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# **EPA Regulations: Too Much, Too Little, or On Track?**

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March 19, 2014

**Congressional Research Service**

7-5700

[www.crs.gov](http://www.crs.gov)

R41561

## Summary

Since Barack Obama was sworn in as President in 2009, the Environmental Protection Agency (EPA) has proposed and promulgated numerous regulations implementing the pollution control statutes enacted by Congress. Critics have reacted strongly. Many, both within Congress and outside of it, have accused the agency of reaching beyond the authority given it by Congress and ignoring or underestimating the costs and economic impacts of proposed and promulgated rules. The House has conducted vigorous oversight of the agency in the 112<sup>th</sup> and 113<sup>th</sup> Congresses, and has approved several bills that would overturn specific regulations or limit the agency's authority. Particular attention has been paid to the Clean Air Act; congressional scrutiny has focused as well on other environmental statutes and regulations implemented by EPA.

Environmental groups and other supporters of the agency disagree that EPA has overreached. Many of them believe that the agency is, in fact, moving in the right direction, including taking action on significant issues that had been long delayed or ignored in the past. In several cases, environmental advocates would like the regulatory actions to be stronger.

EPA states that critics' focus on the cost of controls obscures the benefits of new regulations, which, it estimates, far exceed the costs. It maintains that pollution control is an important source of economic activity, exports, and American jobs, as well. Further, the agency and its supporters say that EPA is carrying out the mandates detailed by Congress in the federal environmental statutes.

This report provides background information on EPA regulatory activity during the Obama Administration to help address these issues. It examines major or controversial regulatory actions taken by or under development at EPA since January 2009, providing details on the regulatory action itself, presenting an estimated timeline for completion of the rule (including identification of related court or statutory deadlines), and, in general, providing EPA's estimates of costs and benefits, where available. The report includes tables that show which rules remain under development, and an appendix that describes major or controversial rules that are now final.

The report also discusses factors that affect the timeframe in which regulations take effect, including statutory and judicial deadlines, public comment periods, judicial review, and permitting procedures, the net results of which are that existing facilities are likely to have several years before being required to comply with most of the regulatory actions under discussion. Unable to account for such factors, which will vary from case to case, timelines that show dates for proposal and promulgation of EPA regulations effectively underestimate the complexities of the regulatory process and overstate the near-term impact of many of the regulatory actions.

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# Introduction

## Is EPA on Target or Overreaching? Conflicting Views

Since Barack Obama was sworn in as President of the United States in 2009, the Environmental Protection Agency (EPA) has proposed and promulgated numerous regulations under the 11 pollution control statutes Congress has directed it to implement.<sup>1</sup> Most of these statutes have not been amended for more than a decade, yet the agency is still addressing for the first time numerous directives given it by Congress, while also addressing newly emerging pollution problems and issues. The statutes also mandate that EPA conduct periodic reviews of many of the standards it issues, and the agency is doing these reviews, as well.

Although supporters would say that EPA is just doing its job, the agency's regulatory actions over the last five-plus years have drawn attention for several reasons. In some cases, such as regulation of greenhouse gas emissions, they represent a new departure. Based on a 2007 Supreme Court ruling that greenhouse gas emissions are air pollutants under the Clean Air Act's definition of that term,<sup>2</sup> the agency has undertaken numerous regulatory actions setting emission standards or laying the framework for a future regulatory structure. In other cases, the agency is revisiting emissions, effluent, and waste management regulatory decisions made during earlier Administrations and proposing more stringent standards to address pollution that persists as long as 40 years after Congress directed the agency to take action. These actions are being driven by statutory requirements to reexamine regulations, by legal challenges and court decisions, or because of changing technologies or new scientific information.

EPA's actions, both individually and in sum, have generated controversy. *The Wall Street Journal*, calling the scale of EPA regulatory actions "unprecedented," stated that the agency "has turned a regulatory firehose on U.S. business"<sup>3</sup> and, regarding proposed regulatory actions affecting electric generating units, it said "the EPA's regulatory cascade is a clear and present danger to the reliability and stability of the U.S. power system and grid."<sup>4</sup> The American Enterprise Institute stated that EPA "is engaged in a series of rule-making proceedings of extraordinary scope and ambition."<sup>5</sup> The U.S. Chamber of Commerce described EPA's actions as "a series of one-sided, politically-charged regulations that are intended to take the place of legislation that cannot achieve a consensus in the Congress."<sup>6</sup> Affected parties, such as the National Petrochemical & Refiners Association, have labeled the agency's actions "overreaching government regulation" and "a clear distortion of current environmental law,"<sup>7</sup> while the National Mining Association

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<sup>1</sup> For a summary of each of the 11 statutes and their principal requirements, see CRS Report RL30798, *Environmental Laws: Summaries of Major Statutes Administered by the Environmental Protection Agency*, coordinated by David M. Bearden.

<sup>2</sup> See CRS Report R40984, *Legal Consequences of EPA's Endangerment Finding for New Motor Vehicle Greenhouse Gas Emissions*, by Robert Meltz.

<sup>3</sup> *The Wall Street Journal*, "The EPA Permittorium," editorial, November 22, 2010.

<sup>4</sup> *The Wall Street Journal*, "An EPA Moratorium," editorial, August 29, 2011.

<sup>5</sup> AEI, "The EPA's Ambitious Regulatory Agenda," Conference, November 8, 2010, at <http://www.aei.org/event/100334#doc>.

<sup>6</sup> U.S. Chamber of Commerce, "Regulatory Areas, Energy, and the Environment," <http://www.uschamber.com/regulations/areas>.

said, “even at a time of great economic stress, EPA is poised to enact a series of back-door mandates that threaten to cost millions of American jobs, and increase the cost of their electricity while they’re at it.”<sup>8</sup>

Both Democrats and Republicans in Congress have expressed concerns, through bipartisan letters commenting on proposed regulations and through introduced legislation that would delay, limit, or prevent certain EPA actions.<sup>9</sup> Senior Republicans in the House and Senate committed to vigorous oversight of the agency’s actions during the 112<sup>th</sup> Congress,<sup>10</sup> with some threatening to withhold funding if the agency continued on its present course.<sup>11</sup> Vigorous oversight is continuing in the 113<sup>th</sup> Congress, as is congressional criticism—early last year, a senior Senate Republican referred to a “frightening flood” of new EPA rules.<sup>12</sup>

EPA has not been silent as the agency’s actions have come under attack. In a November 2010 letter to the ranking Members of the Energy and Commerce Committee and its Subcommittee on Oversight and Investigations, then-EPA Administrator Lisa Jackson stated:

The pace of EPA’s Clean Air Act regulatory work under this administration is actually not faster than the pace under either of the two previous administrations. In fact, EPA has finalized or proposed fewer Clean Air Act rules (87) over the past 21 months than in the first two years of either President George W. Bush’s administration (146) or President Clinton’s administration (115).<sup>13</sup>

In congressional testimony and other fora, Administrator Jackson sought to rebut critics’ challenges to EPA’s actions and initiatives.

It’s time for a real conversation about protecting our health and the environment while growing our economy. EPA’s 40 years of environmental and health protection demonstrate our nation’s ability to create jobs while we clear our air, water and land... Telling the truth

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(...continued)

<sup>7</sup> NPRA, “NPRA Says Court Decision on GHGs Bad for Consumers,” December 10, 2010, at <http://www.npra.org/newsRoom/?fa=viewCmsItem&title=Latest%20News&articleID=5980>.

<sup>8</sup> National Mining Association, “EPA’s Regulatory Train Wreck,” 2011, [http://www.nma.org/pdf/fact\\_sheets/epa\\_tw.pdf](http://www.nma.org/pdf/fact_sheets/epa_tw.pdf).

<sup>9</sup> For a discussion of some of these congressional actions, see CRS Report R41212, *EPA Regulation of Greenhouse Gases: Congressional Responses and Options*, by James E. McCarthy; CRS Report R41698, *H.R. 1 Full-Year FY2011 Continuing Resolution: Overview of Environmental Protection Agency (EPA) Provisions*, by Robert Esworthy; and CRS Report R41979, *Environmental Protection Agency (EPA) FY2012 Appropriations: Overview of Provisions in H.R. 2584 as Reported*, by Robert Esworthy.

<sup>10</sup> See, for example, Letter of Hon. Fred Upton, Chairman-elect, House Energy and Commerce Committee, and Hon. James Inhofe, ranking Member, Senate Environment and Public Works Committee, to EPA Administrator Lisa Jackson, December 9, 2010, at [http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore\\_id=d596d5fb-593c-4c99-b0c1-41aab15887b0](http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=d596d5fb-593c-4c99-b0c1-41aab15887b0). See also “A Coming Assault on the E.P.A.,” *New York Times*, editorial, December 24, 2010.

<sup>11</sup> See letter of Hon. Jerry Lewis to EPA Administrator Lisa P. Jackson, November 29, 2010, p. 2, at <http://op.bna.com/env.nsf/id/jstn-8bnt7t/>.

<sup>12</sup> See “Oil Industry, GOP Criticize EPA’s New Gasoline Rules,” *Washington Post*, March 30, 2013, p. 3.

<sup>13</sup> Letter of Lisa P. Jackson, EPA Administrator, to Hon. Joe Barton and Hon. Michael C. Burgess, November 8, 2010, p. 1. According to the letter, “All three counts include all Clean Air Act rules that amend the Code of Federal Regulations and that require the EPA Administrator’s signature.” Administrator Jackson’s letter was written in response to an October 14 letter from Reps. Barton and Burgess in which they expressed concern regarding the cumulative impacts of new regulations being proposed under the Clean Air Act.

about our economy and our environment is about respecting the priorities of the American people. More than 70 percent of Americans want EPA to continue to do its job effectively. Those same Americans want to see a robust economic recovery. We have the capacity to do both things if we don't let distractions keep us from the real work of creating jobs.<sup>14</sup>

Environmental groups generally believe that the agency is moving in the right direction, but in several cases they would like the regulatory actions to be stronger.<sup>15</sup> Many also fear that decisions to delay the issuance or implementation of several standards are bad omens. Commenting on EPA's December 2010 request to delay the issuance of standards for boilers, for example, Clean Air Watch stated, "there is an unfortunate appearance here that political pressure from Congress is affecting the situation. That EPA is running scared."<sup>16</sup> These concerns were renewed following the President's September 2011 decision to withdraw revised air quality standards for ozone that EPA had spent two years developing (see "Ozone Ambient Air Quality Standards" section, below) and the agency's delay in implementation of air quality standards for cement kilns and other industries.

It is not this report's purpose to render a verdict on whether EPA is overreaching, running scared, or following the directions and using the authorities given it by Congress. Statements characterizing EPA's actions, such as those cited above, depend on judgments as to whether the agency has correctly determined the level of stringency needed to address an environmental problem, and whether the agency's actions are justified by the legislative mandates that Congress has imposed and statutory authorities that Congress has provided. Congress and the courts may render these judgments.

## What This Report Does

This report provides a factual basis for discussion of these issues, which must ultimately be evaluated on a case-by-case basis. The report identifies and briefly characterizes major regulatory actions<sup>17</sup> promulgated, proposed, or under development by EPA since January 2009. The report uses data from EPA's Semiannual Regulatory Agendas<sup>18</sup> and the list of economically significant reviews completed by the Office of Management and Budget (OMB)<sup>19</sup> to compile a list of regulatory actions proposed, promulgated, or under development by the agency. The list includes

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<sup>14</sup> Lisa P. Jackson, EPA Administrator, "Telling the Truth about the Environment and Our Economy," September 2, 2011, <http://blog.epa.gov/administrator>.

<sup>15</sup> See, for example, comments of Clean Air Task Force, Earthjustice, Natural Resources Defense Council, and the Sierra Club on the proposed emission standards for boilers, as cited in CRS Report R41459, *EPA's Boiler MACT: Controlling Emissions of Hazardous Air Pollutants*, by James E. McCarthy, p. 15.

<sup>16</sup> Clean Air Watch, "EPA Seeks Big Delay in Final Toxic Rule for Boilers," December 7, 2010, at <http://blogforcleanair.blogspot.com/2010/12/epa-seeks-big-delay-in-final-toxic-rule.html>.

<sup>17</sup> This report uses the terms "regulatory action," "regulation," "rule," "standard," and "guidelines" for the actions it describes. There are slight differences among these terms, which are explained, if necessary to understand how the regulatory action will be implemented. In general, "regulatory action" is the broadest of the terms and includes each of the others.

<sup>18</sup> U.S. EPA, *Semiannual Regulatory Agenda: Spring 2013*, July 3, 2013, at <http://www.regulations.gov#!documentDetail;D=EPA-HQ-OA-2013-0514-0001>.

<sup>19</sup> OMB, Office of Information and Regulatory Affairs (OIRA), *Historical Reports*, at <http://www.reginfo.gov/public/do/eoHistReviewSearch>.

all EPA rules considered “economically significant” by OMB since January 2009,<sup>20</sup> as well as some others that were not so designated but have been widely discussed.

Each entry in this report (1) gives the name or, where appropriate, the common name of the regulatory action (e.g., the “Tailoring Rule,” or the “Endangerment Finding”); (2) explains what the action does; (3) states the current status of the rule or action (e.g., proposed September 20, 2013); (4) explains the significance of the action, providing information on estimated costs and benefits, where available; (5) discusses the timeline for implementation, and whether there is a non-discretionary congressional deadline or a court order or remand driving its development; and (6) identifies a CRS analyst who would be the contact for further information. To simplify presentation, in some cases, we have summarized several separate, but related, regulations under one heading.

This is not a complete list of the regulations that EPA has proposed or promulgated during the Obama Administration. Rather, it is an attempt to identify the most significant and most controversial. A complete list would be substantially longer.<sup>21</sup>

## A Few Caveats Regarding Timing

Not all of the rules discussed here are Obama Administration initiatives. Many began development under the Bush Administration (or earlier, in some cases), including several that were promulgated under that Administration and subsequently were vacated or remanded to EPA by the courts. Within the Clean Air Act group, for example, most of the major rules, including the agency’s boiler rules and two of the major rules affecting electric power plants (the Cross-State Air Pollution Rule and the MACT rule) fit that description. Similarly, EPA’s regulation of power plant cooling water intake structures is governed by a 1995 consent decree and rules issued and proposed in several phases beginning in 2001. Other EPA actions, such as reconsideration of the ozone air quality standard, have actually delayed for several years implementation of Bush Administration rules that strengthened existing standards. All of these are described in detail below.

Several other generalizations are worth underlining:

- Many proposed and “pre-proposal” rules linger for years without being promulgated; thus, many of the EPA actions described here may not take effect for some time.<sup>22</sup> For those rules not yet promulgated, we have focused on rules that have statutory or court-ordered deadlines and/or that have already been the subject of significant discussion.

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<sup>20</sup> OIRA (the regulatory affairs staff within OMB) considers a rule to be “economically significant” if it is “likely to have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.” OMB, *FAQs/Resources*, at <http://www.reginfo.gov/public/jsp/Utilities/faq.jsp>.

<sup>21</sup> For example, according to OMB, OIRA completed action on 47 proposed and final EPA rules in 2012 and 78 proposed and final rules in 2011; 8 and 15 of these, respectively were determined to be economically significant. See footnote 19.

<sup>22</sup> They may also be substantially altered before they become final and take effect, as a result of the proposal and public comment process, and/or judicial review.



- If there are no known deadlines, we have attempted to provide EPA's estimate of the schedule for promulgation. In some cases, EPA has not estimated a proposal or promulgation date. In those instances, we have either provided dates reported in press accounts or we have discussed the general outlook for promulgation. Experience suggests that proposal or promulgation may take longer than estimated in cases that do not have a court-ordered deadline.
- Although they are the most likely deadlines to be met, even court-ordered dates for proposal or promulgation may change. It is not uncommon for EPA to request extensions of time, often due to the need to analyze extensive comments or re-evaluate technical information.
- Promulgation of standards is not the end of the road. Virtually all major EPA regulatory actions are subjected to court challenge, frequently delaying implementation for years. As noted earlier, many of the regulatory actions described here are the result of courts remanding and/or vacating rules promulgated by previous administrations. EPA has also, in several cases, reconsidered rules after promulgation, changing what were announced as "final" standards, and, in some cases, granting additional time for compliance.
- In many cases, EPA rules must be adopted by states to which the program has been delegated before actual implementation occurs (e.g., establishing air quality plans or issuing permits). Moreover, many states require that the legislature review new regulations before the new rules would take effect.
- Standards for stationary sources under the air, water, and solid waste laws are generally implemented through permits, which would be individually issued by state permitting authorities after the standards take effect. When finalized, a permit would generally include a compliance schedule, typically giving the permittee several years for installation of required control equipment. Existing sources generally will have several years following promulgation and effective dates of standards, therefore, to comply with any standards.

In short, the road to EPA regulation is rarely a straight path. There are numerous possible causes of delay. It would be unusual if the regulatory actions described here were all implemented on the anticipated schedule, and even if they were, existing facilities would often have several years before being required to comply. That said, **Table 1** identifies rules that are likely to be proposed or promulgated by September 2014. Note that expected dates are tentative.



**Table I. Major EPA Rules and Modifications Expected to Be Proposed or Promulgated, March 2014-September 2014**

Item Number in This Report	Name of Rule	Type of Rule	Expected Date
7.	Revised Cooling Water Intake	Final	April 17, 2014
8.	Revised Steam Electric Effluent Limitations Guidelines	Final	May 14, 2014
1.	Carbon Pollution Guidelines for Greenhouse Gas Emissions from Existing Power Plants	Proposed	June 1, 2014
5.	Brick and Clay MACT	Proposed	August 28, 2014

**Source:** Compiled by CRS.

## Congressional Activity

In the 111<sup>th</sup> Congress, a number of EPA's regulatory actions were the subject of legislative proposals, including stand-alone bills that would have delayed or prohibited EPA actions, resolutions of disapproval under the Congressional Review Act, and potential riders on EPA's appropriation. None of these measures passed.

In the 112<sup>th</sup> Congress, criticism of EPA actions increased, and several bills to prevent or delay EPA action passed the House but were not considered in the Senate. Bills are also being considered in the 113<sup>th</sup> Congress. Some proposals have been broad in nature, targeting all regulatory agencies or a lengthy list of specific regulations, while others focus more narrowly on individual rules or actions.

The situation has been particularly contentious for regulatory actions involving greenhouse gases. Although former Administrator Jackson and President Obama repeatedly expressed their preference for Congress to take the lead in designing a GHG regulatory system, EPA maintains that, in the absence of congressional action, it must proceed to regulate GHG emissions using existing authority: a 2007 Supreme Court decision (*Massachusetts v. EPA*) compelled EPA to consider whether GHGs are air pollutants that endanger public health and welfare, and if it so determined, to embark on a regulatory course that is prescribed by the Clean Air Act. Having made an affirmative decision on the endangerment question, EPA has proceeded on that regulatory course and is defending its actions in court.

Opponents of this effort in Congress, who maintain that the agency is exceeding its authority, have considered various approaches to altering the agency's course, including riders on appropriations bills, stand-alone legislation, resolutions of disapproval under the Congressional Review Act, and amendments to the Clean Air Act. Several of these bills have passed the House in the 112<sup>th</sup> or 113<sup>th</sup> Congress; without exception, the 112<sup>th</sup> Congress bills died in the Senate. (Earlier versions of this report described specific bills. Staff interested in these bills may wish to contact the report's authors for additional information.)

In addition to measures that targeted greenhouse gas regulations, bills passed by the House in the 112<sup>th</sup> or 113<sup>th</sup> Congress have addressed other EPA regulatory actions affecting electric power

plants, industrial boilers and incinerators, coal combustion waste, cement kilns, and rural dust. None of these has passed the Senate.

Beyond the criticism of specific regulations, there have also been calls for broad regulatory reforms in the 112<sup>th</sup> and 113<sup>th</sup> Congress—to reinforce the role of economic considerations in agency decision-making, to increase Congress’s role in approving or disapproving regulatory decisions, or to require analysis of the cumulative impacts of multiple EPA regulations. One such broad bill is H.R. 367, the Regulations from the Executive in Need of Scrutiny (REINS) Act, which in general provides that major rules of the executive branch shall have no force or effect unless a joint resolution of approval is enacted into law.<sup>23</sup> The bill has passed the House in both the 112<sup>th</sup> and 113<sup>th</sup> Congresses. Other bills passed by the House in the 112<sup>th</sup> Congress proposed a number of broad regulatory reforms, including requiring agencies to adopt the least costly rule that meets relevant statutory objectives unless the benefits justify additional costs; providing for judicial review of certain requirements and determinations for which judicial review is not currently available; altering judicial deference to agency interpretations of rules; enhancing regulatory review authority of the Small Business Administration; and/or placing moratoria on the issuance of new regulations.

## Conclusions

This report has been updated frequently since the first version was released early in 2011. Many of the issues that were raised then regarding specific regulations have now been resolved—at least to the extent that proposed rules have been finalized. Still, the broader question of whether the Obama Administration’s EPA is “overreaching” in its regulatory efforts has not gone away. Critics both in Congress and outside of it regularly accuse the agency of overkill. In April 2013, in a case involving four of EPA’s greenhouse gas regulatory actions, for example, a dozen states led by Texas asked the Supreme Court to “rein in a usurpation agency and remind the President and his subordinates that they cannot rule by executive decree.”<sup>24</sup>

What is different three years after our first report is that there is now a more detailed record of EPA actions to be evaluated. Reviewing that record, we find—

- Many of the proposals that were controversial when our first report was released are now final.
- In general, the proposed versions of these rules served as “high water marks”: none of the final rules is more stringent than what was proposed and the final versions of many of the most controversial rules were made less stringent.
- In revising proposed rules, EPA often relied on data submitted by industry and other stakeholders, acknowledging that it had inadequate or incomplete data when it proposed the rules.

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<sup>23</sup> For information, see CRS Report R41651, *REINS Act: Number and Types of “Major Rules” in Recent Years*, by Maeve P. Carey and Curtis W. Copeland.

<sup>24</sup> Petition for certiorari filed by State of Texas et al. at 2, granted, 2013 WL 1743433 (Oct. 15, 2013), from Coalition for Responsible Regulation v. EPA, 682 F.3d 102 (D.C. Cir. 2012). Five other petitions for certiorari from the same decision were also granted; the combined cases will be known in the Supreme Court as *Utility Air Regulatory Group v. EPA* (No. 12-1146). Oral argument is scheduled for February 24, 2014.

- In several instances, the regulated community was given more time to comply than originally expected.
- Regardless of modifications in the final rules, many of the regulations have been challenged in court by a variety of groups—some seeking more stringent rules, others less stringent.
- Although many of these challenges remain to be heard by the courts, thus far the courts have upheld EPA decisions on the final regulations in most cases.
- The pace of new regulation has slowed considerably since 2011. In part, this may be because a backlog of rules that were remanded to the agency during the Bush Administration has been largely addressed; other rules were delayed until after the 2012 election, perhaps due to political considerations.
- A number of EPA proposals remain under development, with planned or court-ordered promulgation dates on the horizon; many of these remain controversial.

## Organization of the Report

Because so many of the rules that we listed in the first version of this report have now been promulgated, we have reorganized this update to separate these largely “resolved” issues from proposals that remain under consideration. In order to focus attention on the rules that remain to be finalized, we have removed rules that are already final from the body of the report and placed them in an **Appendix**. What remains in the text are the rules that are most likely to be the subject of debate in the remainder of President Obama’s term. These rules are organized under four headings: Clean Air Act and Climate Change; Clean Water Act; Toxic Substances Control Act; and Solid Waste (Resource Conservation and Recovery Act). Following the text, information concerning the rules that remain under development is summarized in **Table 2**.

## Clean Air Act and Climate Change

**1. Carbon Pollution Standards for New and Existing Power Plants.** EPA has stated for some time that it would undertake a review of the New Source Performance Standards (NSPS) to consider greenhouse gas emission standards for electric generating units at the same time as it developed mercury and air toxics (MATS or MACT) standards for power plants. Electric generating units are the largest U.S. source of both greenhouse gas and mercury emissions, accounting for about one-third of all GHG emissions in addition to about half of U.S. mercury emissions. In a settlement agreement with 11 states and other parties, EPA agreed to propose the NSPS for power plants by July 26, 2011, and take final action on the proposal by May 26, 2012. This schedule encountered delays: proposed standards were not proposed until April 13, 2012.<sup>25</sup> EPA faced a statutory deadline of one year after the date of proposal (i.e., April 13, 2013) for promulgation of final standards, which it did not meet. The agency received more than 2.5 million comments on the proposed rule—the most it has received on any rule in its 40-year history.

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<sup>25</sup> The standards appeared in the *Federal Register* on April 13, 2012. The standards and supporting materials are available at <http://www.epa.gov/carbonpollutionstandard/actions.html>.

On June 25, 2013, the President directed EPA to re-propose the rule by September 20, 2013. EPA released a modified proposal on September 20. The re-proposal appeared in the *Federal Register* on January 8.<sup>26</sup> The public comment period will run until May 9. The President also directed the agency to propose guidelines for emissions from existing generating units by June 1, 2014, finalize them by June 1, 2015, and require the states to submit implementation plans by June 30, 2016.

EPA set the GHG emission standards as proposed in 2012 and as modified in 2013 at levels achievable by most natural-gas-fired units without added pollution controls or by coal-fired units using carbon capture and storage (CCS) technology to capture about 40% of their uncontrolled emissions. Although the components of CCS technology have been demonstrated, no operating power plant combines them all in an operating unit, and the electric power industry has generally concluded that a CCS requirement would effectively prohibit the construction of new coal-fired plants, other than those already permitted. EPA maintains otherwise, but it also says that, because of low natural gas prices and abundant existing generation capacity, it believes no new coal-fired units subject to the proposed standards will be constructed between now and 2020. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**2. Phase 2 Medium- and Heavy-Duty Truck Greenhouse Gas Emission Standards.** On February 18, 2014, President Obama directed the Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) to develop a second round of greenhouse gas emission and fuel economy standards for medium- and heavy-duty trucks. Medium- and heavy-duty trucks are trucks with a gross vehicle weight of 8,500 pounds or more. The standards, which will affect trucks beginning with the 2019 model year, are to be proposed by March 2015 and finalized a year later. EPA had previously set GHG emission standards for MY2014-MY2018 medium- and heavy-duty trucks, which were widely supported by the affected industries. In a Fact Sheet accompanying the President's announcement, the White House stated that EPA and NHTSA will work closely with stakeholders and with the California Air Resources Board (CARB) with the goal of ensuring that the next phase of standards allow manufacturers to continue to build a single national fleet. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)) or Brent Yacobucci (7-9662, [byacobucci@crs.loc.gov](mailto:byacobucci@crs.loc.gov)).

**3. Expanded Renewable Fuel Standard (RFS2).** On March 26, 2010, EPA promulgated new rules for the renewable fuel standard (RFS) that was expanded by the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140).<sup>27</sup> For 2014, EISA is scheduled to require the use of 18.15 billion gallons of ethanol and other biofuels in transportation fuel. Within that mandate, the statute requires the use of 3.75 billion gallons of advanced biofuels (fuels other than corn starch ethanol), including 1.75 billion gallons of cellulosic biofuels. Because of concerns that gasoline and diesel fuel suppliers would be unable to meet the 2014 standards,<sup>28</sup> in November 2013 EPA proposed lowering the advanced biofuel and overall RFS mandates. On November 29, 2013, EPA proposed an overall RFS of 15.21 billion gallons and an advanced biofuel mandate of 2.2 billion gallons, below both the actual 2013 level and the 2014 level scheduled in EISA.

<sup>26</sup> U.S. Environmental Protection Agency, "Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units," Proposed Rule, 79 *Federal Register* 1430, January 8, 2014.

<sup>27</sup> U.S. Environmental Protection Agency, "Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule," 75 *Federal Register* 14670-14904, March 26, 2010.

<sup>28</sup> See section on Ethanol Blend Wall/E15 Waiver in the **Appendix** to this report.

Further, because few commercial-scale cellulosic biofuel refineries have begun operation, EPA has proposed reducing the mandated 2014 level for these fuels from 1.75 billion gallons to 17 million ethanol-equivalent gallons.<sup>29</sup>

Similar shortfalls have occurred since 2010 when EISA first required the inclusion of cellulosic biofuels in the RFS, prompting EPA to revise downward the cellulosic mandate each year. However, through 2012 no commercial-scale cellulosic biofuel plants had begun operation, and only about 20,000 gallons of cellulosic biofuel had been registered under the RFS, as opposed to the 10.45 million ethanol-equivalent gallons (8.65 actual gallons) required by EPA. Because of this shortfall in production capacity, in January 2013 the U.S. Court of Appeals for the D.C. Circuit vacated the 2012 cellulosic mandate.<sup>30</sup> In response, in February EPA revised the 2012 cellulosic standard to zero. As part of the 2014 rulemaking, EPA also proposed rescinding the 2011 cellulosic mandate.

Because of the (vacated) requirement to use fuels that are not available in the market (“phantom fuels”), EPA’s process for determining annual cellulosic volumes has become controversial. Legislation introduced in the House and Senate, H.R. 550 and S. 251, would amend the Clean Air Act to set cellulosic fuel requirements based on the prior years’ average monthly production as opposed to the current statutory requirement for EPA to project production capacity for the year. Various other bills to amend the RFS, including legislation to eliminate portions of the RFS, lower the annual mandated levels, or eliminate the program entirely. For additional information, contact Brent Yacobucci (7-9662, [byacobucci@crs.loc.gov](mailto:byacobucci@crs.loc.gov)).

**4. Ozone Ambient Air Quality Standards.** On January 19, 2010, EPA proposed a revision of the National Ambient Air Quality Standard (NAAQS) for ozone.<sup>31</sup> At the President’s request, on September 2, 2011, this proposal was withdrawn, leaving EPA to implement previously promulgated ozone standards. The Clean Air Act requires EPA to review NAAQS every five years, however, so the agency is nearing completion of the next regular review, with proposal expected before the end of 2014 and promulgation a year later.

NAAQS are the cornerstone of the Clean Air Act, in effect defining what EPA considers to be clean air. They do not directly limit emissions, but they set in motion a process under which “nonattainment areas” are identified and states and EPA develop plans and regulations to reduce pollution in those areas. Nonattainment designations may also trigger statutory requirements, including that new major sources offset certain emissions by reducing emissions from existing sources. Currently, there are NAAQS for six pollutants (ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, and lead). Because EPA has routinely failed to meet CAA requirements that these standards be reviewed every five years, all of the standards have been under court-ordered deadlines for review. EPA last completed a review of the ozone NAAQS in 2008, and made the standard more stringent; but the Obama Administration’s EPA suspended implementation of the 2008 standard in 2009 in order to consider further strengthening it.

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<sup>29</sup> U.S. Environmental Protection Agency, “2014 Standards for the Renewable Fuel Standard Program; Proposed Rule,” 78 *Federal Register* 71732-71784, November 29, 2013.

<sup>30</sup> *API v. EPA*, 706 F.3d 474 (D.C. Cir. 2013).

<sup>31</sup> U.S. Environmental Protection Agency, “National Ambient Air Quality Standards for Ozone; Proposed Rule,” 75 *Federal Register* 2938, January 19, 2010.

The reconsidered ozone NAAQS that was proposed in January 2010 was among the most controversial standards under consideration at EPA, because of its wide reach and potential cost. In the 2010 proposal, EPA identified at least 515 counties that would violate the proposed NAAQS if the most recent three years of data available at the time of proposal were used to determine attainment (compared to 85 counties that violated the standard in effect at that time). The agency estimated that the costs of implementing the reconsidered ozone NAAQS, as proposed, would range from \$19 billion to \$25 billion annually in 2020, with benefits of roughly the same amount.

On September 2, 2011, the White House announced that the President had requested that EPA Administrator Jackson withdraw the draft ozone standards, since work was already underway to update a review of the science that would result in the reconsideration of the ozone standard in 2013.<sup>32</sup> That review is now nearing completion, as mentioned above, with proposal expected in late 2014. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**5. Brick and Clay MACT.** EPA promulgated Maximum Achievable Control Technology (MACT) standards for hazardous air pollutants emitted by manufacturers of bricks, structural clay products, and clay ceramics in 2003, but the standards were vacated by the D.C. Circuit Court of Appeals in 2007. The agency has not taken action since that time, and was sued by the Sierra Club for its failure to act. Under a consent decree, the agency has agreed to sign proposed standards to replace the vacated rule by August 28, 2014, and to sign a final rule for promulgation by June 30, 2015. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

## Clean Water Act

**6. “Post-Construction” Stormwater Rule.** EPA is exploring regulatory options to strengthen the existing regulatory program for managing stormwater, which is a significant source of water quality impairments nationwide. Under the current program, large cities and most industry sources are subject to CWA rules issued in 1990; smaller cities, other industrial sources, and construction sites are covered by rules issued in 1999. EPA is considering options to strengthen stormwater regulations, including establishing post-construction requirements for stormwater discharges from new development and redevelopment, which currently are not regulated. The rule is expected to focus on stormwater discharges from developed or post-construction sites such as subdivisions, roadways, industrial facilities and commercial buildings, or shopping centers. Under a consent agreement with environmental groups, EPA was expected to propose a rule by June 10, 2013, and to issue a final rule by December 10, 2014. However, EPA missed the June 10 deadline, and a new date for proposal of the rule has not been announced.<sup>33</sup> For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**7. Revised Cooling Water Intake Rule.** EPA has proposed a CWA rule to protect fish from entrainment by cooling water intake structures at existing power plants and certain other industrial facilities. The proposed rule will revise EPA regulations issued in 2004 that were

<sup>32</sup> The White House, Office of the Press Secretary, “Statement by the President on the Ozone National Ambient Air Quality Standards,” September 2, 2011.

<sup>33</sup> For additional information, see CRS Report 97-290, *Stormwater Permits: Status of EPA’s Regulatory Program*, by Claudia Copeland



challenged in federal court by electric utility companies and others and were remanded to EPA by court order in 2007 and rules issued in 2006 that also apply to new offshore oil and gas facilities and existing manufacturing facilities, which EPA asked a court to remand to the agency for modification.<sup>34</sup> The proposal also responds to a 2009 U.S. Supreme Court ruling which said that, in developing the revised cooling water intake structure rule, EPA can consider the costs and benefits of protecting fish and other aquatic organisms.<sup>35</sup> The rule combines cooling water intake rules that apply to approximately 1,150 existing electric generating and manufacturing plants. On December 3, 2010, a federal court issued an order endorsing terms of a settlement agreement between EPA and environmental groups, establishing deadlines for the agency to propose and finalize a revised cooling water intake rule. EPA proposed the rule on March 28, 2011. Even before release, the proposed rule was highly controversial. Many in industry feared, while environmental groups hoped, that EPA would require installation of technology that most effectively minimizes impacts of cooling water intake structures, but also is the most costly option. The EPA proposal declined to mandate such technology universally and instead favors a less costly, more flexible regulatory option. In addition, in June 2012, EPA announced that it is considering options for revising portions of the proposed rule.<sup>36</sup> EPA and the environmental litigants have agreed to extend several extensions of the deadline for issuing a final rule until January 14, 2014, in part to provide time for the agency to consult with federal wildlife agencies under provisions of the Endangered Species Act. The final rule is now due April 17, 2014. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**8. Revised Steam Electric Effluent Limitations Guidelines.** Under authority of CWA Section 304, EPA establishes national technology-based regulations, called effluent limitations guidelines (ELGs), to reduce pollutant discharges from industries directly to waters of the United States and indirectly to municipal wastewater treatment plants based on Best Available Technology. These requirements are incorporated into discharge permits issued by EPA and states. The current steam electric power plant rules<sup>37</sup> apply to about 1,200 nuclear- and fossil-fueled steam electric power plants nationwide, 500 of which are coal-fired. In a 2009 study, EPA found that these regulations, which were promulgated in 1982, do not adequately address the pollutants being discharged and have not kept pace with changes that have occurred in the electric power industry over the last three decades. Pollutants of concern include metals (e.g., mercury, arsenic, and selenium), nutrients, and total dissolved solids. In April 2013, EPA proposed a revised power plant ELG, under a schedule in a consent decree with environmental litigants.<sup>38</sup> A final rule is due by May 14, 2014.

The proposed rule presents four “preferred alternatives” for strengthening controls on wastewater discharges from steam electric power plants that would cut annual pollutant discharges by up to 2.6 billion pounds and cut water use by 50 billion to 103 billion gallons per year. The four options

<sup>34</sup> 40 CFR §125.90 and 40 CFR §125.130.

<sup>35</sup> *Entergy Corp. v. Riverkeeper Inc.*, 129 S. Ct. 1498 (2009).

<sup>36</sup> The rule was published in the Federal Register on April 20, 2011. U.S. Environmental Protection Agency, “National Pollutant Discharge Elimination System—Cooling Water Intake Structures at Existing Facilities and Phase 1 Facilities,” 76 *Federal Register* 22174-22228, April 20, 2011. For information, see CRS Report R41786, *Cooling Water Intake Structures: Summary of EPA’s Proposed Rule*, by Claudia Copeland.

<sup>37</sup> 40 CFR §423.10.

<sup>38</sup> The proposed rule was published in the Federal Register nearly two months later. U.S. Environmental Protection Agency, “Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Proposed Rule,” 78 *Federal Register* 34432-34543, June 7, 2013. For information, see CRS Report R43169, *Regulation of Power Plant Wastewater Discharges: Summary of EPA’s Proposed Rule*, by Claudia Copeland.



are based on varying levels of treatment for seven different waste streams generated by the plants and differ in the stringency of the treatment controls to be imposed. The rulemaking addresses wastewater discharges from coal ash storage ponds and flue gas desulfurization (FGD) air pollution controls, as well as other power plant waste streams.<sup>39</sup> The estimated annual compliance cost of the rule would be between \$168 million and \$948 million. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**9. “Waters of the United States” Rulemaking.** From the earliest days, Congress has grappled with where to set the line between federal and state authority over the nation’s waterways. Typically, this debate occurred in the context of federal legislation restricting uses of waterways that could impair navigation and commerce. The phrase Congress often used to specify waterways over which the federal government had authority was “navigable waters of the United States.” However, in the legislation that became the CWA of 1972, Congress felt that the term was too constricted to define the reach of a law whose purpose was not maintaining navigability, as in the past, but rather preventing pollution. Accordingly, in the CWA Congress retained the traditional term “navigable waters,” but defined it broadly to mean “waters of the United States.” That phrase is important in the context of Section 404 of the law, a permit program jointly administered by EPA and the Army Corps of Engineers that regulates discharges of dredged and fill material to U.S. waters, including wetlands. The same phrase also defines the geographic extent of the other parts of the CWA, including state-established water quality standards, the discharge permit program in Section 402, oil spill liability, and enforcement. Consequently, how broadly or narrowly “waters of the United States” is defined has been a central question of CWA law and policy for nearly 40 years.

Controversies increased following two Supreme Court rulings, one in 2001 and one in 2006, on how “waters of the United States” are defined for purposes of the 404/wetlands permit program. Those two rulings left many uncertainties about their interpretation, uncertainties that first the Bush Administration and now the Obama Administration have attempted to clarify through a series of interpretive guidance documents. In April 2011, EPA and the Army Corps jointly proposed new guidance in an effort to clarify the geographic reach of federal regulation, in light of the law, the Court’s rulings, and science. Under the proposed guidance, federal protection of water quality would apply to more waters than currently are considered jurisdictional—a conclusion that pleased some and alarmed others. Final revised guidance was sent to OMB in February 2012, but it was not released. In September 2013, EPA and the Army Corps withdrew the guidance document from OMB review and instead submitted a draft rule that would clarify which waters are subject to CWA jurisdiction, consistent with the Supreme Court’s rulings and current scientific information. It is not known when the draft rule will be proposed.<sup>40</sup> For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**10. Mountaintop Mining in Appalachia.** EPA and other federal agencies (the Office of Surface Mining and Reclamation, in the Department of the Interior; and the U.S. Army Corps of Engineers) are developing a series of actions and regulatory proposals to reduce the harmful environmental and health impacts of surface coal mining, including mountaintop removal mining, in Appalachia. The actions, announced in a June 2009 interagency Memorandum of

<sup>39</sup> Separately, EPA also is considering regulation of coal ash disposal sites under Resource Conservation and Recovery Act, as discussed in this report under “Coal Combustion Waste.”

<sup>40</sup> For additional information, see CRS Report RL33263, *The Wetlands Coverage of the Clean Water Act (CWA): Rapanos and Beyond*, by Robert Meltz and Claudia Copeland.

Understanding, are intended to improve regulation and strengthen environmental reviews of permit requirements under the CWA and the Surface Mining Control and Reclamation Act (SMCRA). Viewed broadly, the Administration's combined actions on mountaintop mining displease both industry and environmental advocates. The additional scrutiny of permits and more stringent requirements have angered the coal industry and many of its supporters. At the same time, while environmental groups support EPA's steps to restrict the practice, many favor tougher requirements or even total rejection of mountaintop mining in Appalachia. Many of the actions have been highly controversial in Congress.

EPA is a key participant in several of the actions. In 2009 EPA and the Corps began conducting detailed evaluations of 79 pending CWA permit applications for surface mining activities in order to limit environmental impacts of the proposed activities under a process called Enhanced Coordination Procedures (ECP). Coal industry groups and coal state officials contended that the ECP process resulted in costly delay in issuance of permits. They challenged the process in federal court, and in October 2011, the court struck down the ECP as an unlawful transfer of legal authority from the Corps to EPA. The agencies are continuing to review permit applications for surface coal mining projects in Appalachia under existing rules, but not the vacated ECP. In July 2012, the same federal court invalidated a 2011 EPA guidance document intended to help assess a mine's water quality impacts, ruling that EPA had overstepped its statutory authority. The government has appealed both of these rulings.

In June 2010, the Army Corps suspended the use of a particular CWA general permit for surface coal mining activities in Appalachia. In February 2012, the Corps reissued all of its CWA general permits, including one (nationwide permit 21) to replace the suspended permit with a permit containing more stringent CWA rules applicable to these coal mining operations.<sup>41</sup>

In November 2009, the Department of the Interior's Office of Surface Mining (OSM) issued an Advance Notice of Proposed Rulemaking (ANPR) describing options to revise a SMCRA rule that affects surface coal mining operations, called the stream buffer zone rule, which was promulgated in December 2008.<sup>42</sup> The Obama Administration identified the 2008 rule, which exempts so-called valley fills and other mining waste disposal activities from requirements to protect a 100-foot buffer zone around streams, for revision as part of the series of actions concerning surface coal mining in Appalachia. Since then, OSM officials have been working on developing a new rule and an accompanying draft environmental impact statement (EIS), which are expected to be proposed in 2014. The revised stream buffer rule, when promulgated, is expected to apply nationwide, not just in Appalachia. Potential changes to the 2008 rule have drawn controversy and criticism. In the 113<sup>th</sup> Congress, a House committee has approved legislation that would require states to implement the 2008 rule and would delay OSM's development of a new rule for at least five years. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

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<sup>41</sup> For information see CRS Report 97-223, *The Army Corps of Engineers' Nationwide Permits Program: Issues and Regulatory Developments*, by Claudia Copeland.

<sup>42</sup> U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement, "Stream Buffer Zone and Related Rules; Advance notice of proposed rulemaking; notice of intent to prepare a supplemental environmental impact statement (SEIS)," 74 *Federal Register* 62664-62668, November 30, 2009.

## Toxic Substances Control Act (TSCA)

### 11. Lead: Renovation, Repair, and Painting in Certain Public and Commercial Buildings

**Rule.** EPA has revised a 2008 final rule implementing Section 402(c)(3) of the Toxic Substances Control Act (TSCA; enacted as the Residential Lead-Based Paint Hazard Reduction Act of 1992). The rule aims to reduce human health hazards associated with exposure to lead-based paint. It established requirements for training and certifying workers and firms that remodel, repair, or paint homes or child-occupied public or commercial buildings likely to contain lead-based paint (generally built before 1978).<sup>43</sup> Shortly after promulgation of the 2008 version of the rule, several petitions were filed challenging it. The U.S. Court of Appeals for the District of Columbia Circuit consolidated the petitions and, in August 2009, EPA signed a settlement agreement with the petitioners. The agreement set legal deadlines for a number of EPA rulemaking actions; two rules have been promulgated (see the **Appendix**), and a third is under development.

In May 2010, EPA published an advanced notice of proposed rulemaking for a third rule responding to the settlement agreement. It addresses renovations in public and commercial buildings that are not child-occupied.<sup>44</sup> On Dec. 31, 2012, EPA published a notice in the *Federal Register* stating:

EPA is in the process of determining whether these activities [renovation, repair, and painting of public and commercial buildings] create lead-based paint hazards, and, for those that do, developing certification, training, and work practice requirements as directed by the Toxic Substances Control Act (TSCA). This document opens a comment period to allow for additional data and other information to be submitted by the public and interested stakeholders. This document also provides advance notice of EPA's plan to hold a public meeting on June 26, 2013.<sup>45</sup>

The comment period for this phase of rulemaking was scheduled to end April 1, 2013, but was extended to July 12, 2013.<sup>46</sup> In the 113<sup>th</sup> Congress, H.R. 2093/S. 484 would amend provisions of TSCA to prohibit EPA from expanding its renovation requirements to public and commercial buildings. For additional information, contact Jerry Yen (7-9113, [jyen@crs.loc.gov](mailto:jyen@crs.loc.gov)).

## Solid Waste/Underground Storage Tanks (RCRA)

**12. Coal Combustion Waste.** In 2012, coal-fired power plants accounted for 37% of U.S. electric power, resulting in approximately 110 million tons of coal combustion waste (CCW). On December 22, 2008, national attention was turned to risks associated with managing CCW when a breach in a surface impoundment pond at the Tennessee Valley Authority's Kingston, TN, plant released 1.1 billion gallons of coal ash slurry, covering hundreds of acres and damaging or

<sup>43</sup> For a complete history of this rule, see EPA's website "Lead Renovation, Repair, and Painting Program Rules" at <http://www2.epa.gov/lead/lead-renovation-repair-and-painting-program-rules>.

<sup>44</sup> U.S. Environmental Protection Agency, "Lead; Renovation, Repair, and Painting Program for Public and Commercial Buildings; Proposed Rule," 75 *Federal Register* 24848-24862, May 6, 2010.

<sup>45</sup> U.S. Environmental Protection Agency, "Meetings: Lead; Renovation, Repair, and Painting Program for Public and Commercial Buildings," 77 *Federal Register* 76996, Dec. 31, 2012.

<sup>46</sup> EPA, Lead; Renovation, Repair, and Painting Program for Public and Commercial Buildings, <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPPT-2010-0173-0162>.

destroying homes and property. In addition to the risk of a sudden, catastrophic release such as that at Kingston, EPA has determined that CCW disposal in unlined landfills and surface impoundments presents substantial risks to human health and the environment from releases of toxic constituents (particularly arsenic and selenium) into surface and groundwater. To establish national standards intended to address risks associated with potential CCW mismanagement, on June 21, 2010, EPA proposed two regulatory options to manage the waste.<sup>47</sup> The first option would draw on EPA's existing authority to identify a waste as hazardous and regulate it under the waste management standards established under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The second option would establish national standards for landfills and surface impoundments that receive coal combustion residuals under RCRA's Subtitle D solid waste management requirements. Under Subtitle D, EPA does not have the authority to implement or enforce its proposed requirements. Instead, EPA would rely on states or citizen suits to enforce new standards. In its Regulatory Impact Analysis, EPA estimated the average annualized regulatory costs to be approximately \$1.5 billion a year under the Subtitle C option or \$587 million a year under the Subtitle D option, but there could be additional costs or benefits depending on how the rule affects the recycling of coal ash.

In a consent decree entered in the U.S. District Court for the District of Columbia, EPA has committed to finalize the rule by December 19, 2014.<sup>48</sup> For additional information, contact Linda Luther (7-6852, lluther@crs.loc.gov).

**13. Underground Storage Tanks.** In November 2011, EPA proposed revisions to the agency's 1988 Underground Storage Tank (UST) technical regulations, financial responsibility requirements, and state program approval regulations promulgated under Subtitle I of the Solid Waste Disposal Act (SWDA).<sup>49</sup> The proposed revisions address changes made in the Energy Policy Act of 2005 (P.L. 109-58)<sup>50</sup> and also update UST leak prevention and detection technologies and requirements.<sup>51</sup> The revisions are intended to improve leak prevention and detection of releases from USTs, which EPA and states report as a leading source of groundwater contamination. Proposed revisions to UST technical regulations include (1) secondary containment requirements for new and replaced tanks and piping, (2) training requirements for UST owners and operators, (3) new operation and maintenance requirements, (4) new release prevention and detection technologies, and (5) updated codes of practice.

The Energy Policy Act of 2005 (EPAAct) amended the SWDA to require states that receive federal funding under Subtitle I to meet certain requirements (such as operator training and secondary containment requirements). The proposed rule would expand on EPAAct and further apply these requirements in Indian country and in states that do not receive Subtitle I funds. EPA's stated goal is to make UST requirements similar in all states and in Indian Country. Additionally, the

<sup>47</sup> U.S. Environmental Protection Agency, "Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities," 75 *Federal Register* 35127-35264, June 21, 2010.

<sup>48</sup> *Appalachian Voices et al. v. Gina McCarthy*, Case No. 1:12-cv-00523 (D.D.C.), January 29, 2014.

<sup>49</sup> Environmental Protection Agency, "Revising Underground Storage Tank Regulations-Revisions to Existing Requirements for Secondary Containment and Operator Training," 76 *Federal Register* 71708, November 18, 2011. The Solid Waste Disposal Act (SWDA) is commonly referred to as the Resource Conversation and Recovery Act.

<sup>50</sup> P.L. 109-58, Title XV, Subtitle B, comprises the Underground Storage Tank Compliance Act (USTCA) which broadly amended the UST leak prevention and provisions of SWDA Subtitle I (42 U.S.C. §6991-6991m).

<sup>51</sup> Technical regulations are located at 40 C.F.R. §280. EPA also proposes to revise state program approval requirements in 40 C.F.R. §281 to incorporate changes to the technical regulations.

proposed rule would expand the scope of certain requirements beyond those established in law. For example, EPA requires states receiving Subtitle I money to require secondary containment for new or replaced tanks if they are installed within 1,000 feet of a community water system or drinking water well. EPA proposes to require secondary containment for new or replaced tanks in all locations.

Among the updates to the 1988 UST rules, the proposal would modify the requirement that UST systems must be compatible with stored substances, by adding options for owners and operators to demonstrate that UST systems are compatible with fuel containing more than 10% ethanol (E10) or 20% biodiesel (B20).<sup>52</sup> The public comment period for the proposal closed on April 16, 2012. EPA plans to issue a final rule in the fall of 2014. For additional information, contact Mary Tiemann (7-5937, [mtiemann@crs.loc.gov](mailto:mtiemann@crs.loc.gov)).

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<sup>52</sup> A comparison of the key differences between the 1988 rule and the proposed rule is available at <http://www.epa.gov/oust/fedlaws/Crosswalk.pdf>.

In **Table 2**, below, we identify major or controversial rules still under development at EPA that were discussed in the previous section. The table includes rules not yet proposed, rules that have been proposed but not yet promulgated, and in several cases rules already promulgated but now being reconsidered by the agency. The **Appendix** to this report, describing economically significant or controversial rules already promulgated by the agency, follows the table. While these promulgated rules are generally thought to be in final form, many are still being challenged by various stakeholders in court.

**Table 2. Major Rules and Modifications Under Development at EPA**

Item No.	Statutory Authority	Rule	Status	Court or Legislative Requirement?	Affected Entities
1.	Clean Air Act	Carbon Pollution Standards for New and Existing Power Plants	EPA re-proposed standards in the January 8, 2014, Federal Register. The Clean Air Act requires promulgation one year after proposal. On June 25, 2013, the President directed EPA to propose emission guidelines for existing power plants by June 1, 2014 and finalize them by June 1, 2015.	EPA was sued by numerous parties for its failure to issue NSPS for GHG emissions from power plants ( <i>State of New York v. EPA</i> ). Section 111(b) of the Clean Air Act requires NSPS for a category of sources if it “causes, or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.” EPA has already concluded that GHGs are such air pollution. Electric generating units account for one-third of all U.S. GHG emissions.	Primarily coal-fired electric generating units, which generate more than one-third of the nation’s electricity.

Item No.	Statutory Authority	Rule	Status	Court or Legislative Requirement?	Affected Entities
2.	Clean Air Act	Phase 2 Medium- and Heavy-Duty Truck Greenhouse Gas Emission Standards	On February 18, 2014, President Obama directed EPA and NHTSA to develop a second round of greenhouse gas emission and fuel economy standards for medium- and heavy-duty trucks. The standards, which will affect trucks beginning with the 2019 model year, are to be proposed by March 2015 and finalized a year later.	None	Manufacturers of trucks with a gross vehicle weight of 8,500 pounds or more.
3.	Clean Air Act	Expanded Renewable Fuel Standard (RFS2)	Standards for use of cellulosic biofuels in 2013 (revising downward the amount that would otherwise be required by statute) were proposed November 29, 2013.	Decisions required under the Energy Independence and Security Act of 2007.	Petroleum refiners, biofuel producers.
4.	Clean Air Act	National Ambient Air Quality Standard for Ozone	Proposed January 19, 2010; withdrawn September 2, 2011. EPA is near completion of its next review, with proposal of any changes in the standards expected late in 2014, and promulgation late in 2015.	Clean Air Act required review of the 2008 standards by March 2013.	Recent ozone levels in the vast majority of the 675 counties with monitors would have violated the proposed 2010 standard; implementation of the proposed standard could have led to widespread new emission controls at a projected cost of \$19 billion to \$25 billion annually in 2020, with comparable levels of benefits, according to EPA.



<b>Item No.</b>	<b>Statutory Authority</b>	<b>Rule</b>	<b>Status</b>	<b>Court or Legislative Requirement?</b>	<b>Affected Entities</b>
5.	Clean Air Act	Brick and Clay Product MACT	EPA has agreed to sign proposed standards by August 28, 2014, and final standards by June 30, 2015.	D.C. Circuit Court of Appeals vacated and remanded standards for this category of sources in 2007. EPA reached a consent agreement in November 2012 on a schedule for replacement standards.	Brick and clay product manufacturers.
6.	Clean Water Act	“Post-Construction” Stormwater Rule	EPA was expected to propose a rule in June 2013 and issue a final rule in December 2014. The agency missed the date for proposal; a new date has not been announced.	May 2010 consent decree, as amended.	Unknown at this time.
7.	Clean Water Act	Revised Cooling Water Intake Rule	EPA proposed regulations March 28, 2011. Final rule is due by April 17, 2014.	EPA rules issued in 2004 were remanded by order of a federal court.	Proposal applies to approximately 1,150 existing power plants and certain other manufacturing facilities.
8.	Clean Water Act	Revised Steam Electric Effluent Limitations Guidelines	EPA proposed a rule on April 19, 2013. Final rule is due by May 22, 2014.	Consent decree.	Proposal applies to existing and new steam electric power plants.
9.	Clean Water Act	“Waters of the United States” Rulemaking	Draft rule developed by EPA and Army Corps was sent to OMB on September 17, 2013.	None	Potentially affects a wide range of entities and activities subject to CWA requirements, including permits.
10.	Clean Water Act and Surface Mining Control and Reclamation Act	Mountaintop Mining in Appalachia	Various short-term and long-term actions are underway by EPA and other agencies to strengthen environmental reviews and revise regulations.	None	Surface coal mining operations in the Appalachian region.

Item No.	Statutory Authority	Rule	Status	Court or Legislative Requirement?	Affected Entities
11.	Toxic Substances Control Act	Lead Renovation, Repair, and Painting	An advanced notice of proposed rulemaking for work in certain public and commercial buildings is being revised as announced Dec. 31, 2012, and is expected to be finalized in 2015.	August 2009 settlement agreement set numerous deadlines for revisions of a 2008 lead rule.	Workers and firms that remodel, repair, or paint homes and some commercial buildings.
12.	Resource Conservation and Recovery Act (RCRA)	Coal Combustion Waste	Proposed June 21, 2010. Final rule is due December 19, 2014.	Consent decree ( <i>Appalachian Voices v. Gina McCarthy</i> ) requires EPA to finalize rule by December 19, 2014.	Coal-fired electric power plants.
13.	Resource Conservation and Recovery Act (RCRA)	Underground Storage Tanks	Proposed November 18, 2011. Final rule is due in fall 2014.	Proposal addresses provisions of the Energy Policy Act of 2005 (P.L. 109-58).	States and owners and operators of underground storage tanks containing either petroleum or hazardous chemicals.

**Source:** Compiled by CRS.

## Appendix. Major or Controversial Rules Promulgated Since 2009

### Climate Change

**Greenhouse Gas Reporting Rule.** On October 30, 2009, in response to a congressional mandate in EPA's FY2008 appropriation (P.L. 110-161), EPA promulgated the Greenhouse Gas Reporting Rule.<sup>53</sup> The rule required 31 categories of sources to report their emissions of greenhouse gases to EPA annually, beginning in 2011, if the sources emit 25,000 tons or more of carbon dioxide or the equivalent amount of five other greenhouse gases (GHGs).<sup>54</sup> (Eleven other categories of sources have since been added to the rule.) By itself, the rule imposes little cost (\$867 per facility, according to EPA's estimate) because it only requires reporting; but the sources who are required to report are expected to be the focus of EPA efforts as the agency develops regulations to control emissions of GHGs. The original reporting deadline was March 31, 2011. As that date approached, EPA extended the deadline to September 30, 2011. The first data submitted under the rule were released January 11, 2012. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Greenhouse Gas Endangerment Finding.** On December 15, 2009, EPA issued findings that six greenhouse gases cause or contribute to air pollution that endangers public health and welfare.<sup>55</sup> The action was taken in response to an April 2007 Supreme Court decision (*Massachusetts v. EPA*) that required the agency to decide the issue or to conclude that climate change science is so uncertain as to preclude making such findings. These findings do not themselves impose any requirements on industry or other entities. However, the action was a prerequisite to finalizing EPA's greenhouse gas emission standards for cars and light duty trucks, which were jointly promulgated by EPA with fuel economy standards from the Department of Transportation, on May 7, 2010. These, in turn, triggered permit requirements for stationary sources of GHGs, beginning January 2, 2011. On December 10, 2010, the U.S. Court of Appeals for the D.C. Circuit denied industry and state motions to stay the endangerment finding and related regulations, and on June 26, 2012, the court upheld the regulations. The court's decision applied to 84 cases filed by a variety of industry groups and states (*Coalition for Responsible Regulation v. EPA*). For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)) or Rob Meltz (7-7891, [rmeltz@crs.loc.gov](mailto:rmeltz@crs.loc.gov)).

**Light Duty Motor Vehicle Greenhouse Gas Emission Standards, Model Years 2012-2016.** On May 7, 2010, EPA and the National Highway Traffic Safety Administration (NHTSA) promulgated integrated GHG emission standards and corporate average fuel economy (CAFE) standards for new cars and light trucks, a category that includes SUVs and minivans, as well as

<sup>53</sup> U.S. Environmental Protection Agency, "Mandatory Reporting of Greenhouse Gases; Final Rule," 74 *Federal Register* 56260, October 30, 2009.

<sup>54</sup> GHG emissions consist of carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), and two categories of gases—hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). Since each of these substances has a different global warming potential, the emissions of each are converted to the equivalent amount of CO<sub>2</sub> emissions, based on how potent the substance is as compared to CO<sub>2</sub>, giving rise to the term "CO<sub>2</sub>-equivalent."

<sup>55</sup> U.S. Environmental Protection Agency, "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act," 74 *Federal Register* 66496, December 15, 2009.

pickup trucks.<sup>56</sup> NHTSA is required by the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140) to promulgate CAFE standards so that by 2020, new cars and light trucks reach a combined average fuel economy of 35 miles per gallon (mpg). EPA simultaneously issued vehicle greenhouse gas standards in response to directives from the Supreme Court in *Massachusetts v. EPA*. The EPA regulations require a reduction in emissions to an estimated combined emission level of 250 grams of CO<sub>2</sub> per mile by model year 2016, about a 21% reduction in emissions when fully implemented. The Administration estimates that complying with the regulations will add \$1,100 to the cost of an average vehicle, although this additional purchase cost is expected to be paid back through lifetime fuel savings. The new standards are being phased in beginning with the 2012 model year. EPA estimates that the additional lifetime cost of 2012-2016 model year vehicles under the regulations will be about \$52 billion; benefits are expected to be approximately \$240 billion. This rule was also upheld by the D.C. Circuit in the June 26, 2012 *Coalition for Responsible Regulation* decision. For additional information, contact Brent Yacobucci (7-9662, byacobucci@crs.loc.gov).

### **Light Duty Motor Vehicle Greenhouse Gas Emission Standards, Model Years 2017-2025.**

Using the same authority described in Item 3 above, EPA and NHTSA promulgated joint GHG/fuel economy rules for 2017-2025 model year vehicles, on October 15, 2012.<sup>57</sup> Under these standards, GHG emissions from new cars and light trucks will be reduced about 50% by 2025 compared to 2010 levels, to an expected fleet average of 163 grams per mile; average fuel economy will rise to nearly 50 miles per gallon. The agencies estimated that the new technology to comply with the standards will cost roughly \$1,800 per vehicle in 2025, although lifetime fuel savings would total roughly \$5,700 to \$7,400. For additional information, contact Brent Yacobucci (7-9662, byacobucci@crs.loc.gov).

**Greenhouse Gas Tailoring Rule.** On June 3, 2010, EPA promulgated a rule that defines which stationary sources will be required to obtain Clean Air Act permits for GHG emissions and how the requirements will be phased in.<sup>58</sup> The threshold set by the rule (annual emissions of 75,000-100,000 tons of carbon dioxide equivalents) will limit which facilities will be required to obtain permits: from 2011 through 2016, the nation's largest GHG emitters, including power plants, refineries, cement production facilities, and about two dozen other categories of sources (an estimated 17,000 facilities annually) will be the only sources required to obtain permits. Of these, most will face only an administrative requirement to provide an estimate of their GHG emissions, but EPA estimated that 1,600 new or modified facilities will need to address whether they have the best available control technology for limiting emissions.<sup>59</sup> Smaller businesses, almost all farms, and large residential structures (about 6 million sources in all these categories), which

<sup>56</sup> U.S. Environmental Protection Agency, U.S. Department of Transportation, "Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule," *75 Federal Register* 25324-25728, May 7, 2010. Information on benefits and costs are summarized in an April 2010 EPA Fact Sheet, at <http://www.epa.gov/oms/climate/regulations/420f10014.pdf>.

<sup>57</sup> U.S. Environmental Protection Agency, U.S. Department of Transportation, "2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards; Final Rule," *77 Federal Register* 62624, October 15, 2012. A link to the rule and other information, including a Fact Sheet, is available at <http://www.epa.gov/otaq/climate/regs-light-duty.htm#new1>.

<sup>58</sup> U.S. Environmental Protection Agency, "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule; Final Rule," *75 Federal Register* 31514, June 3, 2010.

<sup>59</sup> EPA reported, however, that in the first 11 months of the program, only 68 permit applications were received. See U.S. EPA, Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3, GHG Plantwide Applicability Limitations and GHG Synthetic Minor Limitations, Proposed Rule, *77 Federal Register* 14233, March 8, 2012.

would otherwise be required to obtain permits once GHGs became regulated pollutants under the act, are excluded by the rule's threshold limits and thus are shielded from permitting requirements by this rule. This rule was also challenged in *Coalition for Responsible Regulation*. The D.C. Circuit dismissed the challenge June 26, 2012. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**PSD and Title V Permit Requirements for GHG Emissions.** Beginning on January 2, 2011, new and modified major stationary sources that emit more than 75,000 tons per year of CO<sub>2</sub>-equivalent greenhouse gases were required to obtain Prevention of Significant Deterioration (PSD) permits addressing their GHG emissions. These permits, which are mandated under Section 165 of the Clean Air Act, require the applicants to install the Best Available Control Technology (BACT) in order to construct or operate *new and modified* major sources of emissions. State permitting authorities determine what technologies qualify as BACT on a case-by-case basis, using generic guidance issued by EPA on November 10, 2010.<sup>60</sup> The PSD/BACT requirement initially applied only to facilities such as power plants large enough to already be required to obtain PSD permits as a result of their emissions of other pollutants such as sulfur dioxide or nitrogen oxides. What was new starting January 2, 2011, was the addition of GHGs to the list of pollutants that must be addressed by BACT. On July 1, 2011, Step 2 of the requirements took effect: under Step 2, all new and modified sources emitting more than the threshold amounts of GHGs are required to obtain permits, whether or not they would be required to do so because of emissions of other pollutants.

*Existing* sources that are already required to obtain operating permits under Title V of the act will also have to provide information on their GHG emissions. EPA notes that the Title V requirement will generally be satisfied by referencing information already provided to EPA under the GHG reporting rule (Item 1, above). Title V permits do not impose emission control requirements themselves; they simply summarize emission control requirements mandated by other sections of the Clean Air Act. Thus, the only change to Title V permits will be the addition of GHGs to the list of pollutants that the facilities are allowed to emit. For additional information on PSD and Title V permits for GHG emissions, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Medium- and Heavy-Duty Vehicle Greenhouse Gas Rule.** On September 15, 2011, EPA and the National Highway Traffic Safety Administration (NHTSA) promulgated integrated GHG emission standards and fuel economy standards for medium- and heavy-duty vehicles.<sup>61</sup> EPA's endangerment finding (see above) specifically referenced medium- and heavy-duty trucks as among the sources that contribute to the GHG emissions for which it found endangerment. In addition, NHTSA was required by Section 102 of the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140) to promulgate fuel economy standards for medium- and heavy-duty trucks, reflecting the "maximum feasible improvement" in fuel efficiency. The standards will be phased in between 2014 and 2018. When fully implemented, they will require an average per vehicle reduction in GHG emissions of 17% for diesel trucks and 12% for gasoline-powered trucks. The expected cost increase for the 2014-2018 vehicles affected by the rule is \$8.1 billion. EPA projects benefits of \$57 billion over the trucks' lifetimes, including \$50 billion in fuel

<sup>60</sup> U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, "PSD and Title V Permitting Guidance for Greenhouse Gases," November 2010 (subsequently revised, March 2011), at <http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf>.

<sup>61</sup> U.S. Environmental Protection Agency, U.S. Department of Transportation, "Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles; Final Rules," 76 *Federal Register* 57106, September 15, 2011.

savings. In the President's June 25, 2013, Climate Action Plan, he committed to a second round of fuel efficiency and GHG emission standards for post-2018 heavy duty vehicles. For additional information, contact Brent Yacobucci (7-9662, [byacobucci@crs.loc.gov](mailto:byacobucci@crs.loc.gov)).

## Ambient Air Quality Standards

**Particulate Matter (including “Farm Dust”) NAAQS.** EPA considers particulate matter (PM) to be among the most serious air pollutants, responsible for tens of thousands of premature deaths annually. The current NAAQS sets standards for both “fine” particulates (PM<sub>2.5</sub>) and larger, “coarse” particles (PM<sub>10</sub>). The PM<sub>2.5</sub> standards affect far more people and far more counties than the standard for PM<sub>10</sub>, and both sets of standards have affected mostly industrial, urban areas.

EPA completed a review of the PM NAAQS in 2006. The agency is required by the Clean Air Act to review NAAQS at five-year intervals, so another review was due in 2011. As the review process was getting underway, in February 2009, the D.C. Circuit Court of Appeals remanded the 2006 standard for PM<sub>2.5</sub> to EPA, saying that the standard was “contrary to law and unsupported by adequately reasoned decisionmaking.”<sup>62</sup> As a result, EPA combined the statutory five-year review of the standard and its response to the D.C. Circuit decision, completing a review of the PM standard that served both purposes in January 2013.<sup>63</sup> The review left the standard for coarse particles unchanged, as well as the standard for 24-hour exposures to PM<sub>2.5</sub>. But it lowered the standard for annual exposures to PM<sub>2.5</sub>, as suggested by the agency's outside scientific advisers, from 15 micrograms per cubic meter to 12.

Although this appears to be a significant strengthening of a standard that potentially affects a wide array of mobile and stationary sources, EPA projects the incremental cost of the revision at a relatively modest \$53 million to \$350 million annually. The cost of compliance with the PM NAAQS is moderated by the fact that other EPA standards (for various emission sources) are reducing exposures to PM<sub>2.5</sub> even without a strengthening of the ambient standard. Annual benefits of the more stringent NAAQS were estimated to range from \$4.0 billion to \$9.1 billion.

In the 112<sup>th</sup> Congress, attention to PM issues focused on the larger, coarse particles, PM<sub>10</sub>, even though EPA did not propose to change them. Members of the House and Senators discussed the need to prevent a supposed EPA plan to use the revision of the PM<sub>10</sub> standard to impose controls on “farm dust.” The House passed legislation to prevent EPA from tightening standards for PM<sub>10</sub> for one year and to permanently limit EPA's authority to regulate dust in rural areas. EPA stated early in the PM review process that it did not intend to change the PM<sub>10</sub> standard, and the final revision made no change. For additional information, contact Rob Esworthy (7-7236, [resworthy@crs.loc.gov](mailto:resworthy@crs.loc.gov)).

**Sulfur Dioxide NAAQS.** Three other NAAQS reviews (for sulfur dioxide,<sup>64</sup> nitrogen dioxide,<sup>65</sup> and carbon monoxide) were completed in 2010 and 2011. Of these, only the sulfur dioxide (SO<sub>2</sub>)

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<sup>62</sup> American Farm Bureau Fed'n v. EPA, 559 F.3d 512 (D.C. Cir. 2009).

<sup>63</sup> U.S. Environmental Protection Agency, “National Ambient Air Quality Standards for Particulate Matter; Final Rule,” 78 *Federal Register* 3086, January 15, 2013. A link to the standards and other supporting materials can be found at <http://www.epa.gov/pm/actions.html>.

<sup>64</sup> U.S. Environmental Protection Agency, “Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule,” 75 *Federal Register* 35520, June 22, 2010.

<sup>65</sup> U.S. Environmental Protection Agency, “Primary National Ambient Air Quality Standards for Nitrogen Dioxide; (continued...) ”



NAAQS is considered an economically significant rule.<sup>66</sup> EPA estimated the cost of the more stringent SO<sub>2</sub> NAAQS at \$1.5 billion annually, with benefits 9-24 times that amount. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

## Electric Generating Units

**Cross-State Air Pollution (Clean Air Transport) Rule.** EPA's major clean air initiative under the Bush Administration, the Clean Air Interstate Rule (CAIR), was remanded to the agency by the D.C. Circuit Court of Appeals in 2008. EPA promulgated a replacement, the Cross-State Air Pollution Rule, August 8, 2011.<sup>67</sup> The original rule, designed to control emissions of air pollution that causes air quality problems in downwind states, established cap-and-trade programs for sulfur dioxide and nitrogen oxide emissions from coal-fired electric power plants in 28 eastern states, at an estimated annual cost of \$3.6 billion in 2015. The replacement rule also applies to 28 states; it allows unlimited intrastate allowance trading, but limits interstate trading in response to the D.C. Circuit decision; its annual compliance cost was estimated at \$800 million annually in 2014, on top of \$1.6 billion already being spent to comply with CAIR. EPA estimates the benefits of the rule at \$120 billion to \$280 billion annually, chiefly the avoidance of 13,000 to 34,000 annual premature deaths. Numerous parties petitioned the D.C. Circuit for review of the Cross-State rule, and the court stayed its implementation pending the completion of the court's proceedings. On August 21, 2012, the court vacated the standards and remanded them to EPA. In June 2013, the Supreme Court agreed to review the D.C. Circuit decision. Because of the earlier CAIR requirements, which remain in effect pending their replacement and, more recently, because power companies have replaced substantial amounts of coal-fired generation with cheaper (and cleaner) natural-gas-fired units, electric generators had already achieved more than two-thirds of the pollution reductions necessary to comply with the 2014 standards by 2012. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Mercury and Air Toxics Standards / MACT for Electric Generating Units ("Utility MACT").** In 2005, EPA promulgated regulations establishing a cap-and-trade system to limit emissions of mercury from coal-fired power plants. The rules were challenged, and the D.C. Circuit Court of Appeals vacated them in 2008. Rather than appeal the ruling to the Supreme Court, EPA agreed to propose and promulgate Maximum Achievable Control Technology (MACT) standards by the end of 2011. EPA states that the standards for existing units, promulgated February 16, 2012,<sup>68</sup> can be met by 56% of coal- and oil-fired electric generating units using pollution control equipment already installed; the other 44% would be required to install technology that will reduce uncontrolled mercury and acid gas emissions by about 90%, at

(...continued)

Final Rule," 75 *Federal Register* 6473, February 9, 2010.

<sup>66</sup> The agency concluded that the nitrogen dioxide NAAQS, even though it was strengthened, would have no costs or benefits, since the agency projected no areas to be nonattainment for the revised standard. The agency decided not to change the carbon monoxide NAAQS, so there were no costs or benefits associated with that review, either.

<sup>67</sup> U.S. Environmental Protection Agency, "Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals," 76 *Federal Register* 48208, August 8, 2011. Explanatory material can be found at <http://www.epa.gov/crossstaterule/actions.html>. The rule was generally referred to as the Clean Air Transport Rule prior to being finalized.

<sup>68</sup> U.S. Environmental Protection Agency, "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 *Federal Register* 9304, February 16, 2012.



an annual cost of \$9.6 billion. Standards for new facilities are more stringent, and many (including the industry that manufactures pollution control and monitoring equipment), doubted whether compliance with the mercury portion of these standards could be measured. In response to industry petitions, EPA reconsidered the mercury limit for new facilities, and announced changes to the standards for new facilities on March 29, 2013.

EPA estimates that the annual benefits of the Utility MACT, including the avoidance of up to 11,000 premature deaths annually, will be between \$37 billion and \$90 billion. Existing power plants will have until 2015, with a possible one-year extension, to meet the standards. About 20 states have already established mercury emission control standards for coal-fired power plants, and other major sources have been controlled for as long as 15 years, reducing their emissions as much as 95%. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

## Boilers and Incinerators

**MACT and Area Source Standards for Boilers.** EPA proposed Maximum Achievable Control Technology standards to control emissions of toxic air pollutants from commercial and industrial boilers in June 2010. A final rule was issued February 21, 2011, under a court order by the Federal District Court for the District of Columbia.<sup>69</sup> Because of voluminous comments and new information received from industry during a public comment period, EPA had asked the court to extend the deadline for promulgating final standards to April 2012. Having been denied that extension, the agency initiated a reconsideration after it released the final rule, and it promulgated changes to the rule on January 31, 2013.<sup>70</sup> In addition to adjusting the rule's emission standards, the January 2013 rule reset the clock for compliance, effectively giving industry almost two additional years to install control equipment.

Boilers are used throughout industry and in many commercial and institutional facilities. The D.C. Circuit vacated EPA's previous MACT rule for this category in 2007, saying EPA had wrongly excluded many industrial boilers from the definition of solid waste incinerators, which have more stringent emissions requirements under the Clean Air Act. The vacated rule had estimated annual costs of \$837 million, with a benefit-cost ratio of about 20 to 1. The January 2013 rule will set more stringent standards. It will affect about 14,000 boilers, according to the agency, with annual costs estimated at \$1.2 billion and benefits of \$25 billion to \$67 billion annually, including the avoidance of 3,100 to 7,900 premature deaths.

EPA also promulgated what are called "area source" standards for smaller boilers at the same time as the MACT.<sup>71</sup> The area source standards would affect 183,000 boilers, most of which would only be required to perform a tune-up every two to five years to comply with the regulations. EPA

<sup>69</sup> The final rule appeared in the *Federal Register* March 21, 2011. U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule," 76 *Federal Register* 15608, March 21, 2011.

<sup>70</sup> U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers; Final Rule; Notice of Final Action on Reconsideration," 78 *Federal Register* 7138, January 31, 2013.

<sup>71</sup> U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers; Final Rule," 76 *Federal Register* 15554, March 21, 2011. Final action on reconsideration appeared in the February 1, 2013, *Federal Register* (78 FR 7488).

estimated the net cost of the area source rule to be \$490 million annually, with partial benefits ranging from \$210 million to \$520 million annually. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Commercial and Industrial Solid Waste Incinerator (CISWI) Standards.** A third regulation promulgated and reconsidered at the same time as the boiler MACT and area source boiler rules sets standards for emissions from commercial and industrial solid waste incinerators.<sup>72</sup> These standards are related to the D.C. Circuit’s remand of the boiler rules in 2007; they also faced a judicial deadline of February 21, 2011, and after being promulgated, were also reconsidered in early 2013. As reconsidered, the rules would expand the number of existing facilities subject to the more stringent CISWI standards from 20 to 106, with annual costs of \$271 million, according to EPA, and benefits of \$380 million-\$1 billion annually. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

## Other Clean Air Act Rules

**Tier 3 Emissions Standards for Passenger Cars and Light Trucks and Gasoline Standards.** In February 2011, EPA began to scope out new emissions standards for conventional pollutants (i.e., non-greenhouse gases) from passenger cars and light trucks. In a May 2010 memorandum from the White House to the EPA Administrator, President Obama had directed EPA to review the adequacy of the current “Tier 2” emissions standards for these vehicles, which EPA finalized in February 2000, and were phased in between MY2004 and MY2009.<sup>73</sup> EPA proposed “Tier 3” standards April 13, 2013, and released the final standards March 3, 2014. As with the Tier 2 standards, the proposed Tier 3 standards include changes to both vehicle emission limits and fuel formulation rules, lowering allowable sulfur content to reduce the fouling of catalytic converters on existing vehicles and facilitate the use of new technology. The proposal would lower allowable sulfur from 30 parts per million to a maximum of 10, and would require reductions in vehicle emissions of 60%-80%. In letters to the EPA Administrator, several senators have asked EPA to delay its rulemaking over concerns that the new fuel standards would raise the price of gasoline,<sup>74</sup> but EPA maintains that the rule as proposed would add less than a penny a gallon to the price of gasoline. The rules will be phased in, beginning in 2017. EPA estimates the cost of the rules at \$1.1 billion to \$1.5 billion annually, with annual benefits ranging from \$7 billion to \$19 billion. For additional information, contact Brent Yacobucci (7-9662, [byacobucci@crs.loc.gov](mailto:byacobucci@crs.loc.gov)) or Rick Lattanzio (7-1754, [rlattanzio@crs.loc.gov](mailto:rlattanzio@crs.loc.gov)).

**Ethanol Blend Wall Waiver.** Section 211(f) of the Clean Air Act effectively limits the amount of oxygen in gasoline unless EPA issues a waiver. Since ethanol contains oxygen, an increase in the ethanol content of gasoline offered for sale can only occur if EPA issues such a waiver. EPA may issue a waiver if the agency determines that the fuel or fuel additive will not cause or contribute

<sup>72</sup> The 2011 standards were: U.S. Environmental Protection Agency, “Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule,” 76 *Federal Register* 15704, March 21, 2011. The notice of final action on reconsideration is at 78 *Federal Register* 9112, February 7, 2013.

<sup>73</sup> For more information on the Tier 3 standards, see U.S. EPA, “Tier 3 Vehicle Emission and Fuel Standards Program,” at <http://www.epa.gov/otaq/tier3.htm>.

<sup>74</sup> Jeremy P. Jacobs, “Bipartisan Senate Group Seeks Delay in EPA Tailpipe Rules,” *E&E News PM*, January 12, 2012. Also, “Four Democratic Senators Urge EPA to Issue Advance Notice on Proposed Rule for Tier 3,” *Daily Environment Report*, March 22, 2013.

to the failure of any emission control device or system used by vehicle manufacturers to achieve compliance with emission standards under the act.

On March 6, 2009, Growth Energy (on behalf of 52 U.S. ethanol producers) applied to EPA for a waiver from the then-current regulation limiting the ethanol content in gasoline to a maximum of 10% (E10). The application requested an increase in the maximum concentration to 15% (E15). A complete waiver would allow the use of significantly more ethanol in gasoline than has been permitted under the Clean Air Act. Limiting ethanol content to 10% leads to an upper bound of roughly 15 billion gallons of ethanol in all U.S. gasoline. This “blend wall” could limit the fuel industry’s ability to meet the Energy Independence and Security Act’s future requirements to use increasing amounts of renewable fuels (including ethanol) in transportation.

On November 4, 2010, EPA granted a partial waiver allowing the use of E15 in Model Year (MY) 2007 vehicles and newer.<sup>75</sup> The agency delayed a decision on MY2001-MY2006 vehicles until the Department of Energy completed testing of those vehicles. On January 21, 2011, EPA announced that the waiver would be expanded to include MY2001-MY2006 vehicles.<sup>76</sup> EPA determined that data were insufficient to address concerns that had been raised over emissions from MY2000 and older vehicles, as well as heavy-duty vehicles, motorcycles and nonroad applications, and thus a waiver for these vehicles/engines was denied.

EPA has noted that granting the waiver eliminates only one impediment to the use of E15—other factors, including retail and blending infrastructure, state and local laws and regulations, and manufacturers’ warranties, would still need to be addressed. Because of concerns over potential damage by E15 to equipment not designed for its use, this partial waiver has been challenged in court by a group of vehicle and engine manufacturers, although that case was dismissed because none of the petitioners had been injured *in fact*.<sup>77</sup> On June 23, 2011, EPA issued final rules, including new labeling requirements, to prevent the accidental use of E15 in vehicles and engines not approved for its use.

Because of various factors, expansion of E15 supply has been slow. As of late March 2013, only 13 stations in three states (Iowa, Kansas, and Nebraska) had begun selling E15 for use in conventional vehicles. Further, only three automakers have affirmed that E15 may be used in their vehicles without voiding warranties.<sup>78</sup>

In the first quarter of 2013, prices for RFS blending credits (Renewable Identification Numbers, or RINs) increased dramatically (from roughly \$0.08 per gallon in early January to over \$1.00 per gallon in mid-March). The causes of this increase are unclear, but may be driven in part by concerns from fuel suppliers that the industry is approaching the blend wall and that RINs may be

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<sup>75</sup> U.S. Environmental Protection Agency, “Partial Grant and Partial Denial of Clean Air Act Waiver Application Submitted by Growth Energy to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator; Notice,” 75 *Federal Register* 68094-68150, November 4, 2010.

<sup>76</sup> U.S. Environmental Protection Agency, “Partial Grant of Clean Air Act Waiver Application Submitted by Growth Energy to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator,” 76 *Federal Register* 4662, January 26, 2011.

<sup>77</sup> *Grocery Mfrs. Ass'n v. EPA*, 693 F.3d 169 (D.C. Cir. 2012).

<sup>78</sup> For example, General Motors has approved the use of E15 in its model year (MY) 2012 and later vehicles, while Ford has approved E15 for MY2013 and later vehicles. Porsche approves the use of E15 in MY2001 and later cars. Robert L. Darbelnet, President and CEO, American Automobile Association, “Suspend Sale of E15 Gasoline,” *The Hill*, December 13, 2012.

in short supply. After the mid-March high, RIN prices dropped somewhat, to roughly \$0.70 per gallon in early April. For additional information, contact Brent Yacobucci (7-9662, byacobucci@crs.loc.gov).

**Oil and Natural Gas Air Pollution Standards.** In February 2010, EPA signed a consent agreement under which it was to promulgate revisions of the New Source Performance Standards and Hazardous Air Pollutant standards for oil and gas production by November 30, 2011. The agency promulgated these rules on August 16, 2012.<sup>79</sup> Under the CAA, EPA is required to review New Source Performance Standards every eight years; the revisions update NSPS rules for VOCs and SO<sub>2</sub> that were promulgated in 1985. Similarly, EPA had a statutory obligation to review hazardous air pollutant standards for oil and natural gas production, which were issued in 1999, by 2007. Additionally, the 2012 rules are the first regulations to address emissions from natural gas wells that use hydraulic fracturing (“fracking”). The new standards, which will be fully implemented by 2015, will require companies to capture natural gas and volatile organic compounds (VOCs) that escape when hydraulically fractured gas wells are prepared for production. The rules affect production, processing, transmission, and storage, but not distribution to customers. EPA estimates that the rules will result in the capture of 95% of the VOCs otherwise emitted. Although there are costs associated with the use of equipment to capture the emissions, EPA estimates that the rules will produce a net annual savings of \$11 million to \$19 million for the industry, because the captured gas and condensate can be sold. Some states already require similar measures, and EPA estimates that about half of fracked natural gas wells already meet the standards. On August 5, 2013, EPA promulgated updates to the storage tank portions of the rules in response to petitions for reconsideration. The updates would provide additional time for compliance and an alternative emissions limit.<sup>80</sup> Industry groups have filed lawsuits challenging both the 2012 standards and the 2013 updates. For additional information, contact Rick Lattanzio (7-1754, rlattanzio@crs.loc.gov).

**Portland Cement Manufacturing.** On September 9, 2010, EPA promulgated New Source Performance Standards (NSPS) for conventional pollutants from new cement kilns and Maximum Achievable Control Technology (MACT) standards for hazardous air pollutants from both existing and new cement kilns.<sup>81</sup> When fully implemented in late 2013, the standards would have required a 92% reduction in emissions of both particulate matter and mercury and a 97% reduction in emissions of acid gases, according to EPA, as well as controlling other pollutants. EPA had previously issued emission standards for this industry in 1999, but the standards were challenged in court and remanded to the agency by the D.C. Circuit Court of Appeals. The new rules reflect EPA’s reconsideration of the standards.

The agency estimated that it would cost the industry \$350 million annually to comply with the 2010 standards, but that benefits (including the avoidance of 960 to 2,500 premature deaths in people with heart disease) would be worth \$6.7 billion to \$18 billion annually. The trade association representing the industry said the standards would cause some facilities to close. On

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<sup>79</sup> U.S. Environmental Protection Agency, “Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule,” 77 *Federal Register* 49490, August 16, 2012. For information, see <http://www.epa.gov/airquality/oilandgas/actions.html>.

<sup>80</sup> U.S. Environmental Protection Agency, “Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards,” 78 *Federal Register* 58416-58448, September 23, 2013.

<sup>81</sup> U.S. Environmental Protection Agency, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule,” 75 *Federal Register* 54970, September 9, 2010.

December 9, 2011, the D.C. Circuit Court of Appeals remanded the 2010 standards to EPA for the agency to reconsider emission standards for kilns that use solid waste as fuel. The court did not stay implementation of the 2010 standards, but EPA, in proposing changes to the particulate portion of the standards on June 25, 2012, announced its intention to give the industry an additional two years to comply, with a third year available if needed. The changes are estimated to reduce industry costs by \$52 million annually, compared to the 2010 rule. EPA finalized these changes, February 12, 2013.<sup>82</sup>

Further regulation of this industry, which is the third highest stationary U.S. source of carbon dioxide emissions, has been under consideration: when EPA promulgated the rule in September 2010, it stated in the rule's preamble to the rule that it is "working towards a proposal for GHG standards" for these plants.<sup>83</sup> It is uncertain when such a rule might be proposed: action on these standards was not mentioned in the President's June 2013 Climate Action Plan. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Stationary Internal Combustion Engines.** EPA set standards for both compression-ignition<sup>84</sup> (generally diesel) and spark ignition (generally gasoline) stationary engines<sup>85</sup> in 2010. The agency subsequently amended the rules on January 30, 2013.<sup>86</sup> The regulations would affect stationary engines, such as emergency power generators used by hospitals and other sources and electric power generators used for compressors and pumps by a wide array of industrial, agricultural, and oil and gas industry sources. The rules are referred to as the RICE (Reciprocating Internal Combustion Engine) rules. They apply to engines that meet specific siting, age, and size criteria (generally engines of 500 horsepower or less). EPA estimates that more than 1.2 million engines will be affected by the regulations. Depending on the type of engine, owners will have to install pollution control equipment or follow certain work practice standards, such as burning low sulfur fuel or performing oil changes and inspections. EPA estimated that the health benefits of the two rules will be between \$1.45 billion and \$3.5 billion annually in 2013. Annualized costs for the rules were estimated to be \$626 million in 2013. EPA states that the 2013 amendments will reduce the annualized costs by \$139 million (to \$487 million). The amendments were issued in response to a suit by the Engine Manufacturers Association. The most controversial of the amendments allows backup generators to operate for up to 100 hours per year during emergency or peak power use periods without being subject to emission limits, although they will need to use low sulfur fuel beginning in 2015. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Ocean-Going Ships.** EPA took two steps to control emissions from ocean-going ships in 2009 and 2010. It promulgated emission standards for new marine engines<sup>87</sup> and it proposed the establishment of Emission Control Areas (ECAs) extending 200 nautical miles off most U.S.

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<sup>82</sup> 78 *Federal Register* 10006, February 12, 2013.

<sup>83</sup> *Ibid.*, p. 54997.

<sup>84</sup> U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants: Reciprocating Internal Combustion Engines; Final Rule," 75 *Federal Register* 9648, March 3, 2010.

<sup>85</sup> U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; Final Rule," 75 *Federal Register* 51570, August 20, 2010.

<sup>86</sup> 78 *Federal Register* 6674, January 30, 2013.

<sup>87</sup> U.S. Environmental Protection Agency, "Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder; Final Rule," 75 *Federal Register* 22896, April 30, 2010.



shores.<sup>88</sup> In the ECAs, which received final approval in March 2010, both U.S. and foreign ships were required to use low sulfur fuel, beginning in 2012. In both cases, the actions reflect international standards that the United States and other maritime nations have agreed to under the International Convention for the Prevention of Pollution from Ships (MARPOL). EPA estimated the cost of these two initiatives at over \$3 billion annually by 2030, mostly attributable to the cleaner fuel requirement. The agency also estimated that monetized benefits of the requirements will exceed costs by more than 30 to 1. The ECAs and the new standards were supported by both industry and environmental groups, and have been extended to cover the U.S. Caribbean, beginning in 2014. In July 2012, however, controversy arose over the requirement that ships in Alaskan waters use low sulfur fuel, with the state of Alaska filing suit to block implementation of the fuel requirement. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Flares and Process Heaters at Petroleum Refineries.** On September 12, 2012, EPA promulgated amendments to New Source Performance Standards for flares and process heaters at petroleum refineries.<sup>89</sup> The amendments are the result of the agency's reconsideration of standards it promulgated on June 24, 2008. The agency estimates that the reconsidered rules will have capital costs of \$460 million, but will result in savings to the industry of \$79 million per year, while resulting in monetized benefits of \$240 million to \$580 million annually, principally from the avoided health impacts caused by reduced emissions of sulfur dioxide and nitrogen oxides. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

**Mercury Cell Chlor-Alkali MACT Standards.** In December 2003, EPA promulgated MACT standards for emissions of hazardous air pollutants from plants that manufacture chlorine using the mercury cell chlor-alkali process. This is an old technology that has been phased out by 95% of the chlorine industry. At the time of the rule's promulgation, there were 12 plants still using the technology; but as of late 2012, there were only four, two of which were expected to close by early 2013.

EPA was asked to reconsider the 2003 standards by the Natural Resources Defense Council (NRDC), and it agreed to do so. NRDC argues that EPA should have required the remaining chlor-alkali plants to switch to newer technology that does not use mercury. After developing new data on the costs of converting plants to non-mercury technology, EPA proposed revised standards on June 11, 2008. The revised standards would not have required the technology switch, but would have required more stringent work practice requirements.

As a result of comments on the June 2008 proposal, the agency proposed a supplement to that proposal on March 14, 2011.<sup>90</sup> The 2011 supplement contains two options: the first would require the elimination of mercury emissions, effectively requiring conversion to non-mercury-cell technology. The second option would require a strengthening of work practices (as proposed in

<sup>88</sup> International Maritime Organization, Marine Environmental Protection Committee, "Proposal to Designate an Emission Control Area for Nitrogen Oxides, Sulphur Oxides and Particulate Matter, Submitted by the United States and Canada," April 2, 2009, at <http://www.epa.gov/oms/regs/nonroad/marine/ci/mepc-59-eca-proposal.pdf>.

<sup>89</sup> U.S. Environmental Protection Agency, "Standards of Performance for Petroleum Refineries; Performance Standards for Petroleum Refineries for Which Construction, Reconstruction, or Modification Began After May 14, 2007," 77 *Federal Register*, 56422, September 12, 2012.

<sup>90</sup> U.S. Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants: Mercury Emissions from Mercury Cell Chlor-Alkali Plants; Supplemental Proposed Rule," 76 *Federal Register* 13852, March 14, 2011.

2008) to reduce (but not eliminate) emissions. EPA estimated the annual compliance costs of Option 1 at \$13 million, with benefits ranging from \$21 million to \$43 million, but it conceded that there is still uncertainty regarding numerous facets of the cost analysis, and it requested further comments. Option 2 was estimated to have annual costs of \$25,000, with no monetized benefits. For additional information, contact Jim McCarthy (7-7225, [jmccarthy@crs.loc.gov](mailto:jmccarthy@crs.loc.gov)).

## Clean Water Act

**Pesticide Application General Permit.** EPA has developed a Clean Water Act (CWA) general permit to control pesticides that are applied to waters of the United States, such as aerial application of insecticide to control mosquitoes. The general permit was issued on October 31, 2011, in response to a 2009 federal court decision that invalidated a 2006 EPA rule, which had codified the agency’s long-standing view that pesticide applications that comply with federal pesticides law do not require CWA permits.<sup>91</sup> The estimated universe of affected activities is approximately 5.6 million applications annually, which are performed by 365,000 applicators, in four use patterns: mosquito and other flying insect pest control, aquatic weed and algae control, aquatic nuisance animal control, and forest canopy pest control. The permit requires all operators covered by the permit to minimize pesticide discharges to waters by practices such as using the lowest amount of pesticide product that is optimal for controlling the target pest. It also requires operators to prepare plans to document their pest management practices. Under OMB’s criteria, the permit is not a significant rule, but is “economically significant.”<sup>92</sup> Meanwhile, in the 113<sup>th</sup> Congress, legislation intended to overturn the court’s 2009 ruling by exempting aerial pesticide application activities from clean water permit requirements has been introduced (H.R. 935, S. 175, and S. 802). The text of H.R. 935 also was included as a provision of 2013 farm bill legislation approved by the House Agriculture Committee (H.R. 2642) in July 2013, but it was not included in the 2014 farm bill that was enacted in February 2014 (P.L. 113-79).<sup>93</sup> For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**Florida Nutrient Water Quality Standards.** The CWA directs states to adopt water quality standards for their waters and authorizes EPA to promulgate new or revised standards if a state’s actions fail to meet CWA requirements. Water quality standards consist of designated uses, criteria to protect the designated uses, and an antidegradation statement. They serve as the framework for pollution control measures specified for individual sources. Because of severe water quality impairment of Florida waters by nutrients (nitrogen and phosphorus) from diverse sources including agriculture and livestock, municipal and industrial wastewater discharges, and urban stormwater runoff, EPA determined in 2009 that Florida’s existing *narrative* water quality standards for nutrients must be revised in the form of *numeric* criteria that will enable Florida to better control nutrient pollution. In 2009 EPA entered into a consent decree with environmental

<sup>91</sup> U.S. Environmental Protection Agency, “Final National Pollutant Discharge Elimination System (NPDES) General Permit for Point Source Discharges from the Application of Pesticides; Notice of final permit,” 76 *Federal Register* 68750-68756, November 7, 2011.

<sup>92</sup> “Significant” rules are a broader OMB category that includes not only the economically significant (i.e., primarily those with an annual effect on the economy of \$100 million or more), but also rules that “create a serious inconsistency or otherwise interfere with an action taken or planned by another agency”; “materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof”; or “raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth” in Executive Order 12866.

<sup>93</sup> For additional information, see CRS Report RL32884, *Pesticide Use and Water Quality: Are the Laws Complementary or in Conflict?*, by Claudia Copeland.



litigants requiring the agency to promulgate numeric nutrient water quality standards for Florida. To meet the legal deadline, EPA promulgated the first phase of these standards, called the “inland waters rule,” on December 5, 2010. Water quality standards do not have the force of law until the state translates them into permit limits or otherwise imposes pollution control requirements on dischargers. The rule would not establish any requirements directly applicable to regulated entities or other sources of nutrient pollution.

The 2010 rule has not gone into effect, because, in response to criticism of the standards, EPA delayed the effective date of the rule to allow local governments, businesses, and the state of Florida time to review the standards and develop implementation strategies. While few dispute the need to reduce nutrients in Florida’s waters, EPA’s 2010 rule has been controversial, involving disputes about the data underlying the proposal, potential costs of complying with numeric standards when they are incorporated by the state into discharge permit limitations, and disputes over administrative flexibility. EPA has said all along that it prefers that Florida implement its own numeric nutrient water quality criteria, and in June 2012 the state submitted revised standards with numeric nutrient criteria. In response, EPA indicated to the state that the agency likely would approve the standards, at which time the agency would initiate administrative action to repeal the 2010 federal rule. EPA’s deadline for issuing the second phase of standards, for estuaries, coastal waters, and flowing waters in the South Florida Region, also was extended several times to allow the state to develop its own standards.

In March 2013, EPA and the state reached agreement in principle on steps that will put the state in charge of determining numeric limits on nutrient pollution in Florida waterways. Groundwork for the agreement was laid in November 2012 when EPA approved the state’s June 2012 submission for lakes, rivers, streams, and some estuaries. Florida agreed to move forward with rulemaking and legislation to complete the job of setting numeric nutrient criteria for Florida waterways. In response to the state’s actions, EPA approved the state’s implementation plan for controlling nutrient pollution in Florida waters and agency petitioned the federal court in Florida to allow it to approve the state’s water quality standards, although they lack numeric criteria. If the court agrees to amend the consent decree, EPA obligations to directly oversee the state’s nutrient regulations would end, including issuing numeric nutrient standards under the second phase of rulemaking.<sup>94</sup> Environmental groups have criticized EPA’s approval of the standards that Florida has adopted, saying that EPA’s actions are inconsistent with its 2009 determination that numeric criteria are necessary to protect Florida’s waters, and have filed a challenge in federal court. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**Chesapeake Bay TMDL.** Pursuant to a court-ordered schedule, EPA has developed a plan, called a Total Maximum Daily Limit (TMDL), to restore nutrient-impaired waters of the Chesapeake Bay. The TMDL is required because jurisdictions in the Chesapeake Bay watershed have failed to meet deadlines to attain water quality goals for the Bay, thus triggering Clean Water Act requirements that the federal government must develop a plan to do so. The TMDL is not a regulation. A TMDL represents the maximum amount of a pollutant that a body of water may receive and still meet its water quality standards.<sup>95</sup> Individual actions needed to meet the overall pollutant limits specified in the TMDL, such as discharge permit limits or other controls, are to be developed by the Chesapeake Bay jurisdictions in Watershed Implementation Plans. The

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<sup>94</sup> For additional information, see [http://water.epa.gov/lawsregs/rulesregs/florida\\_index.cfm](http://water.epa.gov/lawsregs/rulesregs/florida_index.cfm).

<sup>95</sup> For additional information, see CRS Report R42752, *Clean Water Act and Pollutant Total Maximum Daily Loads (TMDLs)*, by Claudia Copeland.

Chesapeake Bay TMDL is the largest ever developed by EPA or any state, since it will apply to all impaired waters of the 64,000 square miles of the six states in the Bay watershed. On December 29, 2010, EPA issued the TMDL.<sup>96</sup> Pursuant to the schedule of steps in the TMDL, jurisdictions are now developing specific plans called Watershed Implementation Plans (WIPs), which outline the types of controls and best management practices that will be used to reduce pollution in the Bay. EPA approved the first phase WIPs in December 2010, and also has reviewed the jurisdictions' Phase II WIPs, which provide greater detail about pollutant reductions planned through the year 2017. The TMDL has been controversial with agricultural and other groups that are concerned about the likely mandatory nature of many of EPA's and states' upcoming actions. In September 2013, a federal court upheld the TMDL, in a lawsuit filed by the American Farm Bureau Federation that had challenged EPA's authority to set pollution limits in the multistate plan. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**Airport Deicing Effluent Limitations Guidelines and New Source Performance Standards.**

In April 2012, EPA promulgated regulations under the CWA to limit water pollution from aircraft and airport runway deicing operations.<sup>97</sup> The rule is intended to limit runoff of deicing fluid, because it contains urea and other contaminants that contribute to low oxygen levels in streams, which can cause fish kills, algal blooms, and contamination of surface water or groundwater. The rule, which had been under development for several years and was proposed in 2009, is part of ongoing EPA activities under the CWA to regulate wastewater discharges from categories of industries through new and revised effluent limitations guidelines. EPA estimated that the final rule will reduce the volume of deicing-related pollutants by 16.4 million pounds at a cost of \$3.5 million annually. Those estimates are substantially less than the 44.6 million pounds of pollutants estimated in the proposed rule, which was projected to cost the industry \$91.3 million annually. EPA estimates that the final rule will apply to 198 existing airports. For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**Construction Site Effluent Limitations Guidelines.** On December 1, 2009, EPA promulgated regulations under the Clean Water Act (CWA), called effluent limitations guidelines (ELGs), to limit pollution from stormwater runoff at construction sites.<sup>98</sup> The rule, called the Construction and Development, or C&D, ELG, took effect February 1, 2010. OMB determined that it is an economically significant rule. It requires construction sites that disturb one or more acres of land to use erosion and sediment control best management practices to ensure that soil disturbed during construction activity does not pollute nearby waterbodies. For construction sites disturbing 10 acres or more, the rule established, for the first time, enforceable numeric limits on stormwater runoff pollution. EPA issued the rule in response to a 2004 lawsuit filed by an environmental group; in 2006, a federal court ordered EPA to issue a final rule by December 1, 2009. The rule affects about 82,000 firms nationwide involved in residential, commercial, highway, street, and bridge construction. EPA has issued effluent guidelines for 56 industries that include many types of discharges, such as manufacturing and service industries. These guidelines are implemented in discharge permits issued by states and EPA. Several industry groups challenged the C&D ELG. In

<sup>96</sup> Notice of the TMDL appeared in the *Federal Register* January 5, 2011. U.S. Environmental Protection Agency, "Clean Water Act Section 303(d): Notice for the Establishment of the Total Maximum Daily Load (TMDL) for the Chesapeake Bay," 76 *Federal Register* 549-550, January 5, 2011.

<sup>97</sup> U.S. Environmental Protection Agency, "Effluent Limitations Guidelines and New Source Performance Standards for the Airport Deicing Category; Final rule," 77 *Federal Register* 29168-29205, May 16, 2012.

<sup>98</sup> U.S. Environmental Protection Agency, "Effluent Limitation Guidelines for the Construction and Development Point Source Category," 74 *Federal Register* 62996-63058, December 1, 2009.

response, EPA examined the data set underlying a portion of the rule and concluded that it improperly interpreted the data. In August 2010, a federal appeals court granted EPA's request for remand of a portion of the rule to conduct a rulemaking to correct the numeric effluent limitation. In November 2010, EPA promulgated a direct final rule to stay the effectiveness of the numeric turbidity limit in the 2009 rule; other portions of the rule remain in effect.<sup>99</sup> To resolve industry challenges to the 2009 rule, in March 2014, EPA finalized modifications of the 2009 rule, including withdrawal of the numeric turbidity effluent limitations in the 2009 rule, which had been controversial, and changes specific to the non-numeric portions of the rule. The effluent limits in the 2014 rule emphasize best practices to manage erosion and stabilize soils during construction. If more data on numeric discharge standards for construction sites become available, EPA could initiate a new rulemaking in the future.<sup>100</sup> For additional information, contact Claudia Copeland (7-7227, [ccopeland@crs.loc.gov](mailto:ccopeland@crs.loc.gov)).

**Oil Spill Prevention, Control, and Countermeasure Requirements, including deadline extension for farms and exemption for milk storage.** To prevent the discharge of oil from onshore and offshore facilities, EPA issued CWA regulations for spill prevention control and countermeasure (SPCC) plans in 1973.<sup>101</sup> SPCC plans apply to owners or operators of certain non-transportation-related facilities. In general, SPCC plans focus on oil spill prevention, requiring, for example, secondary containment (e.g., dikes or berms) for oil-storage equipment.

Following the passage of the Oil Pollution Act of 1990, the agency proposed substantial changes and clarifications that were not made final until July 2002.<sup>102</sup> However, EPA has both extended the 2002 rule's compliance date (on multiple occasions) and made further amendments to the 2002 rule. On one occasion, amendments offered by the Bush Administration's EPA in 2008 were eliminated by the Obama Administration's EPA the following year.<sup>103</sup>

For most types of facilities subject to SPCC requirements, the deadline for complying with the changes made in 2002 was November 10, 2011.<sup>104</sup> However, in a November 2011 rulemaking, EPA extended the compliance date for farms to May 10, 2013.<sup>105</sup>

Pursuant to the CWA definition of oil, the SPCC requirements apply to petroleum-based and non-petroleum-based oil.<sup>106</sup> In a 1975 *Federal Register* notice, EPA clarified that its 1973 SPCC regulations apply to oils from animal and vegetable sources.<sup>107</sup> EPA subsequently stated that "milk typically contains a percentage of animal fat, which is a non-petroleum oil" and is thus

<sup>99</sup> U.S. Environmental Protection Agency, "Direct Final Rule Staying Numeric Limitation for the Construction and Development Point Source Category," *75 Federal Register* 68215-68217, November 5, 2010.

<sup>100</sup> U.S. Environmental Protection Agency, "Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category, Final rule," *79 Federal Register* 12661-12667, March 6, 2014.

<sup>101</sup> *38 Federal Register* 34164, December 11, 1973.

<sup>102</sup> *67 Federal Register* 47041, July 17, 2002.

<sup>103</sup> A November 13, 2009 rule (*74 Federal Register* 58784) eliminated specific exclusions/exemptions made by a December 5, 2008 rulemaking (*73 Federal Register* 74236).

<sup>104</sup> U.S. Environmental Protection Agency, "Oil Pollution Prevention; Spill Prevention, Control, and Countermeasure Rule Compliance Date Amendment," *75 Federal Register* 63093, October 14, 2010.

<sup>105</sup> U.S. Environmental Protection Agency, "Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule—Compliance Date Amendment for Farms," *76 Federal Register* 72120, November 22, 2011.

<sup>106</sup> See CWA Section 311(a) (33 U.S.C. 1321(a)).

<sup>107</sup> *40 Federal Register* 28849, July 9, 1975.

potentially subject to SPCC provisions.<sup>108</sup> However, in January 2009, EPA proposed a conditional exemption from SPCC requirements for milk storage units.<sup>109</sup> EPA issued a final rule April 18, 2011, exempting all milk and milk product containers and associated piping from the SPCC requirements. EPA's rationale for the exemption is that these units are subject to industry standards for sanitation and may be regulated by other agencies, including the U.S. Department of Agriculture.<sup>110</sup> In addition, the final rule states that exempted milk storage units are not included in a facility's overall oil storage volume, a primary factor for SPCC applicability. For additional information, contact Jonathan Ramseur (7-7919, [jramseur@crs.loc.gov](mailto:jramseur@crs.loc.gov)).

## Toxic Substances Control Act

**Lead: Renovation, Repair, and Painting Program Rules.** EPA has revised a 2008 final rule implementing Section 402(c)(3) of the Toxic Substances Control Act (TSCA; enacted as the Residential Lead-Based Paint Hazard Reduction Act of 1992.) The rule aims to reduce human health hazards associated with exposure to lead-based paint. It established requirements for training and certifying workers and firms that remodel, repair, or paint homes or child-occupied public or commercial buildings likely to contain lead-based paint (generally built before 1978).<sup>111</sup> Shortly after promulgation of the 2008 version of the rule, several petitions were filed challenging it. The U.S. Court of Appeals for the District of Columbia Circuit consolidated the petitions and, in August 2009, EPA signed a settlement agreement with the petitioners. The agreement set legal deadlines for a number of EPA rulemaking actions; two rules have been promulgated; one rule remains under development (see previous discussion of "Toxic Substances Control Act (TSCA)").

Amendments to the rule promulgated May 6, 2010, eliminated an opt-out provision that would have exempted a renovation firm from training and work practice requirements if certification were obtained from the property owner that no child under age 6 or pregnant woman resides in a facility and no children spend significant amounts of time there.<sup>112</sup> The amendment also revised recordkeeping and disclosure provisions. In 2010, Congress included a provision in P.L. 111-212, a supplemental appropriations act, which prohibited the use of "funds made available by this Act" to levy fines or to hold any person liable for work performed under the rule. However, P.L. 111-212 provided no funds to EPA for those purposes, so the provision had no effect on EPA's use of existing funds that had been appropriated in P.L. 111-88 to enforce the rule.<sup>113</sup> In June 2010, on its own initiative, EPA published a memorandum informing enforcement division directors in the regional offices that the Agency would not enforce certain requirements for certification of firms or for individual training until after October 1, 2010. However, individual renovators must have been enrolled in required training classes before that date and all must have completed required training prior to December 31, 2010, according to the memorandum. In the 113<sup>th</sup> Congress, H.R. 2093/S. 484 would amend provisions of TSCA to restore the opt-out provision.

<sup>108</sup> 74 *Federal Register* 2461, January 15, 2009.

<sup>109</sup> U.S. Environmental Protection Agency, "Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements—Amendments," 74 *Federal Register* 2461, January 15, 2009.

<sup>110</sup> 76 *Federal Register* 21652, April 18, 2011.

<sup>111</sup> For a complete history of this rule, see EPA's website "Lead Renovation, Repair, and Painting Program Rules" at <http://www2.epa.gov/lead/lead-renovation-repair-and-painting-program-rules>.

<sup>112</sup> U.S. Environmental Protection Agency, "Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program: Lead; Final Rule," 75 *Federal Register* 24802-24819, May 6, 2010.

<sup>113</sup> Sven-Erik Kaiser, EPA Congressional Liaison, personal communication, September 14, 2011.

A second rule responding to the 2009 settlement agreement was proposed in May 2010. It addressed the testing requirements after renovations are complete.<sup>114</sup> That rule was revised and promulgated July 15, 2011, effective October 4, 2011.<sup>115</sup> EPA decided not to promulgate dust wipe testing and clearance requirements as proposed. Instead it “promulgated several other revisions to the rule, including a provision allowing a certified renovator to collect a paint chip sample and send it to a recognized laboratory for analysis in lieu of using a lead test kit.”<sup>116</sup> In the 113<sup>th</sup> Congress, H.R. 2093/S. 484 would amend provisions of TSCA to prohibit EPA enforcement of the renovation rule until the Administrator has identified a test kit for lead in paint samples. For additional information, contact Jerry Yen (7-9113, [jyen@crs.loc.gov](mailto:jyen@crs.loc.gov)).

## Solid Waste (RCRA)

**Identification of Non-Hazardous Materials That Are Solid Wastes When Burned.** In conjunction with emission standards for boilers and solid waste incinerators (see discussion of “Boilers and Incinerators” in this **Appendix**), in February 2011, EPA finalized regulations intended to clarify when certain materials burned as fuel in a combustion unit would be considered a “solid waste.”<sup>117</sup> The definition of solid waste plays an important role in implementing the emission standards for both boilers and solid waste incinerators. The 2007 D.C. Circuit Court of Appeals decision that vacated EPA’s previous emission standards for boilers also vacated EPA’s definition of terms under its “CISWI Definitions Rule.”<sup>118</sup> The D.C. Circuit concluded that EPA erred in defining “commercial and industrial solid waste” to exclude solid waste that is burned at a facility in a combustion unit whose design provides for energy recovery or which operates with energy recovery. Instead, the D.C. Circuit stated that the Clean Air Act “requires any unit that combusts ‘any solid waste material at all’—regardless of whether the material is being burned for energy recovery—to be regulated as a ‘solid waste incineration unit.’”<sup>119</sup> The 2011 final rule addresses issues brought up by the D.C. Circuit and, in doing so, significantly narrows the current universe of non-hazardous secondary materials that could be burned in boilers.<sup>120</sup> EPA anticipates that boiler operators that burn materials newly-identified as a solid waste would switch to a non-waste fuel, rather than being subject to the more stringent emission standards applicable to solid waste incinerators. The final rule also addresses a host of concerns raised by various stakeholders during the public comment period for the proposed rule, including those of several Members of Congress. In particular, the final rule clarifies that the definition of solid waste would not affect current used oil recycling regulations (which allows burning used oil in space heaters, under certain conditions) and explicitly excludes from the

<sup>114</sup> U.S. Environmental Protection Agency, “Clearance and Clearance Testing Requirements for the Renovation, Repair, and Painting Program: Lead; Proposed Rule,” 75 *Federal Register* 25038-25073, May 6, 2010.

<sup>115</sup> U.S. Environmental Protection Agency, “Lead: Clearance and Clearance Testing Requirements for the Renovation, Repair, and Painting Program,” Final Rule, 76 *Federal Register* 47918-47946, July 15, 2011.

<sup>116</sup> EPA, “Lead; Clearance and Clearance Testig Requirements for the Renovation, Repair and Painting Program,” <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPPT-2005-0049-1434>.

<sup>117</sup> Environmental Protection Agency, Final Rule, “Identification of Non-Hazardous Secondary Materials That Are Solid Waste,” 76 *Federal Register* 15455, March 21, 2011.

<sup>118</sup> Environmental Protection Agency, Final Rule, “Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units,” 70 *Federal Register* 55568, September 22, 2005.

<sup>119</sup> This and related court finding are discussed in the final rule at 76 *Federal Register* 15461.

<sup>120</sup> See EPA’s web page “Identification of Non-Hazardous Materials That Are Solid Waste: Final Rulemaking” at <http://www.epa.gov/epawaste/nonhaz/define/index.htm>.



definition of solid waste “scrap tires used in a combustion unit that are . . . managed under the oversight of established tire collection programs.” EPA states that this regulatory action would not directly invoke any costs or benefits. Instead, any costs or benefits would be related to the Boiler MACT and CISWI Standards (discussed above). On February 7, 2013, EPA amended the 2011 rule to clarify specific elements of the regulations. The amendments were jointly promulgated with EPA’s reconsideration of the CISWI proposed rule (discussed above). For additional information, contact Linda Luther (7-6852, lluther@crs.loc.gov).

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