPA proposes revisions to the SO<sub>2</sub> primary NAAQS.

**June 2010**—EPA finalizes a SO<sub>2</sub> primary NAAQS, establishing a new 1-hour SO<sub>2</sub> standard at a level of 75 ppb.

**Feb. 2019**—In a final decision, EPA retains existing 2010 SO<sub>2</sub> NAAQS.

## MERCURY AND AIR TOXICS STANDARDS (MATS)

**Oct. 1994**—EPA enters into settlement that requires completion of the "Utility Air Toxics Study."

**Feb. 1998**—EPA issues the Utility Air Toxics Study to Congress. The study focuses on power plant toxic air pollutants, including mercury.

**Dec. 2000**—EPA finds it is "appropriate and necessary" to regulate coal- and oil-fired plants under Section 112 of the CAA.

**Jan. 2004**—EPA issues a proposed rule with two basic approaches: a maximum achievable control technology approach (MACT), and a cap-and-trade approach.

**March 2005**—EPA issues a final Clean Air Mercury Rule (CAMR).

**Feb. 2008**—The D.C. Circuit vacates CAMR and also strikes down EPA's rule removing coal and oil power plants from a CAA list of sources of hazardous air pollutants (HAPs).

**June 2015**—The Supreme Court, 5-4, overturns MATS in *Michigan v. EPA*, finding that EPA's failure to consider costs for MATS is unlawful.

**Dec. 2011**—EPA finalizes MATS, promulgating first federal rule that regulates mercury emissions from power plants.

**March 2011**—EPA proposes MATS to replace the court-vacated CAMR.

**April 2016**—EPA finalizes supplemental cost finding for MATS, finding costs do not alter determination that it is "appropriate and necessary" to regulate power plant toxic air pollution.

**June 2016**—The Supreme Court leaves the D.C. Circuit decision in place.

**Dec. 2018**—EPA proposes to reverse its finding that it is "appropriate and necessary" to regulate HAPs from power plants citing compliance costs, but leaves coal and oil plants on the CAA HAPs list, which means the 2012 MATS remains in place.

**April 2020**—EPA establishes MATS subcategory for coal refuse power units.

**April 2020**—EPA finalizes a revised cost-benefit analysis, undermining the legal basis for continued implementation of the standards.

**Dec. 2015**—D.C. Circuit upholds MATS, allowing EPA to continue enforcing MATS when it resolves cost considerations.

## GHG RULES

**April 2007**—The Supreme Court issues ruling in *Massachusetts v. EPA*, allowing EPA to regulate CO<sub>2</sub> and other GHGs as pollutants.

**Dec. 2009**—EPA makes "endangerment finding," formally declaring that CO<sub>2</sub> and other GHGs are threats to public health and welfare.

**Aug. 2015**—As directed by President Obama's Climate Action Plan, EPA issues the Clean Power Plan (CPP), emissions guidelines for existing power plants under CAA Section 111(d), and the New Source Performance Standards (NSPS)—the first federal rules regulating CO<sub>2</sub> emissions from new and existing power plants.

**Oct. 2015**—The CPP is legally challenged by 27 states, 24 trade associations, 37 rural electric cooperatives, and labor unions.

**Feb. 2016**—In an unprecedented order, the Supreme Court stays the CPP, halting its implementation.

**April 2020**—More than two dozen states and cities file legal challenges to ACE Rule.

**July 2019**—EPA repeals the CPP and finalizes the Affordable Clean Energy rule (ACE). ACE establishes heat rate improvement or efficiency improvement as the BSER for CO<sub>2</sub> from coal-fired units. State plans are required by 2022.

**Dec. 2018**—EPA proposes to revise NSPS for new and modified power plants, determines that partial carbon capture and storage is not the BSER.

**April 2017**—The D.C. Circuit begins holding CPP litigation in abeyance. The court ultimately dismisses the challenges in September 2019.

**Jan. 2017**—President Trump issues an executive order directing EPA to reconsider the CPP and associated standards for new sources.

**July 2020**—EPA proposes amendments to the 2013 National Emission Standards for Hazardous Air Pollutants (NESHAP) for industrial, commercial, and Institutional boilers and process heaters. The so-called "Boiler MACT" rule establishes emission standards for categories of boilers based on MACT.

**June 2020**—EPA proposes a rule to overhaul the way it conducts cost-benefit analyses under the CAA.

**May 2020**—Legal challenges to MATS begin.

## COAL ASH RULE AND EFFLUENT LIMITATION GUIDELINES (ELGs)

**June 2010**—In response to major coal ash spills in Tennessee and North Carolina, the EPA proposes the Coal Combustion Residuals (CCR) Rule, requiring lined wet ash ponds or conversion to dry ash handling.

**April 2015**—EPA finalizes the CCR Rule, the first federal rule governing coal ash disposal. The rule imposes construction and operating obligations, including location restrictions, liner criteria, structural integrity requirements for impoundments, operating criteria, and additional groundwater monitoring requirements.

**Sept. 2015**—The Obama administration finalizes ELGs for steam electric power plants, setting stringent Best Available Technology (BAT) effluent limitations and pretreatment standards for existing sources (PSES) as they apply to bottom ash transport water and flue gas desulfurization (FGD) wastewater.

**Dec. 2016**—Industry sues EPA over ELGs.

**Dec. 2016**—President Obama signs the Water Infrastructure for Improvements to the Nation (WIIN) Act, which authorizes state and federal agencies to directly regulate coal ash disposal sites, as opposed to relying on citizen suits.

**July 2018**—EPA finalizes the Phase I rule, adopting alternative performance standards for certain states, revises groundwater-protection standards, and extends compliance deadlines.

**March 2018**—EPA announces plans to amend the CCR rule to allow states to incorporate flexibilities into coal ash permit programs, citing the WIIN Act, and it proposes the first (Phase 1) of two rules revising the 2015 rule.

**April 2017**—The Trump administration announces its intent to reconsider the 2015 ELG rule.

**Aug. 2020**—EPA finalizes the rule to implement court's decision in *Utility Solid Waste Activities Group v. EPA*, setting April 2024 as flexible deadline for closure of unlined surface impoundments.

**Oct. 2020**—EPA issues a final ELG rule revising the technology-based ELGs, extending timeframes, adding subcategories, and introducing a voluntary incentive program. For FGD wastewater, the rule establishes numeric BAT effluent limitations on mercury, arsenic, selenium, and nitrate/nitrite. For bottom ash transport water, it revises the 2015 rule's zero-discharge limitations.

**Aug. 2018**—The D.C. Circuit in *Utility Solid Waste Activities Group v. EPA* strikes down portions of the 2015 rule that allowed unlined and clay-lined impoundments to receive coal ash and exempted inactive impoundments.

**Aug. 2019**—EPA proposes the Phase II rule, establishing location-based criteria to demonstrate safety only if coal ash is disposed in sensitive locations.

**Dec. 2019**—In response to the August 2018 D.C. Circuit ruling, EPA proposes a new rule changing the classification of clay-lined impoundments from "lined" to "unlined." It also establishes a federal CCR permit program.

**Oct. 2020**—Environmental groups legally challenge the 2020 ELG rule.

**Oct. 2020**—EPA finalizes a two-step process to allow a limited number of facilities to demonstrate to EPA or a state that based on groundwater data and the design of a particular surface impoundment, the unit will have "no probability of adverse effects on human health or environment." Demonstrations are due in November 2020.