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Patricia Ross McCubbin*

During President Barack Obama’s first term, the U.S. Environmental Protection Agency (“EPA” or “the Agency”) dedicated much of its effort to regulating air pollutants. Of all the major environmental rules promulgated from 2009 to 2012, more than 60% were adopted under just one statute – the Clean Air Act – according to the Congressional Research Service.¹ In a sharp departure from the Bush administration, many of those regulations addressed greenhouse gases.² Yet while the Obama administration’s work on climate change may have generated the most media coverage, EPA also promulgated many other important rules that addressed more traditional pollutants, such as ozone and fine particles, or so-called

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² See infra text accompanying nn.14-80.
"hazardous" air pollutants like mercury and arsenic.\(^3\)

EPA’s efforts under the Clean Air Act were quite controversial. Operators of coal-fired power plants, for example, felt their facilities were under attack,\(^4\) with the Agency disrupting the reliability of the electric power grid and imposing undue costs on electricity consumers.\(^5\) More generally, critics argued the many requirements imposed by EPA, covering broad swaths of the American economy, were not justified by current law and were hampering the nation’s economic recovery.\(^6\) Indeed, Republican members of the U.S. House of Representatives identified seven air programs on a list of the “top 10 job-destroying regulations” from the federal bureaucracy,\(^7\) and they repeatedly introduced measures to block EPA’s rules.\(^8\)

Supporters, on the other hand, contended the Obama administration was

\(^3\) See infra text accompanying nn. 81-117.
\(^6\) McCarthy & Copeland, supra note 1, at nn. 6-7.
\(^8\) See, e.g., The Free Industry Act, H.R. 97, 112th Cong. (2011); see also Dean Scott, Advocates Turn to Defending Gains, EPA Rule As Republican Rise Sidelines Carbon Limits, 42 ENV’T. REP. (BNA) S-9 (Jan. 21, 2011).
simply complying with statutory mandates and court-ordered deadlines.\(^9\) Although environmental organizations sometimes praised EPA’s work, they also complained the Agency and the President were not doing enough to protect the environment.\(^{10}\) Thus, from both ends of the political spectrum, EPA’s extensive air regulatory program spurred debate.

This article discusses the major initiatives on air pollutants during President Obama’s first term. Part I addresses developments on greenhouse gases,\(^{11}\) and Part II addresses hazardous air pollutants and more traditional pollutants like ozone.\(^{12}\) Then Part III discusses significant air priorities for President Obama’s second term, including those the President identified in his groundbreaking "Climate Action Plan" on greenhouse gases in June 2013.\(^{13}\)


\(^{10}\) See, e.g., Huffington Post, Green Groups Struggle with Obama’s Mixed Environmental Record, Jordan Howard, September 2, 2011, available at http://www.huffingtonpost.com/2011/09/02/green-groups-obama-environmental-record_n_946595.html (environmental advocates praising limits on emissions from cars and trucks, but expressing disappointment on decision to delay new smog regulations).

\(^{11}\) See infra text accompanying nn.14-80.

\(^{12}\) See infra text accompanying nn. 81-117.

\(^{13}\) See infra text accompanying nn. 118-128.
I. **Greenhouse Gases**

In stark contrast to his predecessor, President Obama made addressing climate change a priority from the moment he was elected in 2008. In his acceptance speech on the night of the election, the President-Elect acknowledged the challenge of a "planet in peril".\(^{14}\) Likewise in his first inaugural address, he pledged his support for renewable energy sources that do not release greenhouse gases, referring to "harness[ing] the sun and the winds and the soil to fuel our cars and run our factories".\(^{15}\) Then just eight months into his term, President Obama made a major speech to the United Nations on climate change.\(^{16}\) He also supported the Waxman-Markey bill, which would have established a comprehensive cap-and-trade program nationwide for greenhouse gases.\(^{17}\) In June 2009, the U.S. House of Representatives passed the bill by a slim majority, but it died in the Senate due, in large part, to fears that it would burden the economy during a national recession.\(^{18}\)

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\(^{18}\) See Scott, supra note 17.
With no viable climate change legislation, the Obama administration turned to using the existing Clean Air Act to regulate greenhouse gases. That avenue was available after the U.S. Supreme Court ruled in the seminal opinion of *Massachusetts v. EPA* that the Clean Air Act's "sweeping definition" of an "air pollutant" included greenhouse gases. The *Massachusetts* Court further held that no activity on Capitol Hill since passage of the Act in 1970 "remotely suggests that Congress meant to curtail [EPA's] power to treat greenhouse gases as air pollutants." Relying on its newly recognized statutory authorities, EPA adopted four contentious rules – known informally as the endangerment finding, the tailpipe standards, the tailoring rule and the triggering rule – that, working in tandem with the statute, required reductions in greenhouse gases from cars, industrial facilities, and other sources.

A. *The Endangerment Finding*

The linchpin of EPA’s efforts to reduce greenhouse gases was its highly controversial “endangerment finding,” issued in December 2009. That rule actually consisted of two distinct findings, reflecting the inquiries required by

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20 549 U.S. at 528.

21 Endangerment and Cause or Contribute Finding for Greenhouse Gases Under Section 202(a) the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1) [hereinafter *Endangerment Finding*].
section 202(a)(1) of the Clean Air Act. First, in the true “endangerment finding,” EPA found that emissions of carbon dioxide and five other greenhouse gases “may reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations” by contributing to climate change. The adverse health effects, according to EPA, included “changes in air quality, increases in temperatures, changes in extreme weather events, increases in food and water borne pathogens, and changes in aeroallergens,” all of which can lead to illnesses and deaths. Adverse effects on the public welfare, in EPA’s view, are posed by “numerous and far-ranging risks to food production and agriculture, forestry, water resources, . . . coastal areas, energy, infrastructure and settlements, and ecosystems and wildlife.” Separately, in the “cause or contribute finding,” EPA also found that four greenhouse gases are emitted by new motor vehicles and cause or contribute to the pollution that endangers the public health and welfare.

B. The Tailpipe Standards

To implement the endangerment finding, on April 1, 2010, EPA finalized standards for vehicles that for the first time limited the amount of greenhouse gases

24 Id. at 66,526.
25 Id. at 66,534.
26 Id. at 66,536.
that may be released from tailpipes. The new requirements resulted from a historic agreement brokered by the Obama administration with automakers, labor leaders, environmental organizations, the state of California, and other states. Under the rule, all new passenger cars and light trucks for model year 2016 would have to restrict carbon dioxide emissions to 250 grams per mile. Vehicles in the earlier model years of 2012 through 2015 were allowed to release slightly more carbon dioxide. Because the only feasible way to reduce those emissions is to burn less carbon-based fuel, those tailpipe standards were issued jointly with improved fuel economy standards from the National Highway Traffic Safety Administration. EPA’s emission limit translated to roughly 35.5 miles per gallon (“mpg”) of fuel usage on average, up from 27.8 mpg for cars in 2011.

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28 Steven D. Cook & Carolyn Whetzel, Declaring Status Quo “Not Acceptable,” Obama Announces Rules for Fuel, Emissions, 40 ENV’T. REP. (BNA) 1159 (May 22, 2009). The state of California had been among the first states to attempt to regulate tailpipe emissions, and its authority to do so was upheld by the D.C. Circuit as long as a waiver from EPA was granted. Carolyn Whetzel, State Official Offers Additional Response On Role in National Standards for Vehicles, 43 ENV’T. REP. (BNA) 165 (Jan. 20, 2012). While the Bush administration did not grant this waiver, the Obama administration did and involved California officials in the negotiations for federal regulation. Id. This was later investigated by the House Government Oversight and Reform Committee, which ultimately published a report critical of the process used to adopt the national standards, but no litigation followed. See id.
30 Id. at 25,400.
31 Id. at 25,328.
32 Id. at 25,330.
33 Id. at 25,331.
C. The Tailoring Rule and the Triggering Rule

Much of the dispute surrounding EPA's greenhouse gas rules did not focus on the tailpipe standards per se, but on how those standards would trigger greenhouse gas limits for tens of thousands of power plants, industrial facilities, commercial operations and other buildings. The standards for such stationary sources stem primarily from the Prevention of Significant Deterioration (“PSD”) preconstruction review program, which requires, among other things, that new and modified “major” stationary sources meet limits reflecting the best available control technology (“BACT”). For greenhouse gases, this might simply mean regulated facilities would have to improve their energy efficiency, or it might require them to switch to low carbon fuels. Or as industry's worst fear, it might require them to capture and sequester carbon emissions at great expense.

The BACT requirement for greenhouse gases from stationary sources would be triggered, of all things, by the limits on greenhouse gases from vehicles. In particular, BACT applies to any “pollutant subject to regulation” under the Clean Air Act, and six greenhouse gases were now subject to regulation under the tailpipe standards. Thus, any new facility with the potential to emit those six

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pollutants above certain statutory thresholds (usually 250 tons per year\(^{37}\)) would be subject to the stringent control requirements of the PSD program.\(^{38}\) While schools, apartment buildings or hospitals usually do not emit more conventional pollutants in amounts above the statutory thresholds, their emissions of greenhouse gases are typically much higher.\(^{39}\) As a result, EPA estimated that 82,000 sources could be affected annually, compared to roughly 800 sources regulated per year under the current PSD program.\(^{40}\)

In response to concerns about these potentially enormous regulatory burdens, EPA adopted to other regulations – the tailoring rule\(^ {41}\) and the triggering rule\(^ {42}\) – that phased in the control requirements and limited them to the 1600 or so largest sources.\(^ {43}\) In particular, the triggering rule provided that greenhouse gases would be “subject to regulation” as of January 2, 2011, when the tailpipe standards for model year 2012 vehicles took effect.\(^ {44}\) The tailoring rule then provided that, for the first six months of 2011, only sources that were already subject to the PSD


\(^{40}\) Id.

\(^{41}\) Id. at 31,514.

\(^{42}\) Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs, 75 Fed. Reg. 17,004 (April 2, 2010) (to be codified at 40 C.F.R. pt. 51, 52, 70, 71) [hereinafter Reconsideration of Interpretation].

\(^{43}\) Prevention of Significant Deterioration, 75 Fed. Reg. at 31,516; Reconsideration of Interpretation, 75 Fed. Reg. at 17,007.

\(^{44}\) Reconsideration of Interpretation, 75 Fed. Reg. at 17,007.
permitting program for other pollutants would also undergo PSD review for greenhouse gases. 45

The tailoring rule also dramatically altered the thresholds for “major” new sources. For example, a new source would be subject to the PSD program if it has the potential to emit 100,000 tons of greenhouse gases per year (measured in carbon dioxide equivalency), rather than the 250 ton threshold set by the statute. 46 EPA relied on the rarely-successful doctrines of “administrative necessity”, “avoiding absurd results” and “one step at a time” to support the tailoring rule, arguing that without it the permitting scheme would be overwhelmed by the sheer number of greenhouse gas sources newly subject to regulation. 47

D. Challenges to EPA’s Greenhouse Gas Rules

All four of EPA’s greenhouse gas rules – the endangerment finding, the tailpipe standards, the tailoring rule, and the triggering rule – were challenged in the U.S. Court of Appeals for the District of Columbia Circuit. The litigants represented a broad spectrum of American society, including scores of industries, many states, individual members of Congress, and even some environmental

46 Id. The tailoring rule similarly altered the scope of the Title V operating permit program, establishing a 75,000 ton per year threshold, rather than the 100 tons per year set in the Act. Id.
47 Id.
groups, who generally supported EPA’s efforts but criticized some aspects of the rules.^[48]

Challengers to the endangerment finding included the states of Virginia, Alabama, and Texas, as well as the U.S. Chamber of Commerce, the National Association of Manufacturers, the American Farm Bureau, Peabody Energy, many other industrial and commercial interests, and Republican members of the U.S. House of Representatives.^[49] In that suit, seventeen states and several environmental organizations intervened on EPA’s behalf, while a dozen states intervened in opposition.^[50] Interestingly, most major players in the auto industry were not involved, having agreed not to challenge the endangerment finding or the accompanying tailpipe standards as long as the federal and state governments guaranteed that the industry would face only one nationally uniform set of vehicle requirements.

Almost all of the states and industries challenging the endangerment finding also filed suit against the tailpipe standards and the triggering rule, with many of

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[^50]Id.
the same interveners for and against EPA.\textsuperscript{51} The tailoring rule was also subject to extensive challenge, not only from the industry and state coalitions, but also from some environmental groups who disagreed with EPA’s effort to reduce the number of facilities that must obtain permits for greenhouse gas emissions.\textsuperscript{52} In addition, several industries sought to re-open PSD rules and interpretations going back as far as 1980.\textsuperscript{53}

The lawsuits were not the only attack on EPA’s greenhouse gas rules. EPA also received ten administrative petitions for reconsideration of the endangerment finding.\textsuperscript{54} Most of the petitions focused on “Climategate” – the controversy about climate scientists apparently manipulating data for policy-driven purposes – to raise doubts about the validity of the information presented by EPA.\textsuperscript{55} The Agency denied the requests for reconsideration in July 2010.\textsuperscript{56} In addition, various resolutions and bills were introduced (but not adopted) on Capitol Hill to limit and


\textsuperscript{52} Petition for Review, Southeastern Legal Foundation v. EPA, No. 10-1131 (D.C. Cir., filed June 3, 2010) (consolidated challenges to tailoring rule).


\textsuperscript{55} Id.

\textsuperscript{56} Id.
delay EPA's authority over greenhouse gases.\textsuperscript{57}

In the judicial challenges, the extraordinary number and scope of issues led to an unprecedented two days of oral argument at the D.C. Circuit.\textsuperscript{58} Yet the court’s opinion itself was relatively short, and it gave the Obama administration a major victory, unanimously upholding all four of EPA’s greenhouse gas rules.\textsuperscript{59} The court held that EPA's endangerment finding was well supported by the scientific studies, declaring that EPA "is not required to re-prove the existence of the atom every time it approaches the scientific question."\textsuperscript{60} The court also rejected the claim that EPA should have declined to adopt the endangerment finding because of the inevitable regulatory burdens on both vehicles and stationary sources, ruling instead that the Clean Air Act required EPA to base the endangerment finding only on the facts before it.\textsuperscript{61} Having upheld the endangerment finding, the court easily found that EPA's tailpipe standards were consistent with the statutory mandate and were supported by the evidence.\textsuperscript{62} The court did not address the merits of the tailoring rule and the timing rule, finding

\textsuperscript{57} See, e.g., Steven D. Cook, Senate Rejects Murkowski Resolution Aimed at Halting Greenhouse Gas Rules, 41 ENV'T REP. (BNA) 1291 (June 11, 2010) (discussing Senate rejection of a resolution that would nullify EPA rules on motor vehicle emissions); Steven D. Cook and Dean Scott, Obama Would Veto a Bill to Delay EPA Limits on Greenhouse Gas, White House Aide Says, 41 ENV’T REP. (BNA) 1692 (July 30, 2010).

\textsuperscript{58} See Andrew Childers, D.C. Circuit Issues Arguments Schedule In Challenges to Greenhouse Gas Rules, 43 ENV’T REP. (BNA) 388 (Feb. 17, 2012).

\textsuperscript{59} Coal. for Responsible Regulation, Inc. v. EPA, 684 F.3d 102, 113 (D.C. Cir. 2012).

\textsuperscript{60} Id. at 120.

\textsuperscript{61} Id. at 119.

\textsuperscript{62} Id. at 121-22.
instead that none of the plaintiffs had standing to challenge those rules.\textsuperscript{63} The tailoring rule, for example, \textit{exempted} stationary sources from the PSD program, so the court found no harm to any of the challengers.\textsuperscript{64} Rehearing en banc was denied in late 2012,\textsuperscript{65} and multiple petitions for certiorari were filed in spring 2013.\textsuperscript{66}

\textbf{E. Light Duty Vehicles, Hydraulic Fracturing Operations, and Power Plants}

Even as it was defending its four main greenhouse gas rules, the Obama administration continued to move forward with several other important initiatives on climate change. In October 2012, for example, EPA and the National Highway Traffic Safety Administration issued additional standards for light-duty vehicles – this time for model years 2017-2025 – that will nearly double existing fuel efficiency by 2025 to 54.5 miles per gallon.\textsuperscript{67} In addition, in August 2011, the two agencies adopted the first-ever standards for medium- and heavy-duty trucks and other large vehicles that will require a roughly 15\% improvement in fuel economy

\textsuperscript{63} \textit{Id.} at 146.
\textsuperscript{64} \textit{Id.} Interestingly, the court did not address a possible standing argument under the "competitor standing" doctrine. \textit{See, e.g.}, Honeywell Int’l, Inc. v. EPA, 374 F.3d 1363, 1370–71 (D.C. Cir. 2004) (stating that a manufacturer’s competitive interests satisfied standing requirements to challenge EPA’s rule).
\textsuperscript{66} \textit{Coal. for Responsible Regulation, Inc. v. EPA} 12-1146, 81 U.S.L.W. 3560 (Mar. 20, 2013).
by 2018. Similarly, EPA issued groundbreaking rules requiring thousands of sources to calculate and report the amount of greenhouse gases they emit annually.

In addition, EPA issued the first-ever standards for hydraulic fracturing operations at new natural gas wells. While environmental advocates supported that initial step, some sued the Agency for failing to directly regulate methane emissions – a powerful greenhouse gas – and instead relying on the restrictions on volatile organic compounds to capture much of the methane. The environmental community is pushing for methane regulation not only at new natural gas wells, but also at all the many existing wells.

By far, the most controversy centered on EPA's efforts to regulate greenhouse gases from power plants. In April 2012, EPA issued a proposal for

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“new source performance standards” under Clean Air Act section 111(b),\textsuperscript{73} for greenhouse gases from new power plants burning fossil fuels.\textsuperscript{74} This highly significant proposal received nearly 3 million comments during the public review period.\textsuperscript{75} The utility industry believed the rule, if finalized, would effectively ban the construction of new coal- and oil-fired power plants, because the Agency set a limit on greenhouse gases that could only be met by burning natural gas or using carbon capture and sequestration techniques that, in the industry’s view, are costly and unproven.\textsuperscript{76} EPA and its allies, on the other hand, believed the performance standards simply reflected the current market conditions, in which natural gas was far cheaper than other fuels so that operators were choosing – even without the regulation – to build only new power plants fueled with natural gas.\textsuperscript{77} The rule was

\textsuperscript{73} 42 U.S.C. § 7411(b) (2012). EPA’s ability to set standards under section 111 of the Clean Air Act was one of the reasons the U.S. Supreme Court held that the statute displaced any federal common law of nuisance as to greenhouse gases. American Electric Power Co. v. Connecticut, 131 S.Ct. 2527, 2537-38 (2011).


\textsuperscript{76} Byron F. Taylor & Jason E. James, Stationary Source Greenhouse Gas Regulation: Status Quo or Bold New Rules?, 44 Env’t. Rep. (BNA) 871 (March 22, 2013) (“EPA’s proposed New Source Performance Standard (NSPS) for new fossil fuel-fired electricity-generating units takes a different approach, amounting to a de facto ban on new units that burn coal.”).

\textsuperscript{77} Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, Proposed Rule, 77 Fed. Reg. 22,392, 22,413 (April 13, 2012) (“Although a small number of new coal-fired power plants have been built recently, the industry generally is not building these kinds of power plants at present and is not expected to do so for the foreseeable future. The reasons include the current economic environment, which has led to lower electricity demand, and competitive natural gas prices.”)
important for both sides not only in its own right, but because in final form it
would trigger EPA’s obligation, under Clean Air Act section 111(d),78 to adopt
emission guidelines for existing power plants, which by far represent a greater
source of greenhouse gases than new plants.79 Hence, utilities will be fighting
vigorously to defeat the final performance standards for new sources, and they
even brought legal challenges before the standards were finalized.80 Likewise
environmentalists will fight just as hard to protect what they view as a key to
cclimate change policy over the coming decade.

II. Hazardous Air Pollutants and More Traditional Pollutants

While the Obama administration’s work on climate change was significant,
during the President's first term EPA also took many other significant actions to
address both hazardous air pollutants and more traditional pollutants.

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80 Complaint, Las Brisas Energy Center LLC v. EPA (D.C. Cir. June 11, 2012) (No. 12-1248). The plaintiff planned a 1,300-megawatt power plant in Corpus Christi, Texas, and sued EPA arguing the proposed rule constituted final agency action because it set a deadline by which new facilities must break ground or be subject to the proposed carbon dioxide emissions limit. Andrew Childers, Texas Power Plant Among Those Suing EPA Over Carbon Dioxide Performance Standard, 43 ENV’T. REP. (BNA) 1542 (June 15, 2012).
A. Hazardous Air Pollutants

EPA was very active on hazardous air pollutants, adopting standards under Clean Air Act section 112\textsuperscript{81} for everything from the production of polymers and resins,\textsuperscript{82} to chromium electroplating,\textsuperscript{83} steel pickling facilities,\textsuperscript{84} asphalt processing plants,\textsuperscript{85} and many others. Some of the Agency’s most contentious rules, however, addressed new and existing sources in three major industries: Portland cement manufacturing,\textsuperscript{86} industrial boilers,\textsuperscript{87} and power plants.\textsuperscript{88} In all three actions EPA was criticized for what industry representatives dubbed the “FrankenMACT”

\textsuperscript{81} 42 U.S.C. § 7412 (2012).
\textsuperscript{84} Id.
\textsuperscript{86} National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants, 75 Fed. Reg. 54,970 (Sept. 9, 2010).
\textsuperscript{88} In December 2011, EPA announced standards for mercury, acid gases and other hazardous air pollutants from power plants under section 112. National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 9304 (Feb. 16, 2012). The Obama administration inherited the mercury issue from the Bush administration when the Bush Clean Air Mercury Rule was struck down by the D.C. Circuit as fundamentally inconsistent with the statute. See N.J. v. EPA, 517 F.3d 574 (D.C. Cir. 2008).
approach, in which the Agency ostensibly cobbled together pollutant limits that reflected the “maximum achievable control technology” ("MACT") at many different facilities to create a set of requirements that no single regulated plant could meet.\textsuperscript{89} Rather than this pollutant-by-pollutant approach, the industry believed that EPA should have identified MACT on a source-by-source basis.\textsuperscript{90} Environmental advocates, on the other hand, argued these latest rules were entirely consistent with EPA’s long-standing methodology for setting standards for hazardous air pollutants.\textsuperscript{91}

After initially promulgating the three regulations, EPA reopened them for further consideration, either per a court order or its own choice. For the Portland cement standards, the D.C. Circuit issued a remand because EPA improperly used data from both cement kilns and solid waste incinerators in setting the MACT

\textsuperscript{89} Trinity Consultants, EPA Proposes "Franken-MACT" for Utilities (August 5, 2011) (describing how "the final limits are the best of best on a pollutant-specific basis and not on a best source achieved basis"), available at http://www.trinityconsultants.com/Templates/TrinityConsultants/News/Article.aspx?id=3494.


limits.\textsuperscript{92} For industrial boilers, EPA announced the reconsideration at the very moment it issued the MACT standards because the Agency needed additional time to address more than a dozen issues that could not be resolved before EPA had to release the rule to meet a court-ordered deadline.\textsuperscript{93} Finally, as to power plants, after receiving petitions for administrative reconsideration, EPA agreed to reopen a few “technical” issues for new sources, including how to measure compliance with the mercury limits.\textsuperscript{94}

EPA announced the reconsidered requirements for Portland cement plants\textsuperscript{95}

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\textsuperscript{92} Portland Cement Ass’n v. EPA, 665 F.3d 177 (D.C. Cir. 2011).
\textsuperscript{93} National Emission Standards for Hazardous Air Pollutants; Notice of Reconsideration, 76 Fed. Reg. 15,266 (March 21, 2011).
\textsuperscript{94} National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units: Notice of Partial Stay, 77 Fed. Reg. 45,967 (Aug. 12, 2012). EPA did so because the industry argued the standards were set so low that continuous monitoring could not measure the mercury concentrations at those low levels, making both monitoring and compliance difficult. See Jessica Coomes, \textit{EPA Mercury Standards Would Block New Coal-Fired Plants, Petitioners Say}, 43 ENVT. REP. (BNA) 1141 (May 4, 2012). The other issues in the case are being separately litigated, including challenges to the standards for existing sources. Jessica Coomes, \textit{EPA Asks D.C. Circuit to Hold in Abeyance Case Challenging New Source Mercury Limits}, 43 ENVT. REP. (BNA) 1921 (July 27, 2012). On November 30, 2012, in response to that reconsideration, EPA published a proposal of some revisions that did not change the actual technology for control but changed how the standards are articulated, easing some of the industry’s concerns. Reconsideration of Certain New Source and Startup/Shutdown Issues: National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 71,323 (Nov. 30, 2012). For example, the original standard was 0.0002 pounds per gigawatt hour, whereas the proposed new standard is an order of magnitude different at 0.003 pounds, which can be measured by available monitoring systems. See Jessica Coomes, \textit{Proposed Changes to Mercury Limits For New Coal Plants Help Ease Industry Fears}, 43 ENVT. REP. (BNA) 3097 (Dec. 7, 2012).
\textsuperscript{95} See National Emission Standards for Hazardous Air Pollutants for the Portland Cement
and industrial boilers\textsuperscript{96} in December 2012, although the rules did not appear in the Federal Register until early in the second term. In addition, EPA issued the revised mercury standards for new power plants in April 2013.\textsuperscript{97} None of the new regulations changed the Agency’s disputed practice of setting limits pollutant-by-pollutant, rather than source-by-source. That key issue – and many others on these rules for hazardous air pollutants – will now be litigated before the D.C. Circuit.

\textit{B. Ozone and Other "Criteria" Pollutants}

The Obama EPA also took significant action on national ambient air quality standards ("NAAQS") for so-called "criteria" pollutants under Clean Air Act section 109.\textsuperscript{98} It adopted more stringent “primary” standards for nitrogen dioxide\textsuperscript{99}

\begin{flushright}Manufacturing Industry and Standards of Performance for Portland Cement Plants, 78 Fed. Reg. 10,006 (Feb. 12, 2013); National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 78 Fed. Reg. 7488 (Feb. 1, 2013). The Portland Cement industry was given two additional years to comply with the new standards, which was welcomed by industry leaders but called “completely gratuitous” by environmental groups. Andrew Childers, \textit{EPA Gives Cement Kilns Two Extra Years To Comply With Revised Air Toxics Standards}, 44 \textit{ENV’T. REP.} (BNA) 6 (Jan. 4, 2013).
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and sulfur dioxide, in an effort to avoid the harmful effects of ozone on human health, and those rules were upheld by the D.C. Circuit. The Agency also initially proposed new “secondary” standards for nitrogen dioxide and sulfur dioxide designed to avoid harms to the ecosystem but later reversed course, prompting lawsuits from environmentalists. In addition, EPA chose to retain the existing standards for carbon monoxide and coarse particles. For fine particles, the Agency announced more stringent primary standards in December 2012 that likely will be challenged in the D.C. Circuit.

99 Primary National Ambient Air Quality Standards for Nitrogen Dioxide; Final Rule, 75 Fed. Reg. 6474 (Feb. 9, 2010) (codified at 40 C.F.R. pts. 50, 56). These rules set the standard for NO\textsubscript{2} (as proxy for measuring all oxides of nitrogen) at 100 ppb over one hour. Id. at 6,494.
100 Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule, 75 Fed. Reg. 35,520 (June 22, 2010) (establishing a new one-hour primary standard at 75 ppb, while revoking the existing daily and annual primary standards).
103 See Brief of Plaintiff, Center for Biological Diversity v. EPA, No. 12-1238 (DC Cir. Nov. 30, 2012).
105 National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3086 (Jan 15, 2013). There was particular controversy about whether EPA would address coarse particles in rural areas, referred to as “farm dust” by House Republicans, who passed legislation in December 2011 to restrict EPA’s ability to regulate coarse particulate matter. Jessica Coomes, House Passes Bill to Restrict EPA’s Ability To Regulate Rural Coarse Particulate Matter, 42 ENV’T REP. (BNA) 2734 (Dec. 9, 2011). In actuality, EPA had no intention of revising the coarse particle standard, and even some organizations like the National Farmers Union were not concerned, saying that such legislation was a “waste of taxpayer time and money.” Id.
106 National Ambient Air Quality Standards for Particulate Matter, supra note 105, 78 Fed. Reg. at 3086 (Although this rule did not appear in the Federal Register until January 2013, it was signed by the EPA Administrator in late December 2012).
Perhaps the biggest NAAQS story, however, is not the rules EPA finalized, but the Agency’s proposed ozone standards that eventually succumbed to political opposition.107 After the new administration announced in March 2009 that EPA would reevaluate the ozone standard put forth under President Bush, the Agency spent months reassessing all the data and eventually proposed a stricter standard.108 Critics in the regulated community and in Congress used EPA’s own data to highlight the regulation’s enormous compliance costs.109 On September 2, 2011, after political pressure continued to mount, President Obama asked EPA to withdraw the proposal,110 greatly disappointing his environmental supporters.

Separately, the Obama administration and its allies suffered a significant defeat when EPA’s Cross-State Air Pollution Rule111 was struck down by the D.C. Circuit.112 That regulation was designed to help downwind states comply with the NAAQS for ozone and fine particles by limiting upwind emissions of sulfur


110 President Barack Obama, supra note 107.


dioxide and nitrogen oxides. The Cross-State Air Pollution Rule was an attempt to replace the Bush era Clean Air Interstate Rule, which itself was remanded (but not vacated) by the D.C. Circuit.

In late June 2013, the U.S. Supreme Court granted certiorari on the decision striking down the Cross-State Air Pollution Rule. The Justices will consider whether the appellate court even had jurisdiction to consider the challenges and, if so, how to interpret the statutory provision governing upwind states' contributions to downwind air pollution. If the Supreme Court agrees that the rule should fall, EPA will have to work even more carefully to address the difficult issue of interstate transport of pollutants.

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114 Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NOX SIP Call, 70 Fed. Reg. 25,162 (2005).
115 North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008), modified on reh'g in part, 550 F.3d 1176 (D.C. Cir. 2008); See also Patricia Ross McCubbin, Cap and Trade Programs Under the Clean Air Act: Lessons from the Clean Air Interstate Rule and the NOX SIP Call, 18 PENN ST. ENVT'L. REV. 1, 4 (2009).
117 Id. (order granting review on three issues, including jurisdiction and two substantive statutory interpretation questions). The relevant provision from the Clean Air Act is 42 U.S.C. § 7410(a)(2)(D)(i)(I).
III. Priorities for Regulation of Air Pollutants in the Second Term

In President Obama’s second term, EPA will be defending its recent final rules at the Supreme Court and at the D.C. Circuit as well as moving forward with new rules. EPA is expected, for example, to issue a revised nationwide standard for ozone in late 2013.118

In addition, the environmental community is anxious to see developments on other fronts as well. EPA missed a December 2011 deadline for regulating greenhouse gases at petroleum refineries,119 and the Agency is separately considering revisions to the refinery limits for criteria pollutants and hazardous air pollutants.120 Also of high priority for environmentalists are the “tier 3” emission standards for light duty vehicles, which would require auto manufacturers to further reduce tailpipe emissions of nitrogen oxides, volatile organic compounds and other pollutants, and require oil refineries to reduce the sulfur content in

119 As part of a consent decree with environmental groups, EPA agreed to issue proposed standards for emissions at petroleum refineries by a December 2011 deadline. Andrew Childers, Resumption of Talks Expected in January on Refinery Greenhouse Gas Rule Deadline, 43 Env’t. Rep. (BNA) 3185 (Dec. 14, 2012). EPA expects the proposal to be made sometime in 2013, potentially making it nearly two years late. Id.
120 Jessica Coomes, White House Returns Proposed Rule on Refineries to EPA for More Analysis, 44 Env’t. Rep. (BNA) 709 (March 15, 2013). In early 2009 before leaving office, the Bush administration issued a finding that no new standards were appropriate, but the Obama administration blocked it and said it would review that decision. See Jessica Coomes, EPA Withdraws Portions of Final Rule Amending Standards at Petroleum Refineries, 42 Env’t. Rep. (BNA) 1630 (July 22, 2011).
gasoline.\textsuperscript{121}

Of greatest priority will be EPA's efforts to address climate change. For several months in early 2013, it was unclear whether or how EPA would proceed on greenhouse gases from power plants, as the Agency missed a deadline for issuing the performance standards for new power plants.\textsuperscript{122} In late June 2013, however, President Obama gave a major speech on climate change and released a "Climate Action Plan" detailing the many actions proposed for the executive branch in light of Congress's refusal to adopt comprehensive legislation\textsuperscript{123} – everything from promoting renewable energy and improving energy efficiency, to preparing the United States for the adverse impacts of climate change, and working with other nations on all these fronts.\textsuperscript{124} On the regulation of power plants, President Obama directed EPA, in an accompanying Presidential Memorandum, to issue a revised proposal for standards for new power plants no later than September 20, 2013, with the final standards to be issued "in a timely fashion after considering all public comments".\textsuperscript{125} Of great significance, he also directed EPA


\textsuperscript{122} Volcovici, \textit{supra} note 75.

\textsuperscript{123} President Barack Obama, \textit{The President's Climate Action Plan}, Executive Office of the President (June 25, 2013).

\textsuperscript{124} Id.

to issue proposed guidelines on *existing* power plants by June 1, 2014, with final guidelines to be issued in 2015 and state plans to implement those guidelines due in 2016.\textsuperscript{126}

As part of EPA's efforts to address greenhouse gases, it will have to wrestle with two related, overarching issues. The first is how to coordinate federal requirements – especially for existing facilities – with state programs that already regulate greenhouse gases in California, the Northeast states and elsewhere. The second issue is how, if at all, EPA could create a nationwide greenhouse gas trading scheme that involves multiple industrial sectors, when its authority under the Clean Air Act may extend at most to sector-by-sector trading. Perhaps EPA could facilitate a national trading program if it promulgated a NAAQS for greenhouse gases. In fact, the Center for Biological Diversity and 350.org petitioned the Agency in December 2009 for just such a nationwide standard,\textsuperscript{127} but to date EPA has not responded.\textsuperscript{128}

\textsuperscript{126} Id. at 39536.
\textsuperscript{128} For an analysis of whether the Clean Air Act requires EPA to establish such nationwide air quality standards for greenhouse gases, see Patricia Ross McCubbin, *EPA’s Endangerment Finding for Greenhouse Gases and the Potential Duty to Adopt National Ambient Air Quality Standards to Address Global Climate Change*, 33 So. Ill. L. J. 437 (2009).
In sum, EPA already has many important Clean Air Act items on its agenda for President Obama’s second term, and the number of air issues will only increase as time goes on.