

Summary of Testimony by John D. Walke

H.R. 2250 and H.R. 2681 together weaken the Clean Air Act dramatically to authorize the indefinite delay of toxic air pollution standards for industrial boilers, incinerators, and cement plants. Worse, these bills rewrite the Clean Air Act and overturn multiple federal court decisions to eviscerate strong toxic air pollution standards that now must be applied to control dangerous dioxin, acid gas, and lead and mercury pollution from these facilities.

Industrial boilers and cement plants are some of the largest emitters of mercury and scores of other toxic air pollutants that still are failing to comply with basic Clean Air Act requirements for toxic pollution over two decades after adoption of the 1990 amendments to this landmark statute. This situation is due to unlawful delays and standards by the prior administration that have resulted in the obligation by the present EPA to re-propose and re-issue lawful air toxics standards to protect the public. EPA's mercury and air toxics standards for these two industrial sectors will deliver enormous public health benefits. Were these standards to be delayed by even a single year, the potential magnitude of extreme health consequences would be as follows:

- 9,000 premature deaths;
- 5,500 non-fatal heart attacks;
- 58,000 asthma attacks;
- 5,950 cases of acute or chronic bronchitis;
- 110,000 cases of upper or lower respiratory symptoms;
- 6,040 hospital admissions and emergency room visits;
- 440,000 days when people must miss work or school; and
- 2,650,000 days when people must restrict their activities.

It would be irresponsible to deny these health benefits to the American people. Toxic air pollution standards for these industries will protect all Americans from the serious health consequences that uncontrolled and poorly controlled toxic air pollution from these plants otherwise would cause.

TESTIMONY OF JOHN D. WALKE
CLEAN AIR DIRECTOR
NATURAL RESOURCES DEFENSE COUNCIL
LEGISLATIVE HEARING ON “H.R. 2250, THE EPA REGULATORY RELIEF ACT OF 2011
AND H.R. 2681, THE CEMENT SECTOR REGULATORY RELIEF ACT OF 2011”
BEFORE THE SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES
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Thank you, Mr. Chairman and members of the Subcommittee, for the opportunity to testify today. My name is John Walke, and I am clean air director and senior attorney for the Natural Resources Defense Council (NRDC). NRDC is a nonprofit organization of scientists, lawyers, and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.2 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles, San Francisco, Chicago, and Beijing. I have worked at NRDC since 2000, and before that I was a Clean Air Act attorney in the Office of General Counsel for the U.S. Environmental Protection Agency. Over the last decade, I represented NRDC in many of the rulemakings and lawsuits concerning mercury and air toxics standards discussed in my testimony.

Toxic Air Pollution Standards for Industrial Boilers, Incinerators, and Cement Plants

Today’s hearing addresses mercury and air toxics standards from two of the three largest sources of industrial mercury pollution in the United States – industrial boilers and incinerators and cement plants. None of these industrial sources of mercury pollution today meets Clean Air

Act requirements to reduce toxic pollution, over two decades after the adoption of the 1990 amendments to the Act.

Since the 1990 amendments, over one hundred air toxics standards have been adopted covering many hundreds of industrial source categories, including chemical plants, oil refineries, manufacturers, steel plants and others. But with respect to cement plants and industrial boilers and incinerators, this period has only meant inexcusable delay and unlawful standards, all resulting in a failure to achieve legally required reductions in these facilities' toxic air pollution. The final and proposed health safeguards for these industrial categories will deliver enormous health benefits to the American people every year.

In sharp contrast, H.R. 2250 and H.R. 2681, two bills aimed at exempting industrial boilers and incinerators, and cement plants, respectively, from toxic air pollution standards, would substitute the Clean Air Act's strongest health protections under the law for the weakest and worst possible alternatives under the Act. These bills set the stage for indefinite and permanent delays of toxic air pollution standards for industrial boilers, incinerators and cement plants. The legislation shockingly substitutes so-called "work practice standards," oftentimes mere tune-ups, for actual emissions standards that would require these two industries, like hundreds before them, to reduce their toxic air pollution at all, much less by the maximum reduction standard that the Clean Air Act has required for the past twenty-one years.

Industrial boilers and incinerators and Portland cement manufacturers are some of the largest industrial emitters of mercury pollution in the U.S. Exempting these facilities from meeting the law's longstanding protective measures for reducing toxic air pollution, following decades of delay, would have enormous and deadly consequences for the American people. Let me emphasize in the strongest possible terms that these bills are not mere "15 month delays of

the rules as EPA itself has requested,” as some have misrepresented the legislation. Instead the bills reflect the complete evisceration of the substantive standards for achieving reductions in toxic air pollution, coupled with the elimination of any statutory deadlines for EPA to re-issue standards to protect Americans. Both steps are unprecedented in this Committee or any other legislation introduced in Congress to my knowledge.

The 1990 amendments to the Clean Air Act requiring maximum reductions in deadly neurotoxins, carcinogens and other air toxins were passed by overwhelming bi-partisan majorities of 401 to 21 in the House and 89 to 11 in the Senate. Members voting for the law that remain in Congress today include Congressmen Barton, Upton, Stearns and Waxman of this committee, Senator McConnell, and other conservative Democrats and Republicans.

No one has made the case at this hearing or an earlier hearing how or where EPA is issuing air toxic standards inconsistent with the statute or governing caselaw. No one has demonstrated or even claimed that mercury or arsenic or lead are less dangerous than was believed in 1990. No one has explained why these industrial sectors -- the second and third worst mercury polluters -- should be controlled less protectively than the one hundred plus industrial standards adopted by Republican and Democratic administrations alike in the past 20 years without economic harm.

There are 3 obvious differences about the circumstances surrounding these rules: first, the last administration issued illegal and unprotective rules that need to be fixed to follow the law.¹ Second, the corrected standards were issued by a Democratic president. And third, this happened following a change in political parties controlling this chamber during the last election. None of those differences provides a sound policy basis for refusing to achieve protective reductions in mercury and carcinogens from these industrial sectors.

¹ See generally http://switchboard.nrdc.org/blogs/jwalke/out-of-control_criticism_of_ep.html.

Health Benefits

Cement plants: EPA's final mercury and air toxics standards for cement plants are estimated to save as many as 2,500 lives every year by 2013.² The standards also will prevent up to 17,000 cases of aggravated asthma, 1,500 heart attacks, 32,000 cases of upper and lower respiratory symptoms, and 130,000 days of lost work annually by the year 2013.

The safeguards will reduce annual emissions of cement plants' mercury by 16,600 pounds (a 92% cut), acid gases by 5,800 tons (97% cut), soot pollution by 11,500 tons (92% cut) and sulfur dioxide pollution by 110,000 (78% cut).³

These standards will produce benefits of \$6.7 billion to \$18 billion annually, yielding benefits that outweigh costs by a factor of up to 20 to 1.

Boilers and process heaters: EPA's March 2011 final mercury and air toxics standards for industrial, commercial and institutional boilers and process heaters are estimated to save as many as 6,500 lives every year by 2014.⁴ The safeguards also will prevent up to 41,000 cases of aggravated asthma, 4,000 heart attacks, 1,600 cases of chronic bronchitis, 3,700 cases of acute bronchitis, 4,300 hospital and emergency room visits, 78,000 cases of respiratory symptoms, and 310,000 lost work or school days every year starting in 2014.

EPA estimates that the value of the health benefits associated with the standards are between \$22 billion to \$54 billion starting in 2014, compared with industry compliance costs estimated at only \$1.4 billion.

² See generally U.S. EPA, Fact Sheet, Final Amendments to National Air Toxics Emission Standards and New Source Performance Standards for Portland Cement Manufacturing *available at* http://www.epa.gov/ttn/atw/pcem/pcem_fs_080910.pdf (last visited Sept. 6, 2011) ("Portland Cement Fact Sheet").

³ *Id.*

⁴ See generally Fact Sheet, Final Air Toxics Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Source Facilities *available at* <http://www.epa.gov/airquality/combustion/docs/20110221mboilersfs.pdf> (last visited Sept. 6, 2011) (Boilers Fact sheet).

Legislative Analysis

H.R. 2250 Indefinitely Delays Toxic Air Pollution Safeguards for Industrial Boilers and Incinerators, and Repeals Critical Clean Air Act Provisions.

H.R. 2250, the “EPA Regulatory Relief Act of 2011,” severely weakens and delays Clean Air Act safeguards to reduce mercury, toxic metals, acid gases and other hazardous air pollution from industrial boilers and incinerators.

The legislation fundamentally weakens the Clean Air Act by:

- 1) Setting the stage to delay industry compliance deadlines *indefinitely*, and by at least a *minimum* of 3.5 years -- resulting in:
 - Over 100,000 tons of additional unregulated toxic air pollution, including mercury, toxic metals, dioxins and acid gases;
 - 1.54 million tons of sulfur dioxide pollution;
 - Up to 22,750 premature deaths;
 - 14,000 non-fatal heart attacks; 143,000 asthma attacks; and
 - Over one million days when people miss work or school.⁵
- 2) Rewriting the Clean Air Act to entirely remove the law's longstanding obligation to achieve maximum reductions in hazardous air pollution based on the best performers in an industrial sector, substituting instead ineffectual work practices that need not achieve *any* emissions reductions;
- 3) Overturning federal court decisions enforcing the Clean Air Act; and
- 4) Deleting provisions in the Clean Air Act that courts have upheld as unambiguously clear and protective.

⁵ *Id.*

H.R. 2250 – Section-by Section-Analysis

Section 2: This provision voids EPA’s current toxic air pollution rules for industrial boilers and incinerators and prevent EPA from re-adopting new protections for a *minimum* of 15 months following enactment of the bill, while setting the stage for *indefinite delay*.

Analysis: This section of the bill requires EPA to redo its entire rulemaking process and does not allow EPA to finalize any regulations relating to these facilities until *at least* 15 months after enactment of H.R. 2250.

Toxic air pollution standards for industrial boilers and incinerators are already nearly a decade overdue under the Clean Air Act. On September 13, 2004, EPA promulgated national emission standards for hazardous air pollutants (“NESHAPs”) for new and existing industrial boilers and incinerators. In 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the 2004 standards. Pursuant to the Court’s opinion, and in order to comply with the court’s remand order, EPA re-proposed toxic air pollution standards for these facilities in June of 2010. The agency finalized the standards pursuant to a court order on March 21, 2011. On that same day, EPA announced that the Agency would reconsider portions of the standards. In a June 2011 press release, EPA announced a timeline that requires final rules by April 2012. The agency stated that this timeline “is the best approach to put in place technically and legally sound standards that will bring significant health benefits to the American public.”⁶ Assuming EPA proceeds on this timetable, by the time toxic air

⁶ See EPA Press Release, “EPA Announces Timeline for Reconsideration of Air Toxics Standards for Boilers and Certain Incinerators, Open and transparent process will strengthen the basis for the protective, cost-effective and achievable standards,” *available at* <http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/5530a05d25ddd683852578b900533312!OpenDocument> (last visited Sept. 6, 2011)

pollution standards for these facilities are finalized, they will already be almost a decade overdue.

H.R. 2250 sets the stage to delay these rules permanently, by providing in section (2)(A)(2) the Administrator *must* delay toxic air pollution standards for industrial boilers and incinerators by at least 15 months, and deletes any statutory deadline for EPA ever to re-promulgate standards. Instead of longstanding, mandatory deadlines, the legislation substitutes a mere instruction that EPA may finalize future standards “on such later date as may be determined by the Administrator.” This puts critical safeguards against toxic air pollution for all Americans at the whim of political winds in future administrations, something Congress never has previously allowed.

Finally, this section deletes two longstanding federalism provisions of the Clean Air Act that Congress adopted to grant state and local officials backstop authority to reduce toxic air pollution when EPA standards were unduly delayed, Clean Air Act sections 112(g)(2) and 112(j).

Section 3: These provisions further delay the law’s health protections by a number of years and weaken the rigorous legal standards for reducing toxic air pollution from incinerators and other industrial polluters.

Analysis: Section 3(a)(1) eliminates the Clean Air Act’s deadline requiring industry compliance no later than 3 years after final standards are issued, and prohibits EPA from setting compliance deadlines any earlier than 5 years after the effective date of the standards. Coupled with the minimum 15 month delay described above, H.R. 2250 would push back the earliest possible compliance date for these facilities *until early 2018, rather than the 2014 deadline that current standards establish.*

Again, the bill is worded so that this extension is only the *minimum* amount of delay. Specifically, the bill requires only that compliance deadlines not be *earlier* than 5 years after the effective date of the standards. This means compliance deadlines could be set 10, 15, or even 20 years after the effective date of the regulations, drastically exceeding the current Clean Air Act's outside compliance deadline of 3 years.

Section 3(a)(2) requires the Administrator to take into consideration a list of additional factors in setting the extended compliance deadlines. This reflects a list of factors that the federal appellate court for the D.C. Circuit ruled in 2001 may *not* be considered in setting emissions standards for toxic air pollution under the Clean Air Act.⁷ H.R. 2250 thus overturns court precedent to authorize indefinitely delayed standards based on factors that courts have ruled to be unlawful in setting toxic air pollution standards.

Section 4: These provisions overturn a 2007 D.C. Circuit court decision and adopt a definition of “solid waste” that has the practical effect of exempting virtually all toxic waste-burning facilities from the protective standards that apply to incinerators under the Clean Air Act.⁸ The bill defines “solid waste incineration unit” to exclude any unit that recovers energy from burning waste and has the effect of exempting thousands of these facilities from any meaningful obligation to control or measure their toxic air emissions.

Analysis: The D.C. Circuit court forcefully rejected the very same definition of solid waste that H.R. 2250 sec. 4(1) seeks to adopt.⁹ The court held that the definition was “inconsistent with the plain language” of the Clean Air Act and sent the rule back to EPA to follow the law. Section 4 of H.R. 2250 has the effect of rewriting section 129 of the Clean Air

⁷ *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 (D.C. Cir. 2001).

⁸ *NRDC v. EPA*, 489 F. 3d 1250 (D.C. Cir. 2007).

⁹ *Id.*

Act, an important section that courts already have found to be unambiguously clear, and that requires EPA to set protective incinerator standards for any unit that burns any solid waste. From a practical standpoint, section 4 of the bill has enormous implications. The definition dictated by this section would make it legal for industrial facilities in communities across America to burn numerous toxic materials for energy without controlling, monitoring or reporting the pollution that results. This would allow facilities to burn things like used chemicals and solvents and plastic for energy without cleaning up or reporting the toxic air pollution. Burning these same materials as trash would require pollution controls. There is no coherent explanation to the American people why they should be compelled to breathe uncontrolled emissions of carcinogens and neurotoxins from smokestacks that are recovering energy from that combustion process, while facilities that recognize these identical substances to be toxic waste combusted with no energy recovery must control those emissions.

Section 5: These provisions turn the current Clean Air Act's safeguards for toxic air pollution from these facilities on their head. The bill would replace emissions standards based upon the best performing boilers and incinerators with toxic air pollution practices dictated by the lowest common denominator of industrial polluters. Most troubling, the bill entirely repeals Maximum Achievable Control Technology standards ("MACT" standards) as applied to these facilities. MACT standards are the cornerstone of the Clean Air Act's toxic air pollution provisions, and the bill would entirely exempt industrial boilers and incinerators from having to meet these standards.

Analysis: A long line of D.C. Circuit cases has soundly rejected the weaker pollution approach put forth in the legislation.¹⁰ The court repeatedly has affirmed that the Clean Air Act

¹⁰ See, e.g., *Sierra Club v. EPA*, 479 F.3d 875 (D.C. Cir. 2007).

requires toxic air pollution standards to be “based on the emission level actually achieved by the best performers (those with the lowest emission levels).” In sharp contrast, section 5(a) of the bill would weaken the Clean Air Act by compelling EPA to set pollution standards based on the emissions of the dirtiest boilers in operation. The court expressly held that identifying the “worst-performing source” and setting the standards “at the emission level of that source” was an “impermissible reading of the statute’s unambiguous language.”¹¹

Industry representatives have decried the longstanding practice of achieving maximum reductions in hazardous air pollutants on a “pollutant-by-pollutant” basis, rather than some other vague aggregate basis that these representatives never fully describe or reconcile with the statute. It is important to recognize that EPA *always* has set Maximum Achievable Control Technology standards on this very same pollutant-by-pollutant basis for the over one hundred MACT standards it has set, under each administration since adoption of the 1990 amendments. Despite filing an unsuccessful lawsuit over this practice only recently, industry groups have *never* managed to identify a single MACT standard that has been based upon industry’s incoherent and unprotective approach. Finally, *no* court decision has ever sided with industry or ruled that the statute compels, or even allows, this approach.

The plain language and structure of Clean Air Act sections 112 and 129 require EPA to set not one lowest common denominator standard for all hazardous air pollutants, but individual numeric emission standards for specific pollutants. CAA §112; §129. For example, section 129(a)(4) requires EPA to set not one “MACT standard,” but individual numeric emission standards for specific pollutants. 42 U.S.C. § 7429(a)(4). Section 129(a)(2) provides that these standards must meet specific stringency requirements. 42 U.S.C. § 7429(a)(2). Together, these sections require EPA to set an individual standard for each pollutant that requires the maximum

¹¹ *Id.*

“achievable” degree of reduction. Thus, EPA must calculate a floor for each pollutant reflecting the emission level that the relevant best sources actually “achieved.”

Since 1997, the courts have consistently repeated that EPA must set section 112 MACT emission standards based on the best-performing source for *each* pollutant. *See, e.g., Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 at 858 (D.C. Cir. 2001)(“[T]he Agency first sets emission floors for each pollutant and source category....”). Further, industry critics of EPA’s pollutant-by-pollutant approach cannot cite to a single case or decision that did not follow EPA’s pollutant-by-pollutant approach to sections 112 or 129. In fact, of the over 100 MACT standards for myriad other industrial categories that have been promulgated to date, industry’s preferred substitute approach has never been used.

Industry groups would argue that MACT floors should be set based on plants that are “best” with respect to *all* pollutants at one time. This would have the illogical and unprotective result of basing emissions limitations on a source that is not the best-performing source for *any* single covered pollutant. This would mean that for some pollutants, emissions standards would be set based on the *worst*-performing unit, rather than the *best*-performing unit, as compelled by the statute. Industry has conceded in legal briefs that their “single plant” approach would mean that the best performers for some pollutants are the worst performers for others. The practical impact of this industry-preferred standard would be disastrous to public health. As such, EPA has never adopted this approach, under Republican or Democratic administration. The plain language of the Clean Air Act compels EPA’s pollutant-by-pollutant approach, and industry’s contorted arguments that have not succeeded in court or appeals to different administrations should not be embraced by Congress to produce dramatically weaker emissions standards. The pollutant-by-pollutant approach used by EPA in over one hundred MACT standards to date has

achieved meaningful reductions in toxic air pollution, and we should support EPA in protecting the American public while achieving these enormous reductions.

Perhaps the most radical provision of all of H.R. 2250 is found in Section 5(b), which mandates that EPA set “the least burdensome” standard, “including work practice standards,” when setting toxic air pollution standards for industrial boilers and incinerators. This means least burdensome to polluters and most burdensome to people. Work practice standards, by their very definition, run counter to mandated emissions standards required by §112(d) of the Clean Air Act. Work practice standards, found in §112(h), are to be promulgated expressly when “it is *not feasible*” for the Administrator to promulgate emissions standards under §112(d) of the Act that *actually reduce emissions*. In such a case mere work practice standards may be issued “in lieu of” these standards. §112(h)(emphasis added). This sleight-of-hand substitution of the most protective standard for reducing toxic air pollution with the least protective measure mentioned in the law represents gross over-reaching. It is not defensible public policy. This single provision of H.R. 2250 would have the effect of exempting industrial boilers and incinerators from maximum reductions in toxic air pollution emissions, in contrast to almost every other major industrial source of toxic air pollution in the nation. This section also eviscerates the existing Clean Air Act section §112(h) itself, in that it would eliminate the requisite finding of infeasibility mandated by the section before EPA may resort to ineffectual work practice standards. These changes would radically distort the Clean Air Act’s twenty-year approach to controlling toxic air pollution and would have enormous health impacts.

H.R. 2681 Indefinitely Delays Toxic Air Pollution Safeguards for Cement Plants, and Repeals Critical Clean Air Act Provisions

H.R. 2681 indefinitely delays clean-up of toxic air pollution from cement plants and gives cement plants a free pass from controlling emissions that lead to the creation of smog and

soot pollution. According to EPA, Portland cement manufacturing is the third-largest source of mercury air emissions in the U.S.¹² Toxic air pollution standards for cement plants went into effect in September 2010.¹³ These standards are already 13 years overdue, and H.R. 2681 would further delay standards by a minimum of 4.5 years, while eliminating any deadline for EPA to act and setting the stage for *indefinite* delay.

Just as H.R. 2250 would give incinerators and industrial boilers a free pass from cleaning up their toxic air pollution, this bill purports to give EPA “more time” to complete standards for cement plants, ignoring the fact that EPA already has completed standards for these facilities. The bill also distorts the Clean Air Act by basing toxic air pollution standards for cement plants on the dirtiest plants, rather than the cleanest currently in operation, and weakens the law to allow indefinite delay of these fundamentally weakened standards.

Toxic air pollution standards for cement plants are already 13 years overdue. H.R. 2681 further delays these already adopted standards by *a minimum of 4.5 years*. Blocking these standards would result in the following harms *every year* they are delayed:

- up to 2,500 premature deaths;
- 1,500 heart attacks;
- 1,500 emergency room visits; and
- over 100,000 missed work days.¹⁴
- The standards are also expected to reduce the amount of mercury that deposits on land and water by as much as 30% in some areas of the country, especially in those areas located nearest to cement kilns.

EPA has found that the benefits of these health standards will be as high as \$18 billion annually starting in 2013, with benefits significantly outweighing the costs by a margin of up to 19:1.

¹² See Fact Sheet, Portland Cement *available at* http://www.epa.gov/ttn/atw/pcem/pcem_fs_080910.pdf

¹³ See generally

<http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/ef62ba1cb3c8079b8525777a005af9a5!OpenDocument>

¹⁴ See *supra*, Fact Sheet, Portland Cement

Moreover, EPA analyzed various studies and concluded the standards could create up to 1,300 jobs.

H.R. 2681 – Section – by – Section Analysis

Section 2: Within Section 2 alone, H.R. 2681 has the immediate effect of setting toxic air pollution standards for cement plants back by at least two years.

Analysis: First, Section 2(a) requires EPA to re-propose both already finalized toxic air pollution standards (MACT standards) and already finalized New Source Performance Standards (“NSPS”) for Portland cement plants at least 15 months after the bill is enacted. Further, the section requires that the Administrator specify what constitutes non-hazardous or hazardous waste as applied to this sector on the same open-ended timeline.

In addition to this delay, section 2(b) blocks EPA’s already-finalized MACT standards and NSPS for Portland cement plants. Since these rules went into effect a year ago, this provision has the effect of immediately building in an over two year delay at the very outset of the bill. Section 2(b) also stays NSPS for Commercial and Industrial Solid Waste Incineration Units, and, like H.R. 2250, also targets and blocks EPA’s recently finalized definition of non-hazardous solid waste.

Again, like H.R. 2250, this provision causes a minimum two-year delay, but in actual fact sets the stage for indefinite delay by allowing standards for these facilities to be set *at least 27* months after EPA’s September 2010 final standards, or “on such later date as may be determined by the Administrator.” As such, H.R. 2681 also deletes any statutory deadline for EPA ever to re-promulgate standards. For longstanding, mandatory deadlines, the legislation substitutes a mere instruction that EPA may finalize future standards “on such later date as may be determined by the Administrator.” The puts critical safeguards against toxic air pollution for all

Americans at the whim of political winds in future administrations, something Congress never has previously allowed.

Sections 3, 4, and 5: These sections are substantively identical to H.R. 2250's, the implications of which are described at length above in the section-by-section analysis to that bill.

Analysis: As applied to Portland cement plants, these provisions rewrite and weaken the Clean Air Act to extend industry compliance periods from 3 to 5 years, overturn D.C. Circuit legal precedents, and eliminate the requirement that cement plants achieve longstanding requirements for maximum reductions in toxic air pollution. Taken together, these provisions would create an oversized loophole exempting cement plants from almost all requirements to control their toxic air pollution. Cement plants, like industrial boilers, are some of the nation's largest industrial sources of toxic air pollution such as cancer-causing dioxins, acid gases, and mercury. Exempting this industrial group from meaningful toxic air pollution standards will have enormous and deadly consequences to the American public.

In particular, Section 5(b) of the bill is particularly destructive. Like H.R. 2250, this section mandates that EPA set "the least burdensome" standard, "including work practice standards," when setting toxic air pollution standards for cement plants. This means least burdensome to polluters and most burdensome to people. Work practice standards, by their very definition, run counter to mandated emissions standards required by §112(d) of the Clean Air Act. Work practice standards, found in §112(h), are to be promulgated expressly when "it is *not feasible*" for the Administrator to promulgate emissions standards under §112(d) of the Act that *actually reduce emissions*. In such a case mere work practice standards may be issued "in lieu of" these standards. §112(h)(emphasis added). This sleight-of-hand substitution of the most

protective standard for reducing toxic air pollution with the least protective measure mentioned in the law represents gross over-reaching. It is not defensible public policy.

This single provision of H.R. 2681 would have the effect of exempting industrial boilers and incinerators from maximum reductions in toxic air pollution emissions, in contrast to almost every other major industrial source of toxic air pollution in the nation. This section even eviscerates the existing Clean Air Act section §112(h) itself, in that it would eliminate the requisite finding of infeasibility mandated by the section before EPA may resort to ineffectual work practice standards. These changes would radically distort the Clean Air Act's twenty-year approach to controlling toxic air pollution and would have enormous health impacts.

EPA first issued standards for the Portland cement industry in 1999. The Court of Appeals for the D.C. Circuit struck down portions of these standards in 2000, and remanded these illegal portions back to the agency. EPA amended parts of those standards in 2006, but intervening D.C. Circuit court decisions made clear those 2006 standards were unlawful as well. Not until September of 2010, after taking those court decisions into account, did the Agency finalize amended standards for the industry. Should EPA proceed with its finalized standards, existing Portland cement plants will not have to come into compliance until 2013, at which point the industry will have had almost *15 years* of notice that EPA was proceeding with toxic air pollution standards for cement plants, to say nothing of the congressional mandate to regulate toxic pollution first adopted in the 1990 Clean Air Act.

Health Impacts

Health impacts of mercury

Mercury is a highly neurotoxic contaminant that is pervasive throughout watersheds where it accumulates in fish, other wildlife, and ultimately in humans.¹⁵ Mercury contamination of fish stocks is widespread in the United States, with nearly every state (48 out of 50) posting health advisories for mercury in fish.¹⁶ A recent study of mercury levels in fish in streams across the United States found toxic methyl-mercury levels exceeding the level for human health concern at nearly 30% of the sites sampled.¹⁷ For example, there are 1,039 advisories for mercury contamination in fish in Minnesota alone; 120 advisories for mercury contamination in Michigan waterways; 113 such advisories in Ohio; and 11 in Kentucky.¹⁸

Newly deposited mercury has been shown to be more bioavailable and more rapidly converted to methylmercury and represents a greater fraction of the methylmercury that is incorporated into food chains and ultimately fish.¹⁹ Local sources have been implicated in elevated levels of mercury measured in ambient air,²⁰ precipitation,²¹ soils,²² and methylmercury

¹⁵ US EPA 2009. Human Exposure to Methylmercury. <http://www.epa.gov/mercury/exposure.htm>.

¹⁶ USGS. 2009. Recent findings from the National Water-Quality Assessment (NAWQA) and Toxic Substances Hydrology Programs (as presented to the NAWQA National Liaison Committee, August 21, 2009). US EPA 2007. National Listing of Fish Advisories Technical Fact Sheet: 2005/06 National Listing Fact Sheet; EPA-823-F-07-003; July 2007.

US Department of Health and Human Services and Environmental Protection Agency. 2009. What You Need to Know About Mercury in Fish and Shellfish. Available at <http://www.fda.gov/Food/FoodSafety/Product-SpecificInformation/Seafood/FoodbornePathogensContaminants/Methylmercury/ucm115662.htm>.

¹⁷ USGS. 2009. Mercury in Fish, Bed Sediment, and Water from Streams Across the United States, 1998-2005.

http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/advisories_index.cfm.

¹⁸ USGS. 2009. Mercury in Fish, Bed Sediment, and Water from Streams Across the United States, 1998-2005. Hintelmann H, Harris R, Heyes A, Hurley JP, Kelly CA, Krabbenhoft DP, et al. Reactivity and mobility of new and old mercury deposition in a boreal forest ecosystem during the first year of the METAALICUS study. *Environ. Sci. Technol.* 36(23):5034-40, 2002.

²⁰ Manolopoulos H, Snyder DC, Schauer JJ, Hill JS, Turner JT, Olson ML, et al. Sources of speciated atmospheric mercury at a residential neighborhood impacted by industrial sources. *Environ. Sci. Technol.* 41(16):5626-33, 2007.

²¹ Dvonch JT, Graney JR, Keeler GJ, Stevens RK. Use of elemental tracers to source apportion mercury in south Florida precipitation. *Environ. Sci. Technol.* 33(24):4522-27, 1999.

White EM, Keeler GJ, Landis MS. Spatial variability of mercury wet deposition in eastern Ohio: summertime meteorological case study analysis of local source influences. *Environ. Sci. Technol.* 43(13):4946-53, 2009.

levels in biota including fish.²³ Reductions in local mercury emissions levels have been tied to decreasing levels measured in the environment and biota.²⁴

Therefore, in order to achieve the National Academy of Sciences public health goal to reduce mercury concentration in fish,²⁵ current mercury emissions must be ratcheted down to decrease the amount of mercury cycling through aquatic systems and reduce contamination of fish and people. Industrial boilers and cement plants contribute large percentages of all the mercury air emissions in the United States.

A significant fraction of the U.S. population already has elevated levels of mercury in their bodies, with an estimated 8% of women having mercury levels considered unsafe.²⁶ Further, *more than 300,000 newborns each year in the U.S. may have been over-exposed to mercury in utero, increasing their risk of neuro-developmental effects.*²⁷ Asians, Pacific Islanders, and Native Americans are all more likely to have elevated blood mercury levels, as are women living in the Northeast and other coastal areas, or consuming a lot of fish.²⁸ Researchers have estimated that in the U.S. methyl mercury toxicity is associated with between 115 and 2,675 excess cases per year of a level of cognitive impairment that would be considered mental

²² Biester H, Müller G, Schöler HF. Estimating distribution and retention of mercury in three different soils contaminated by emissions from chlor-alkali plants: part I. *Sci. of the Tot. Environ.* 284:177-89, 2002.

²³ Evers DC, Han Y, Driscoll CT, Kamman NC, Goodale MW, Lambert KT, et al. Biological mercury hotspots in the northeastern United States and southwestern Canada. *Biosci.* 57(1):29-43, 2007.

²⁴ Frederick PC, Hylton B, Heath JA, Spalding MA. A historical records of mercury contamination in southern Florida (USA) as inferred from avian feather tissue. *Environ. Toxicol. and Chem.* 23(6):1474-78, 2004. Driscoll CT, Han Y, Chen CY, Evers DC, Lambert KF, Holsen TM, et al. Mercury contamination in forest and freshwater ecosystems in the northeastern United States. *Biosci.* 57(1):17-28, 2007. USGS. 2009. Mercury in Fish, Bed Sediment, and Water from Streams Across the United States, 1998-2005.

²⁵ National Research Council. 2000, *Toxicological Effects of Methylmercury.* National Academy Press. Washington DC.

²⁶ Schober SE, Sinks TH, Jones RL, Bolger PM, McDowell M, Osterloh J, et al. Blood mercury levels in US children and women of childbearing age, 1999-2000. *JAMA.* 289(13):1667-74, 2003.

²⁷ Mahaffey KR, Clickner RP, Bodurow CC. Blood organic mercury and dietary mercury intake: National Health and Nutrition Examination Survey, 1999 and 2000. *Environ Health Perspect.* 112(5):562-70, 2004.

²⁸ Hightower JM, O'Hare A, Hernandez GT. Blood mercury reporting in NHANES: identifying Asian, Pacific Islander, Native American, and multiracial groups. *Environ Health Perspect.* 114(2):173-5, 2006. Mahaffey KR, Clickner RP, Jeffries RA. Adult women's blood mercury concentrations vary regionally in the United States: association with patterns of fish consumption (NHANES 1999-2004). *Environ. Health Perspect.* 117(1):47-53, 2009.

retardation.²⁹ The cost of caring for these children has been estimated at between \$28 million and \$3.3 billion, a cost the researchers point out is accrued annually until mercury emissions are reduced.³⁰

Methyl-mercury readily crosses the placenta and the blood brain barrier and is known to be neurotoxic, especially to the developing brain.³¹ Several very large studies have shown solid associations between intrauterine methylmercury exposure and impaired neurobehavioral performance.³² Neurological effects in children can also occur from early life exposures to mercury at low doses resulting in diminished visual recognition memory (VRM)³³ and other neurological impairments such as decreased visual motor development and receptive vocabulary.³⁴ Postnatal mercury exposure is also associated with ADHD as well as impacts to motor functions and IQ.³⁵ Some neurobehavioral deficits related to mercury exposure may take many years to manifest.³⁶

²⁹ Trasande, Leonardo, Schecter, Clyde, Haynes, Karla A., and Landrigan Phillip. Mental Retardation and Prenatal Methylmercury Toxicity. 2006 *Am Journal of Industrial Medicine*. 49:153-158.

³⁰ Trasande, Leonardo, Schecter, Clyde, Haynes, Karla A., and Landrigan Phillip. 2006. Applying Cost Analyses to Drive Policy that Protects Children Mercury as a Case Study. *Ann. N.Y. Acad.Sci.* 1076:911-923.

³¹ Myers GJ, Davidson PW. Prenatal mercury exposure and children: Neurologic, developmental, and behavioral research. *Environ Health Perspect* 106(Suppl 3): 841-847, 1998.

³² Grandjean P, White RF, Weihe P, Jorgensen PJ. Neurotoxic risk caused by stable and variable exposure to methylmercury from seafood. *Ambul Pediatr*. 3(1):18-23, 2003.

Debes F, Budtz-Jørgensen E, Weihe P, White RF, Grandjean P. Impact of prenatal methylmercury exposure on neurobehavioral function at age 14 years. *Neurotoxicol Teratol*. 28(5):536-47, 2006.

³³ Oken E, Wright RO, Kleinman KP, Bellinger D, Amarasiriwardena CJ, Hu H, Rich-Edwards JW, Gillman MW. Maternal fish consumption, hair mercury, and infant cognition in a U.S. Cohort. *Environ Health Perspect*. 113(10):1376-80, 2005.

³⁴ Oken E, Radesky JS, Wright RO, Bellinger DC, Amarasiriwardena CJ, Kleinman KP, Hu H, Gillman MW. Maternal fish intake during pregnancy, blood mercury levels, and child cognition at age 3 years in a US cohort. *Am J Epidemiol*. 167(10):1171-81, 2008.

Davidson PW, Myers GJ, Weiss B. Mercury exposure and child development outcomes. *Pediatrics*. 113(4 Suppl):1023-9, 2004. Oken E, Bellinger DC. Fish consumption, methylmercury and child neurodevelopment. *Curr Opin Pediatr*. 20(2):178-83, 2008.

³⁵ Myers GJ, Thurston SW, Pearson AT, Davidson PW, Cox C, Shamlaye CF, Cernichiari E, Clarkson TW. Postnatal exposure to methyl mercury from fish consumption: a review and new data from the Seychelles Child Development Study. *Neurotoxicol*. 30(3):338-49, 2009.

³⁶ Yoshida M, Shimizu N, Suzuki M, Watanabe C, Satoh M, Mori K, Yasutake A. Emergence of delayed methylmercury toxicity after perinatal exposure in metallothionein-null and wild-type C57BL mice. *Environ Health Perspect*. 116(6):746-51, 2008.

Recent research has revealed that elevated levels of mercury in adults can trigger neurological deficits impacting fine motor speed, dexterity, concentration, verbal learning, and memory.³⁷ Cardiovascular effects have also been reported in adults at environmentally-relevant exposure levels, indicating increased risks of myocardial infarction (e.g. heart attacks), increased blood pressure, and thickening of the carotid artery (a measurement of atherosclerosis) associated with elevated mercury levels.³⁸

Health impacts of other toxic heavy metals³⁹

Clean up standards for boilers and cement plants not only would make substantial reductions in mercury pollution, but also reduce other toxic heavy metals, including antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel and selenium. Due to the low volatility of these metals, the majority of emissions occur as particles. The public is exposed through direct inhalation of metal containing particles and soil contamination resulting from aerial deposition of metals.

Hexavalent chromium, for example, is a known human carcinogen, primarily affecting the lungs, but tumors in the stomach and intestinal tract have also been reported.⁴⁰ Exposure to hexavalent chromium is also associated with respiratory effects (e.g., nasal and lung irritation,

³⁷ Yokoo EM, Valente JG, Grattan L, Schmidt SL, Platt I, Silbergeld EK. Low level methylmercury exposure affects neuropsychological function in adults. *Environ Health*. 2(1):8, 2003.

³⁸ Guallar E, Sanz-Gallardo MI, van't Veer P, Bode P, Aro A, Gomez-Aracena J, et al. Mercury, fish oils, and the risk of myocardial infarction. *N Engl J Med*. 347(22):1747-54, 2002.

Salonen JT, Seppanen K, Nyyssonen K, Korpela H, Kauhanen J, Kantola M, et al. Intake of mercury from fish, lipid peroxidation, and the risk of myocardial infarction and coronary, cardiovascular, and any death in eastern Finnish men. *Circulation* 91(3):645-55, 1995.

Choi AL, Weihe P, Budtz-Jørgensen E, Jørgensen PJ, Salonen JT, Tuomainen TP, Murata K, Nielsen HP, Petersen MS, Askham J, Grandjean P. Methylmercury exposure and adverse cardiovascular effects in Faroese whaling men. *Environ. Health Perspect*. 117(3):367-72, 2009.

Jacob-Ferreira AL, Passos CJ, Jordão AA, Fillion M, Mergler D, Lemire M, Gerlach RF, Barbosa Jr F, Tanus-Santos JE. Mercury Exposure Increases Circulating Net Matrix Metalloproteinase (MMP)-2 and MMP-9 Activities. *Basic Clin. Pharmacol. Toxicol*. 1-8, 2009 [Epub ahead of print] PMID: 19594729.

³⁹ 70 Fed. Reg. 59402, 59406-08 (Oct. 12, 2005), Agency for toxic substances and Disease Registry, Public Health Statements, <http://www.atsdr.cdc.gov/>.

⁴⁰ US DHHS, ATSDR. 2008. Draft Toxicological Profile For Chromium.

altered pulmonary function), gastrointestinal effects (*e.g.*, irritation, ulceration and non-neoplastic lesions of the stomach and small intestine), hematological effects (*e.g.*, microcytic, hypochromic anemia), and reproductive effects (*e.g.*, effects on male reproductive organs, including decreased sperm count and histopathological change to the epididymis). Bronchitis, decreases in pulmonary function, pneumonia, and other respiratory effects have been noted from chronic high dose exposure of hexavalent chromium in occupational settings. Hexavalent chromium inhalation exposure may be associated with complications during pregnancy and childbirth.

Another notoriously toxic heavy metal, lead, exerts “a broad array of deleterious effects on multiple organ systems via widely diverse mechanisms of action,” including effects on heme biosynthesis and related functions; neurological development and function; reproduction and physical development; kidney function; cardiovascular function; and immune function.⁴¹ In particular, lead is associated with neurological, hematological, and immune effects on children, and hematological, cardiovascular and renal effects on adults. Children are particularly sensitive to the effects of lead. Functional manifestations of lead neurotoxicity during childhood include sensory, motor, cognitive and behavioral impacts. Cognitive effects of special concern include decrements in IQ scores and academic achievement, as well as attention deficit problems. Children in poverty and black, non-Hispanic children face higher exposures to lead and are consequently more susceptible to lead’s health impacts. Reproductive effects, such as decreased sperm count in men and spontaneous abortions in women, have been associated with lead exposure. There is also some evidence of lead carcinogenicity, primarily from animal studies, together with limited human evidence of suggestive associations. EPA has classified lead as a probable human carcinogen.

⁴¹ National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66964, 66975-76 (Nov. 12, 2008).

Health impacts of acid gases⁴²

Hydrogen chloride (HCl) is irritating and corrosive to any tissue it contacts. Brief exposure to low levels causes throat irritation. Long-term exposure to low levels can cause respiratory problems, eye and skin irritation, and discoloration of the teeth. Exposure to higher levels can result in rapid breathing, narrowing of the bronchioles, blue coloring of the skin, severe burns of the eyes and skin, accumulation of fluid in the lungs, and even death. Some people may develop reactive airways dysfunction syndrome (RADS), a type of asthma caused by some irritating or corrosive substances. Children may be more vulnerable than adults to corrosive agents, such as HCl, because of their relatively narrower airways, relatively greater exposure due to greater breathing volume per pound of body weight and relatively longer potential exposure durations. Hydrogen fluoride or Hydrofluoric acid (HF) is a serious systemic poison that is highly corrosive; exposure to it can be fatal.

Health impacts of organic chemicals⁴³

Organic compounds emitted by coal boilers include but are not limited to acetaldehyde, benzene, formaldehyde, dioxin and furan, polycyclic aromatic hydrocarbons (PAHs), toluene, and xylenes. Each of these organic compounds is associated with a range of potential health effects. Several of the health effects from short-term inhalation exposure to these pollutants are similar: they include irritation of the eyes, skin, and respiratory tract in humans; central nervous system effects (e.g., drowsiness, dizziness, headaches, depression, nausea, irregular heartbeat); reproductive and developmental effects; and, neurological effects. Exposure to benzene at extremely high concentrations may lead to respiratory paralysis, coma, or death. Long-term

⁴² Agency of Toxic Substances and Disease Registry, ToxFAQs, <http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=759&tid=147>, ATSDR, Medical Management Guidelines for Hydrogen Fluoride, <http://www.atsdr.cdc.gov/MMG/MMG.asp?id=1142&tid=250>

⁴³ ATSDR, Public Health Statements, <http://www.atsdr.cdc.gov/>.

inhalation exposure in humans produces health effects that range from mild to serious. Mild symptoms may include nausea, headache, weakness, insomnia, intestinal pain, and burning eyes. Long-term exposure also has effects on the central nervous system, can be toxic to the immune system, and can produce disorders of the blood, lead to reproductive disorders in women (*e.g.*, increased risk of spontaneous abortion), and is associated with developmental effects, gastrointestinal irritation, liver injury, and muscular effects. In addition, some of the organic HAPs are either known human carcinogens, such as benzene, or probable carcinogens, such as formaldehyde and dioxins.

Polycyclic aromatic hydrocarbons (PAHs) are known human mutagens, carcinogens, and/or developmental toxicants.⁴⁴ Infants and children are *especially* sensitive and susceptible to the hazards of PAHs. Greater lifetime cancer risks result from early exposure to carcinogens (*i.e.*, at a young age), and many carcinogens can have a long latency period. These substances are known to cross the placenta to harm the unborn fetus; in addition to contributing to fetal mortality they have been shown to increase the cancer risk, and produce tumors as well as birth defects in offspring.⁴⁵ There is also evidence that exposure of children to PAHs at ambient levels in polluted areas can adversely affect IQ.⁴⁶ Further evidence suggests that prenatal exposure to PAHs may be a risk factor for the early development of asthma-related symptoms and can adversely affect children's cognitive development, with implications for diminished

⁴⁴ Salmon A.G. and Meehan T. Potential Impact of Environmental Exposures to Polycyclic Organic Material (POM) on Children's Health, California Office of Environmental Health Hazard Assessment (OEHHA). http://www.oehha.ca.gov/public_info/public/kids/pdf/PAHs%20on%20Children's%20Health.pdf
Agency for Toxic Substances and Disease Registry, Public Health Statement for Polycyclic Aromatic Hydrocarbons (PAHs). August 1995. <http://www.atsdr.cdc.gov/PHS/PHS.asp?id=120&tid=25>

⁴⁵ Perera FP. DNA Damage from Polycyclic Aromatic Hydrocarbons Measured by Benzo[a]pyrene-DNA Adducts in Mothers and Newborns from Northern Manhattan, The World Trade Center Area, Poland, and China, *Cancer Epidemiol Biomarkers Prev* 2005;14(3):709–14.

⁴⁶ Perera, FP et. al. Prenatal Airborne Polycyclic Aromatic Hydrocarbon Exposure and Child IQ at Age 5 Years. *Pediatrics* 2009;124:e195–e202.

school performance.⁴⁷ Thus the adverse health impacts of PAH exposure to infants and children are significantly greater.

Health impacts of particulate matter

In addition to the toxic constituents and associated health impacts above, these sources constitute a major public health hazard through fine particulate matter (PM) emissions. Numerous studies have documented a wide range of adverse health impacts from exposure to fine particulate matter, including increased risk for cardiovascular disease such as atherosclerosis, increased heart attacks, increased respiratory illness, increased emergency room visits for acute health events, birth defects, low birth weights, premature births, and increased rates of death.⁴⁸

The Clean Air Act Works and Enjoys Overwhelming Public Support

The Clean Air Act is one of our country's most successful public health and environmental laws in the past 40 years marking the modern environmental era. The EPA

⁴⁷ Perera FP, Rauh V, Tsai WY, Kinney P, Camann D, et al. (2003) Effects of transplacental exposure to environmental pollutants on birth outcomes in a multiethnic population. *Environ Health Perspect* 111: 201–205. Perera FP et. al., Effect of Prenatal Exposure to Airborne Polycyclic Aromatic Hydrocarbons on Neurodevelopment in the First 3 Years of Life among Inner-City Children, *Environ Health Perspect* 114:1287–1292 (2006).

⁴⁸ Kuenzli N, Jerrett M, Mack WJ, Beckerman B, LaBree L, Gilliland F, Thomas D, Hodis HN. “Ambient Air Pollution and Atherosclerosis in Los Angeles,” *Environ Health Perspect*, 2005 Feb:113(2):201-6. Miller KA, Siscovick DS, Sheppard L, Shepherd K, Sullivan JH, Anderson GL, Kaufman JD. “Long-term Exposure to Air Pollution and Incidence of Cardiovascular Events in Women.” *N Engl J Med*, 2007 Feb 1:356(5):447-58. Hoffman B, Moebus S, Mohlenkamp S, Stang A, Lehman N, Dragano D, Schermund A, Memmesheimer M, Mann K, Erbel R, Jockel K-H. “Residential Exposure to Traffic Is Associated With Coronary Atherosclerosis.” *Circulation*, published online July 16, 2007, DOI:10.1161 / CIRCULATIONAHA.107693622.

Pope CA, Muhlestein JB, May HT, Renlund DG, Anderson JL, Horne BD. “Ischemic Heart Disease Events Triggered by Short-term Exposure to Fine Particulate Air Pollution.” *Circulation* 2006 Dec 5;114(23):2443-8. Schwartz J, Slater D, Larson TV, Person WE, Koenig JQ. “Particulate Air Pollution and Hospital Emergency Room Visits for Asthma in Seattle.” *Am Rev Respir Dis*, 1993 Apr; 147(4):826-31. Ritz B, Wilhelm M, Zhao Y. “Air Pollution and Infant Death in Southern California, 1989–2000.” *Pediatrics*, 2000 Aug:118(2):493-502. Wilhelm M, Ritz B. “Residential Proximity to Traffic and Adverse Birth Outcomes in Los Angeles County, California, 1994–1996.” *Environ Health Perspect*, 2003 Feb; 111(2):207-16. Wilhelm M, Ritz B. “Local Variations in CO and Particulate Air Pollution and Adverse Birth outcomes in Los Angeles County, California, USA.” *Environ Health Perspect*, 2005 Sep:113(9):1212-21.

Jerrett M, Burnett RT, Ma R, Pope CA, Krewski D, Newbold KB, Thurston G, Shi Y, Finkelstein N, Calle EE, Thun MJ. “Spatial Analysis of Air Pollution and Mortality in Los Angeles.” *Epidemiology*, 2005 Nov:16(6):727-36.

recently released a report on the health and economic health benefits of the 1990 Clean Air Act amendments, assessed from 1990 to 2020.⁴⁹ The agency found that the Clean Air Act has saved over 160,000 lives every year by the year 2010, and the law will save over 230,000 lives every year by the year 2020.

NRDC analyzed the EPA report beyond the two target years of 2010 and 2020 in order to arrive at a cumulative assessment of the lives saved by the 1990 Clean Air Act Amendments by the year 2020. As summarized by my colleague, Christina Angelides:

NRDC’s own analysis of EPA’s report shows that the 1990 amendments will have cumulatively saved **4.2 million lives** and avoided millions of cases of pollution-related illness by 2020 — including **43.8 million cases of asthma exacerbation, 3.3 million heart attacks, 2.1 million hospital admissions and 2.2 million emergency room visits, and 313 million lost work days**. For comparative purposes, 4.2 million is about the population of the city of Los Angeles.

A more detailed break-down of the avoided healthy impacts is presented in the following table (the blue portion is from the EPA report, while the green reflects NRDC’s additional analysis)⁵⁰:

Avoided Health Impacts (PM2.5 & Ozone Only)*	Pollutants*	Year 2000*	Year 2010*	Year 2020*	Estimated Cumulative Benefits 1990-2020 (NRDC)**
PM 2.5 Adult Mortality	PM	110,000	160,000	230,000	4,105,000
PM 2.5 Infant Mortality	PM	160	230	280	5,645
Ozone Mortality	Ozone	1,400	4,300	7,100	96,700
Chronic Bronchitis	PM	34,000	54,000	75,000	1,333,500
Acute Bronchitis	PM	96,000	130,000	180,000	3,377,000
Non-Fatal Myocardial Infarction	PM	79,000	130,000	200,000	3,301,000
Asthma Exacerbation	PM	1,200,000	1,700,000	2,400,000	43,750,000
Hospital Admissions	PM, Ozone	46,000	86,000	135,000	2,111,500
Emergency Room Visits	PM, Ozone	58,000	86,000	120,000	2,173,000
Restricted Activity Days	PM, Ozone	49,000,000	84,000,000	110,000,000	1,991,000,000
Lost School Days	Ozone	1,200,000	3,200,000	5,400,000	74,500,000
Lost Work Days	PM	8,000,000	13,000,000	17,000,000	313,000,000

*Data from Table 5-6, Environmental Protection Agency, The Benefits and Costs of the Clean Air Act: 1990 to 2020, February 2011, p.5-25.

**To estimate the cumulative life savings and health benefits of the 1990 amendments from 1990 to 2020, NRDC assumed a roughly linear growth rate to interpolate benefit estimates for each year from 1995--when EPA's Acid Rain Program Phase I began to secure the first benefits under the amendments--through 2010, and benefit estimates for each year from 2010 to 2020. These annual benefit estimates were then aggregated across the entire period.

⁴⁹ See generally <http://www.epa.gov/air/sect812/prospective2.html>.

⁵⁰ See generally http://switchboard.nrdc.org/blogs/cangelides/the_1990_clean_air_act_will_sa.html.

The Clean Air Act – and its toxic air pollution measures in particular – continue to enjoy tremendous support from the American people, as well as our nation’s health and medical professionals. A nationwide poll conducted by Public Policy Polling and released by the NRDC reports how registered voters feel about U.S. House Members’ actions to block public health safeguards.

- 66% of Americans – including 54% of Republicans and 61% of Independents – support “requiring stricter limits on the amount of toxic chemicals such as mercury, lead, and arsenic that coal power plants and other industrial facilities release.”
- 64% favor “requiring stricter limits on the amount of smog that vehicles and industrial facilities release.”

In a recent CNN poll conducted by the Opinion Research Corporation from April 9-10, 71% of adult Americans polled responded that the federal government should continue to provide funding to the EPA to enforce regulations on greenhouse gases and other environmental issues. This included 80% of respondents from the Midwest and 71% from the South.

Recent Congressional Attacks on Clean Air Safeguards Are Failing the Public

Today's hearing *follows* a vote in which a majority of the House approved an amendment to H.R. 1’s budget bill to block implementation and enforcement of the mercury and air toxics standards for cement plants. That blocking vote occurred despite no legislative hearings, no expert witnesses, no factual record, and fewer than 40 minutes of debate by nine members of Congress. Today’s hearing rightly will be seen by the American people as an after-the-fact trial for clean air protections that already have been convicted by a majority of the House of Representatives.

The American people deserve better. The cement vote on H.R.1 marked the first time in the forty-year history of the Clean Air Act that a majority of the House of Representatives had voted to block EPA from implementing and enforcing standards to sharply reduce mercury and other toxic air emissions from a polluting industry. That legislative rider was dropped from the final budget agreement following opposition from the Senate, White House and hundreds of health, medical and other organizations. H.R. 2681 is merely another incarnation of this deadly vote.

The American people deserve better than to see these political favors for polluting interests renewed and extended to multiple mercury and air toxics standards that save lives, stop mercury poisoning and protect the public.

The Myth of EPA as “Rogue” Agency

Some critics of EPA regulations – such as the mercury and air toxics standards for cement plants and boilers – have charged EPA with being a “rogue” agency. This overheated rhetorical indictment should be dismissed simply because it is leveled invariably when there is a disagreement over the agency’s legal or policy decisions. But to examine the charge more fully, it’s fair to say that it has been based upon two other claims that bear examination in the context of today’s hearing: (1) that EPA is acting outside the scope of statutory authority conferred by Congress; and (2) that EPA is acting precipitously and the current administration is regulating at a much higher regulatory pace than prior administrations. Both of these claims are false.

First, EPA has acted within plain statutory authority in adopting final mercury and air toxics standards for cement plants and industrial boilers. Section 112 of the Clean Air Act confers clear authority to adopt such MACT standards for all hazardous air pollutants from listed stationary source categories, including the two identified industrial categories. Indeed, the EPA

is following the instructions and legal precedents in a series of D.C. Circuit court decisions that overturned a string of Bush administration EPA rulemakings for violating the plain language of the Clean Air Act.⁵¹

Industry attorneys have yet to identify any instances in which EPA's recent final or proposed mercury and air toxics standards are similarly violating the plain language of the Act. I invite Committee members to examine whether any of the other witnesses for today's hearing make such demonstrations of EPA unlawfulness in their testimony. But even if industry representatives believe the final or proposed standards to be unlawful in some respect, they have the same legal recourse as the state attorneys general and public health and conservation groups that successfully challenged a host of unlawful Bush EPA rules: (1) to file administrative comments criticizing EPA's proposed standards; and (2) to file lawsuits challenging final standards. If the industry challenges are meritorious, the courts will remand the standards to EPA for correction in order to deliver on the statutory promise of clean air to the public. If the industry challenges lack merit, the American people will enjoy the benefits of standards with enormous public health and environmental benefits.

EPA critics also have attacked mercury and air toxics standards and similar health safeguards by arguing that the current administration is regulating at a much faster, heavier regulatory pace than prior administrations. For example, a November 22, 2010 editorial in the Wall Street Journal charged that the Obama EPA's regulatory output has outpaced the entire first term of the Clinton Administration implementing the just-enacted 1990 Clean Air Act Amendments. This charge and similar ones are demonstrably false.

EPA Administrator Lisa Jackson has already specifically refuted such charges in an October 14, 2010 letter to Congressmen Barton and Burgess:

⁵¹ See generally http://switchboard.nrdc.org/blogs/jwalke/out-of-control_criticism_of_ep.html.

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).

Indeed, as discussed above, even this slower regulatory pace under the current administration has been a function of re-proposing and re-issuing numerous air pollution standards by the prior administration that were found unlawful. Those earlier unlawful standards and illegal delays brought us to where we are today.