

Statement of Gina M. Solomon, M.D., M.P.H.
Senior Scientist
Natural Resources Defense Council

Associate Clinical Professor of Medicine
University of California, San Francisco

**Health Risks to Children and Communities
From Recent EPA Proposals and Decisions on Air and Water Quality**

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Introduction

Thank you for the opportunity to submit written testimony to this Committee. I am Gina Solomon, a physician and Senior Scientist at the Natural Resources Defense Council (NRDC) and an Associate Clinical Professor of Medicine at the University of California at San Francisco (UCSF). NRDC is a national, nonprofit, public interest organization dedicated to protecting human health and the environment. We have over 1.2 million members and online activists in all 50 states. I have subspecialty training and expertise in environmental medicine, and have done research, education, and advocacy for over a decade to protect children from lead poisoning, from contaminants in their food, air and drinking water, and from hazardous pesticides.

Almost every day I speak with people – both patients and members of the public – about their health and about risks to their health from environmental pollution. One of the most frequent questions I hear is: “What can I do to protect myself and my family from contaminants in the air, water, food, and in my community?” It’s often difficult to answer that question. Many hazards that can affect the health of children and families are not things that individuals can protect themselves from, even with advice from their physician. Contaminants in the air we breathe, or in the water used to make the coffee we drink are things that we have little control over as individuals. It is the responsibility of government agencies such as the Environmental Protection Agency (EPA) to assure that our air and water are safe for the most vulnerable among us, including pregnant women and children.

However, with a little information, people can sometimes take very effective action to protect their community. Physicians can also sometimes take action to warn vulnerable patients or monitor the community for health effects such as lead poisoning. The foundation for scientifically-based action is information. If there is information available about air pollution, local sources of toxic chemicals and contaminants in drinking water, people can learn about the problem and take action. If there are resources available in communities on the histories of individual facilities or on the health effects of various chemicals, people can learn and take action. If such data are available to agencies such as EPA, they also have what they need to take regulatory or enforcement action if needed.

Unfortunately, EPA is taking several major steps to eliminate information and decrease health protection from environmental hazards. Six recent draft or final EPA rules will each significantly limit critical information available to scientists, health care providers, communities, and ironically to EPA itself. As a result, children and communities will be left less protected and less able to protect themselves.

Eliminating the Air Quality Standard for Lead Would Put Children at Risk

The draft EPA Staff Paper reexamining the outdated National Ambient Air Quality Standard (NAAQS) for lead proposes no revisions of the standard – which was set nearly 30 years ago – and instead states that EPA “will evaluate the status of lead as a criteria air

pollutant in light of currently available information and assess whether revocation of the standard is an appropriate option for the Administrator to consider”¹

The news that EPA is considering revocation of the air quality standard for lead was a shock to scientists, children’s health advocates, and communities across the country. Lead is one of the best-studied poisons in the world today, and it has been clearly shown to impair children’s health in thousands of major scientific studies. Lead affects the brain by impairing neurological development, blunting IQ, and shortening children’s attention span.² It also affects the kidneys and the cardiovascular system. More recent studies have linked lead exposure to diseases as diverse as osteoporosis, cataracts, and cognitive decline in the elderly.³ As a clinician who has treated lead poisoned children and adults, I can tell you that this toxic substance has devastating effects on people’s lives.

EPA points out that lead levels in the air have dropped significantly since the 1970’s when the current lead standard was issued. That is true, and shows the enormous health benefits that can occur with air quality regulations. Yet it is bizarre reasoning to suggest that because regulations have greatly reduced the lead threat, these regulations should therefore be eliminated.

In fact, lead remains very much a problem today. An estimated 310,000 children aged 1-5 in the U.S. remain at risk from harmful blood lead levels according to the Centers for Disease Control and Prevention (CDC).⁴ Furthermore, in a recent review, CDC concluded that “no level of lead in a child’s blood can be specified as safe”, and that health effects have been demonstrated below the current blood lead threshold.⁵ Therefore EPA should be revising the 1978 standard to bring it into line with the current science, which would mean a substantial reduction of the standard.⁶

EPA points out that there are currently only two nonattainment areas for the current NAAQS. The paucity of nonattainment areas is hardly a reason to remove the standard, especially since the 1978 standard is in serious need for revision. If the standard were

¹ EPA. Review of the National Ambient Air Quality Standards for Lead: Policy Assessment of Scientific and Technical Information. OAQPS Staff Paper – First Draft. December 2006. p. 1-2.

² Ibid p. 3-8 et seq.

³ Schaumberg DA, et al. Accumulated lead exposure and risk of age-related cataract in men. JAMA. 2004 Dec 8;292(22):2750-4; Stewart WF, et al. Past adult lead exposure is linked to neurodegeneration measured by brain MRI. Neurology. 2006 May 23;66(10):1476-84; Nash D, Magder LS, Sherwin R, et al. Bone density-related predictors of blood lead level among peri- and postmenopausal women in the United States: The Third National Health and Nutrition Examination Survey, 1988-1994. Am J Epidemiol. 2004 Nov 1;160(9):901-11.

⁴ Centers for Disease Control and Prevention. Blood Lead Levels - United States, 1999—2002. 54(20);513-516. May 27, 2005. <http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5420a5.htm> [Visited February 1, 2007].

⁵ The CDC blood lead threshold of concern is 10 micrograms per deciliter (µg/dL). Centers for Disease Control and Prevention. Preventing lead poisoning in young children: a statement by the Centers for Disease Control and Prevention. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, August 2005.

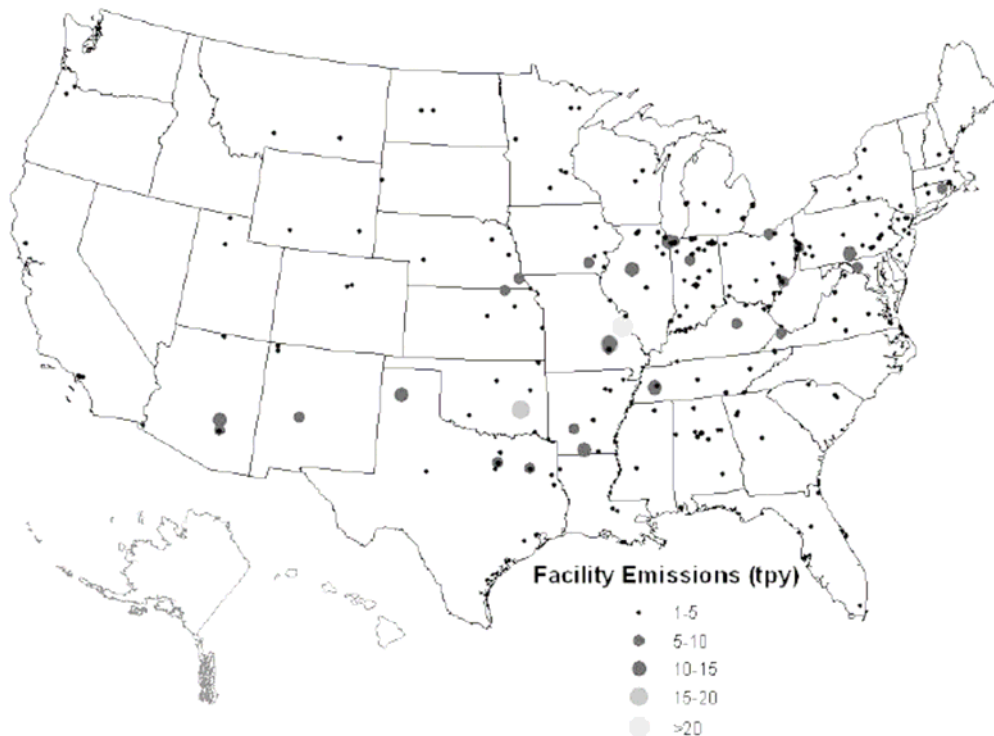
⁶ The CDC blood lead level of concern was 30 µg/dL in 1978 and the lead NAAQS was set at that time to maintain children’s blood lead levels below 30. Today the CDC’s level of concern is 10 µg/dL.

reduced to one-third of its current level, to 0.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) - as proposed by EPA staff in 1990 - and the averaging time were reduced to the first maximum monthly average - which would help control the intermittent high concentrations that contribute to soil deposition and local contamination - there would be 32 nonattainment areas as calculated in EPA's staff paper.⁷ This is hardly reassuring, and indicates that the air quality problem with lead is still very much with us today.

According to EPA there are about 13,000 facilities in the U.S. that emit lead to the atmosphere.⁸ Facilities that emit more than one ton of lead per year are mapped in Figure 1. EPA also lists 36 different source categories ranging from battery manufacturing facilities to cement kilns each of which pollutes the air with more than five tons per year of lead.⁹ The EPA Staff Paper mapped lead emissions by county nationwide and demonstrated that there are still substantial airborne lead concentrations in many parts of the country (Figure 2). Furthermore, EPA's review of the lead NAAQS Compliance Monitoring network revealed that "only 2 of 26 facilities (both lead smelters) identified as emitting greater than 5 [tons per year] have a [lead] NAAQS compliance monitor within 1 mile."¹⁰

Figure 1: Industrial Sources Releasing More than One Ton per Year of Lead into Air, 2002

(Source: EPA Lead NAAQS Staff Paper, December 2006)



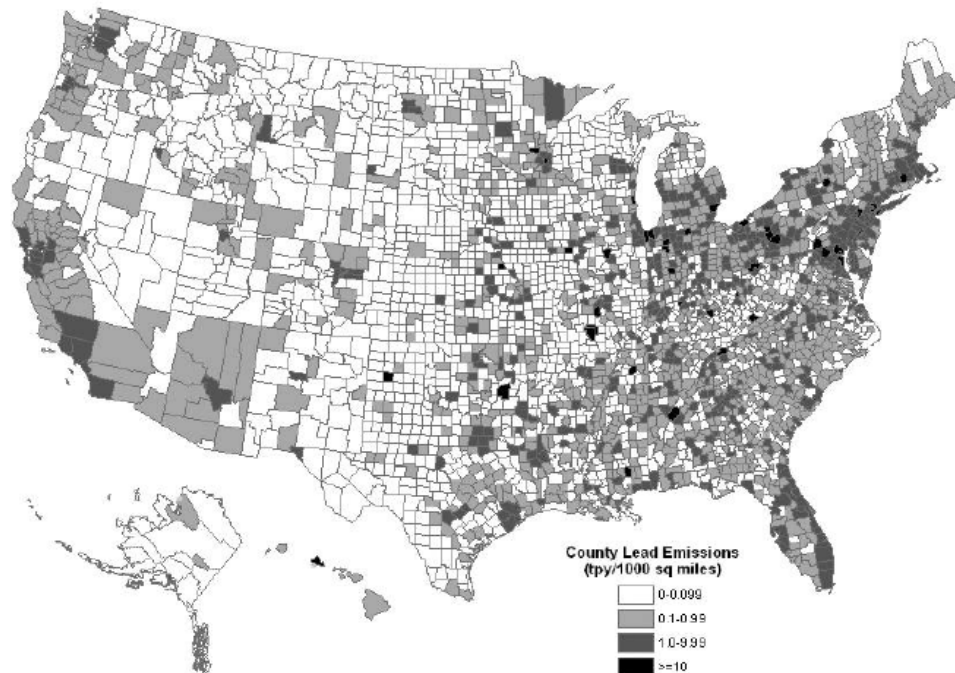
⁷ EPA Lead NAAQS Staff Paper. p. 2-37.

⁸ EPA Lead NAAQS Staff Paper. p. 2-6.

⁹ Ibid. Table 2-3.

¹⁰ EPA Lead NAAQS Staff Paper. p. 2-24.

Figure 2: County-Level Lead Emissions in the United States, 2002
(Source: EPA Lead NAAQS Staff Paper, December 2006)



Jefferson County, Missouri is currently designated as a nonattainment area for lead. The State Implementation Plan (SIP) for this county has been determined inadequate to attain the current NAAQS in 2006; therefore a revised SIP is under development for that area.¹¹ If the NAAQS standard for lead were eliminated, there would no longer be an incentive for reductions in airborne lead emissions in that county, and the estimated 37,562 people (including 2,164 children) who live within 5 miles of that facility would remain at significant health risk.¹²

Last week I spoke with a woman named Leslie Warden. She and her husband Jack raised their son in Jefferson County, Missouri. They lived for 25 years in the town of Herculaneum less than a mile from the Doe Run lead smelter. Their son Erik, now struggling to complete junior college, has Attention Deficit Disorder (ADD). Her niece and nephew, who lived just one block away, were both diagnosed with lead poisoning. For years Mrs. Warden said that she and all her neighbors assumed that everything was OK in their small town, since “that’s what everyone from the government told us”. In 1999, when they finally learned about the widespread air and soil pollution, and all the children with lead poisoning, they felt duped and betrayed. When she heard that EPA is now considering eliminating the air quality standard for lead, Mrs. Warden said: “Then

¹¹ EPA Lead NAAQS Staff Paper. p. 4-9.

¹² Ibid.

why don't they just put it back in gasoline or in paint? They think it's OK to use our children as lead monitors; that would be the only air monitor we'd have left in this community is our children." She is right. If EPA eliminates the NAAQS for lead, they will also dismantle the national lead air quality Compliance Monitoring network. Then we will have no way of knowing which counties have lead problems, and how high the levels are in our air. The first hint of a problem will be when children in our communities get lead poisoning, and that's too late.

Changing the NAAQS Review Process Erodes the Role of Science

In addition to the proposal to eliminate the air quality standard for lead, EPA is using the review of the lead NAAQS to debut a new process for reviewing criteria air pollutant standards. This so-called "efficient process" is actually a rough-shod short cut through the science. The new process will significantly reduce public comment, scientific review, and EPA scientific staff input. Instead, the new process is tailor-made to allow political appointees at EPA to have maximum flexibility and discretion in the standard-setting process.

The NAAQS standard setting process has been a model of an EPA rulemaking process that includes careful incorporation of the latest science, and is largely driven by scientific review rather than politics. Due largely to insufficient funding and agency focus, the process may not be as quick as many of us would like, but it is deliberate, thorough, and focuses on getting the best possible advice from independent scientists on the Clean Air Scientific Advisory Committee (CASAC) and from scientists within the Agency.

The launch of the new "expedited" EPA process in conjunction with the lead NAAQS review is no coincidence. The Battery Council International (BCI), a trade association whose members include virtually all of the United States' lead battery manufacturers and most of its secondary smelters, advocated for exactly these changes in a letter to EPA in July of 2006 (attached). In particular, the BCI letter states that "[t]here is no good reason to prepare a criteria document, a staff report, and a regulatory proposal with preamble." The lead battery industry obviously felt that short-cuts through the NAAQS standard-setting process would be to its advantage when their pollutant came up for review, and they got their wish. The lead industry wasn't the only polluter celebrating the recent changes in the NAAQS standard-setting process; the American Petroleum Institute was also apparently quite involved in recommending this process change.¹³ As a scientist, I am deeply saddened when I see the polluters pulling the strings and science sidelined, since I know that the impacts will ultimately be on health at the community level.

The other subtext in the current proposal is that recently at EPA the politics haven't been squaring with the science. The CASAC has twice recently crossed swords with EPA – first over particulate matter, and then over ozone. In both cases, the scientists have urged EPA to recognize the overwhelming scientific evidence in favor of substantially lower standards for these pollutants. In the case of particulate matter, EPA management made

¹³ Letter from Senators Boxer, Carper, Clinton, Obama, Lieberman, Lautenberg, and Baucus to Stephen L. Johnson. December 21, 2006.

the decision to select a standard that is less health protective than the EPA staff and the CASAC recommended. When CASAC protested the EPA decision,¹⁴ EPA appears to have retaliated by decreasing CASAC's role in the standard setting process.

Reducing Toxics Release Inventory Reporting Will Leave Communities in the Dark

As I mentioned previously, one of the consequences of eliminating the NAAQS for lead would be the dismantling of the Compliance Monitoring network, thereby leaving communities in the dark about how much lead is in the air they're breathing. In the same vein, EPA recently promulgated a final rule changing reporting requirements for the nation's Toxics Release Inventory (TRI). This new rule will allow polluters to release greater amounts of hazardous chemicals while substantially reducing information to communities.

In December EPA published a final rule modifying the monitoring requirements for the TRI with the alleged intent of reducing reporting burdens on regulated facilities. The new rule increases the reporting threshold for non-persistent, bioaccumulative and toxic (non-PBT) chemicals by four-fold, from 500 pounds to 2,000 pounds, with a total cap of 5,000 pounds. Facilities that fall under the threshold for a particular chemical will now be exempt from detailed reporting and allowed to file only a Form A Certification Statement giving the name of the chemical in question but no other data on waste management or releases. The rule also allows facilities that treat or manage up to 500 pounds of a persistent, bioaccumulative and toxic (PBT) chemical, but have zero releases of the PBT chemical to use the shorter Form A.¹⁵

According to EPA, approximately 9,500 non-PBT chemical reports would be eligible for Form A reporting under the final rule, at a modest savings to reporting facilities of \$438 and 9.1 work hours per Form. Meanwhile 2,360 PBT chemical reports would be eligible at a savings of \$748 and 15.5 work hours per Form. The 6,670 facilities that could benefit from this rule would save an average of only \$885.

According to NRDC calculations, the changes to the TRI will mean that more than 5.7 million pounds of chemical pollution, plus 10.5 million pounds of production-related waste will now go unreported each year. Our analysis shows that a total of 16 chemicals will effectively "disappear" from the TRI as a result of this rule. I was interested to discover that one of the chemicals that will vanish from full TRI reporting is *methyl isothiocyanate*. When methyl isothiocyanate is exposed to sunlight it breaks down to *methyl isocyanate* (MIC).¹⁶ Those who know their history will recall that the 1984 Union Carbide chemical disaster in Bhopal, India – a disaster that killed thousands of people and injured tens of thousands¹⁷ – was the impetus for the passage of the Emergency

¹⁴ Letter from Rogene Henderson et al. to Stephen L. Johnson. September 29, 2006. <http://www.epa.gov/sab/pdf/casac-ltr-06-003.pdf> [visited January 31, 2007].

¹⁵ Dioxin is exempt from this provision. 71 FR 76932.

¹⁶ California Department of Pesticide Regulation. Evaluation of Methyl Isothiocyanate as a Toxic Air Contaminant. California Environmental Protection Agency, Sacramento, CA, August 2002. p. XV.

¹⁷ <http://www.bhopal.net/death-toll.html> [visited February 1, 2007].

Planning and Community Right to Know Act that originally created the TRI.¹⁸ The chemical responsible for the disaster in Bhopal was MIC. It is hard to escape the irony that EPA's decision to limit the TRI causes the chemical that essentially created the TRI to disappear from the national reporting system.

One of the main arguments for the change in TRI reporting was to alleviate burdensome paperwork for small businesses. However, a recent independent analysis of the data discovered that the industries that will benefit most from this rule will be large corporations that can easily afford to do the paperwork.¹⁹

I spoke about this issue the other day with a woman named Linda Bardo, who raised her son in the small community of Curtis Bay, in Baltimore, MD. In her zip code there are currently seven large facilities reporting a total of 12,400 pounds of benzene emissions. Benzene is known to cause leukemia in humans and is an extremely dangerous chemical to breathe. Under EPA's new rule six of the seven facilities would no longer be required to report any of their benzene emissions. Almost one-third (3,500 pounds) of the benzene air emissions to this small community would "disappear". These companies aren't small businesses. They are petroleum giants such as Amerada Hess Corp., BP Products North America, Citgo Petroleum Corp., Sunoco, and Motiva. When Ms. Bardo learned about the TRI reporting change, her response was:

I realize that these companies offer many employment opportunities to many people. That part is great. But I just do not feel it is too much to ask that they be required to complete paperwork relating to these emissions, especially since most people in Curtis Bay and Brooklyn live within 1-5 miles of these facilities. These companies may complain because they have to fill out some paperwork, but our community has extremely high asthma rates; high cancer rates. We have to do everything we can to improve the air that we breathe here in Curtis Bay. For them to say they don't want to do the paperwork – that's disgusting to me, it makes me sick!

TRI is one of the most important tools available to concerned citizens and community groups that advocate for a healthier environment. Since most of the TRI data are not easily accessible through other sources (and may in many cases be available nowhere else) EPA's changes to the TRI program infringe the public's right to know about chemical releases in their communities. While 5,000 pounds of waste management or 2,000 pounds of releases may not sound significant on a nationwide basis, the cumulative amounts can have health significance for communities located near industrial areas where multiple facilities may no longer be required to report releases of numerous TRI chemicals. Linda Bardo in Baltimore, MD pointed out: "It's not like we have one plant in our town to deal with. This one has a blip here and that one has a blip there, but when you

¹⁸ Emergency Planning and Community Right-To-Know Act of 1986, Pub. L. No. 99499, 100 Stat. 1728, codified at 42 U.S.C. sec.11001-11050 (1994)

¹⁹ National Environmental Trust. EPA's Proposed TRI Rule Changes Benefit Large Companies and Provide No Burden Reduction for Small Businesses. Washington, DC. December 2006.
<http://www.net.org/proactive/newsroom/release.vtml?id=29162> [visited February 2, 2007].

put them together it's terrible. We still will have to deal with every type of emission that comes out of every one of those plants.”²⁰

The neighborhoods most affected will be poor and largely minority communities. In its analysis of the impacts of the proposed rule EPA estimated that minorities make up 31.8 percent of the general U.S. population, 41.8 percent of the population within one mile of facilities that filed at least one Form R in 2003, and 43.5 percent of the population within one mile of facilities that would have qualified for Form A reporting in 2003. EPA also estimated that individuals under the poverty level make up 12.9 percent of the U.S. population, 16.5 percent of the population within one mile of facilities that filed at least one Form R in 2003, and 17.0 percent of the population within one mile of facilities that would have qualified for Form A reporting in 2003 as a result of the proposed rule. It did not present a revised analysis for the final rule.²¹ It appears that the executives that operate these facilities do not live downwind from them.

Last Thursday I spent some time talking with Mr. Duncan McKee, a gentleman who lives in a community in Los Angeles just down the street from a number of polluting industries. He has lived in this community for 49 years, and has a daughter who spent a significant part of her childhood there. There are three facilities near Mr. McKee's home, Distinctive Appliances Inc, Hill Brothers Chemical Co., and Lansco Die Casting Inc. that would no longer report any emissions under the new TRI rules. Currently, these facilities release or dispose of diisocyanates, ammonia, and copper. In addition, there is a large battery manufacturing facility near his house. He told me: “The neighbors know that the facility burns plastic and rubber casings; when that's going on, just one whiff of the air and you get a splitting headache.” When he heard about the proposal to change the TRI reporting threshold he said: “To eliminate this limit would open the door for companies to pump out even more than they do currently.” He pointed out that there are families with children living within 500 feet of the battery manufacturing facility in his neighborhood, and there are 26 schools within 4 miles. Apparently the fine dust released from this facility is “stuff that you really can't get away from – it penetrates your house, kids are breathing it in, and kids get it on their hands and in their mouths.” Twelve people within two square blocks are currently suffering from cancer. Children in the neighborhood have leukemia and Hodgkin's lymphoma. They don't know if the cancer is from the local polluters, but people in the community are worried and they say that the government does not have strong enough standards or strong enough enforcement of the standards that are already on the books.

Mr. McKee is not the only person who is angry about what EPA is doing. EPA received more than 122,000 comments on its proposal to cut back on TRI reporting. Of these, 99.97 percent (122,386 comments) opposed the proposal, and only 34 comments (of which 29 were from industry organizations) favored it. Opponents to the EPA changes included over 300 public interest organizations, 66 public health professionals and organizations, 46 labor organizations, 48 researchers, 8 religious leaders and

²⁰ Personal communication, Linda Bardo, Baltimore MD. February 1, 2007.

²¹ 71 FR 76940.

organizations, and 21 financial investors.²² Among those submitting public comment to EPA was D. Radford Shanklin, a chemist, research biologist, and physician in Memphis, TN. He wrote to the EPA saying that “the extent and detail of reporting should be INCREASED not decreased. To do otherwise is to become complicit with the well documented historic tendency of much of big industry to falsify their science, mislead the public, and turn cold shoulders to the harm to environment and health.” (emphasis in original).²³

EPA Proposes to Weaken Health Protections for Toxic Air Pollution

On December 21, 2006, the EPA Administrator signed a rulemaking proposal to weaken nearly 100 toxic air pollution standards by allowing industrial plants across the country to emit significantly greater amounts of 188 hazardous air pollutants, including numerous carcinogens.²⁴

The rulemaking proposal violates Clean Air Act requirements that toxic air polluters achieve the most protective legal standard selected by Congress in the 1990 Clean Air Act amendments – Maximum Achievable Control Technology (MACT). The proposal even allows polluters in nearly 100 industrial source categories to throw off more protective toxic air pollution limits to which they are already subject, and abandon federal monitoring, recordkeeping, reporting – and in some instances, permitting -- requirements to which they are already subject.²⁵ By evading toxic air pollution limits, industrial facilities would be permitted to substantially increase releases of toxic chemicals into surrounding communities by tens of thousands of pounds each year, including highly potent carcinogens, neurotoxicants, endocrine disruptors, and reproductive toxicants. EPA also structures the proposal in such a way that the federal government and citizens lose the ability to enforce violations by polluters. The MACT standard process under the Clean Air Act, by contrast, allows the federal government, citizens and state officials to enforce all violations.

²² OMB Watch. Against the Public’s Will: Summary of Responses to the Environmental Protection Agency’s Plans to Cut Toxic Reporting. Washington, DC. December 2006.

²³ Letter from D. Radford Shanklin, F.R.S.M. EPA-HQ-TRI-2005-0073-579, Toxic Release Inventory Burden Reduction Proposed Rule, Environmental Protection Agency, January 30, 2006.

²⁴ The rulemaking proposal was published in the Federal Register on January 3, 2007, and is open for public comment until March 5, 2007. See “National Emission Standards for Hazardous Air Pollutants: General Provisions,” 72 Fed. Reg. 69.

²⁵ It is worth noting that EPA under this administration proposed a rulemaking also aimed at this aspect of EPA’s air toxics regulations, that was designed to incentivize additional reductions in toxic emissions through pollution prevention. See 68 Fed. Reg. 26,249 (May 15, 2003); see also 72 Fed. Reg. at 71. That earlier proposal would have allowed sources to qualify for alternative, less rigorous, monitoring, recordkeeping and reporting requirements by reducing toxic emissions below levels required by MACT. 72 Fed. Reg. at 71. Crucially, however, the earlier proposal would not have allowed sources to increase emissions above levels required by the MACT standards. In other words, it would not have allowed toxic backsliding. EPA’s December 2006 proposal abandons that more modest 2003 proposal without explaining why the agency is abandoning its prohibition on increasing toxins above levels allowed by the MACT standards.

When word of this harmful, deregulatory plan first circulated within EPA in late 2005, officials at seven out of the agency's ten regional offices joined in a nine-page memo to protest the proposal, saying that, if implemented, it "would be detrimental to the environment and undermine the intent" of the Clean Air Act (see attached memo).²⁶ The scathing internal memo also said the rule changes would create a loophole that allows polluters to "virtually avoid regulation and greatly complicate any enforcement against them" and eliminate the ability of EPA and the public to effectively monitor and take action against toxic polluters.²⁷ Decrying the higher toxic pollution levels allowed by the proposal, the regional officials observed that "[t]he cost of the increased HAP emissions would be borne by the communities surrounding the sources."²⁸ The regional EPA officials also protested the preparation of the proposed rule without their input and the "reluctan[ce]" by headquarters to even share the draft policy with them, characterizing the slights as part of a "trend" with the current administration that was "disturbing."²⁹

In a second memo from the EPA regional offices to headquarters, dated March 10, 2006, the regions were forced to reiterate the vast majority of their prior objections, after headquarters re-circulated a draft rulemaking proposal that ignored most of the regional concerns (see attached memo).³⁰ This second memo says: "Most notably, we continue to have significant concerns about the increase in emissions of hazardous pollutants that will likely occur from the revisions to the [existing] policy, as currently drafted."³¹ Comparison of the December 2006 published rulemaking proposal, and the December 2005 draft that the regional officials condemned, makes abundantly clear that their objections were ignored.

The Clean Air Act amendments of 1990 required EPA to impose standards for 188 different toxic substances emitted by industrial sources, ranging from benzene and asbestos to chlorine and formaldehyde. Adopting a technology-forcing approach, the law imposed MACT standards on plants that annually emitted 10 tons or more of a single toxic chemical, or 25 tons or more of a combination of toxic chemicals. MACT standards are based on the performance of the average of the top 12 percent of facilities in an industrial sector. Congress intended EPA to identify the emissions levels achieved by the best-performing plants in an industrial sector, and to require the remaining plants to achieve the same performance levels. To date, EPA has issued nearly 100 MACT standards covering some 174 industrial sectors. Prior to issuance of this proposal, EPA projected that the standards collectively would "reduce annual emissions of air toxics by about 1.7 million tons from 1990 levels when fully implemented."³² These reductions will not be accomplished if EPA's proposal becomes law.

²⁶ "Regional Comments on Draft OIAI Policy Revisions" (Dec. 13, 2005) ("Dec. 2005 Regional Memo"), at 3. <http://www.nrdc.org/media/docs/060403b.pdf>.

²⁷ *Id.*, at 4.

²⁸ *Id.*, at 3-4.

²⁹ *Id.* at 1.

³⁰ "Regional Comments on Revised Draft OIAI Policy Revisions" (March 10, 2006), at 2 (attached to this testimony).

³¹ March 2006 Regional Memo at 2.

³² <http://www.epa.gov/ttn/atw/nata1999/natafinalfact.html> [visited January 31, 2007].

MACT standards typically force plants to slash their toxic air emissions by 95 percent or more. For example, an industrial facility that emitted 100 tons of a combination of toxins might be required to slash its toxic emissions to 5 tons per year. Under EPA's proposed rule, however, that facility can turn around and increase its toxic emissions from 5 tons per year to just below the 25-ton threshold (say, 24.9 tons per year) and still escape controls -- while increasing its toxic emissions nearly five fold. Because the proposal weakens all of EPA's nearly 100 MACT standards, a slow-motion public health disaster could ensue in communities located in industrial areas all across the country.

It is crucial to understand the protective, technology-forcing structure of the MACT program to appreciate just how pernicious EPA's proposal is. Congress intended all facilities in an industry to replicate emissions reductions actually being achieved by the top-performers in that industry when EPA set the standards. Thus, take a hypothetical industrial category comprised of 100 facilities, each with 100 tons of toxic emissions prior to any pollution reduction strategies. The top 12 facilities in this hypothetical category are reducing air toxics levels on average by 95%, down to 5 tons per year. This leads EPA to establish a MACT standard requiring 95% cuts in toxic pollution. The remaining 88 facilities dutifully comply and reduce their air toxics by 95%, down to 5 tons per year at each facility. The 12 top performers are required to continue achieving 95% reductions. Thus, the MACT standard reduces total toxic emissions from this hypothetical industrial category by 8,360 tons each year (88 x 95 tons per facility).

Under EPA's proposal, however, these 100 facilities would no longer be required to maintain their air toxic levels at 5 tons per year. To the contrary, EPA is claiming that Congress in fact intended all 100 of these facilities to be able to increase their toxic air pollution from 5 tons per year to 24.9 tons per year. This would represent an increase of 1,990 tons of air toxic emissions each year from this entire industrial category. Moreover, these 100 facilities would no longer be subject to the monitoring, recordkeeping, reporting and other compliance obligations associated with the MACT standard. These facilities would escape federal control of their toxic pollution altogether, and EPA and citizens would lose the ability to enforce violations by these facilities of permit limits adopted at or below 24.9 tons per year.

EPA's rulemaking proposal pretends that this toxic-increasing agenda is exactly what Congress intended when it adopted the 1990 Clean Air Act amendments. Yet EPA identifies no legislative history to support that pretense. Moreover the proposal ignores the statutory definition of MACT itself, with its mandate that toxic pollution standards reflect the performance of the average of the top 12 percent of facilities in an industrial sector. EPA's rulemaking proposal does not even discuss these statutory provisions in the purported legal authority section of its proposal.³³

The December 2005 Regional Memo reminded EPA headquarters officials that "[i]n 1995, EPA believed that the [existing] policy follows 'most naturally' from the language and structure of the statute, and that allowing facilities to backslide would undermine the maximum achievable emissions reductions mandated by Congress." Observing that the

³³ See 72 Fed. Reg. at 72-73.

draft proposal had reversed that position without any explanation, the Regional Memo urged EPA headquarters to “more clearly articulate why EPA no longer believes that the [existing] policy flows naturally from the statute.” The December 2006 proposal ignores the regions’ request and fails to explain how this change comports with the statute itself and with EPA’s longstanding interpretation of the statute.

The EPA regional officials also urged headquarters officials to examine closely the issue of toxic pollution increases from industrial facilities currently subject to more protective MACT pollution limits, “to determine whether the [proposal’s] likely benefits would be greater than the potential environmental costs.” By EPA’s own admission, the agency failed to conduct any analysis to determine what the environmental, energy and economic impacts of the proposal would be.³⁴ Indeed, it is startling to read EPA’s own laundry list of admissions concerning the proposal’s impacts that they did not analyze and supposedly cannot quantify or even estimate:

- The agency disavows any ability to quantify the “environmental, economic, and energy impacts” of the proposal “without knowing which sources will avail themselves” of the proposal;
- EPA admits that it is “unknown” how many sources, if any, would voluntarily reduce their emissions in response to the “incentive” provided by the proposal;³⁵
- The agency admits “it is not known how many sources may increase their emissions from the major source MACT level”;³⁶ and
- EPA admits that it “cannot identify or quantify the universe of sources that would decrease their HAP emissions to below” those levels (10 tons of a single HAP, 25 tons of multiple HAPs) eligible for exemption from MACT under the proposal.

EPA’s entire discussion of the “Impacts of the Proposed Amendments” takes up less than half of a column in a three-column Federal Register page – exactly 151 words – without a single factual citation, and without a single document in the administrative record analyzing the environmental, public health, energy or economic impacts of the proposal.

In his written response to questions submitted by Committee members after the April 5, 2006 confirmation hearings, EPA’s Acting Assistant Administrator for Air and Radiation, William Wehrum, promised Senator Murkowski that the agency would determine what the balance was between sources allowed to increase toxic emissions under the proposal, versus sources that EPA believed would have an “incentive” to reduce emissions. As the agency admissions above reveal, however, EPA has broken that promise and failed to answer those questions. Indeed, the silent administrative record for the proposal confirms that EPA has failed even to research and analyze those questions, notwithstanding readily available factual information indicating (1) which air pollution sources nationwide are subject to MACT standards; and (2) which of those sources have

³⁴ See 72 Fed. Reg. at 77.

³⁵ *id.* at 72/1, 77/2.

³⁶ *id.* at 77/2

facility-wide toxic air pollution levels below 10 tons for a single toxin or 25 tons for a combination of toxins – the universe of facilities allowed to pollute more by EPA’s proposal.

In response to questions submitted by Senator Jeffords following this same hearing, Mr. Wehrum offered the top two factors that EPA believed would “tend to minimize” “in many cases” the pollution increases allowed by the proposal: (1) “some sources want to be a good corporate citizen and would choose not to change current emission levels;” and (2) “[o]ther companies would want to avoid the negative publicity associated with increases in toxic air pollutants.”³⁷ It is noteworthy that the White House Office of Management and Budget deleted these two rationales when reviewing EPA’s draft rulemaking, no doubt out of recognition that the rationales are unsubstantiated and absurd.³⁸ But it is highly telling that both Mr. Wehrum and EPA’s original draft advanced these speculative, insupportable justifications so prominently, revealing that EPA’s hollow assurances are rooted in faith more than facts or analysis or concern for the public’s health.

Perchlorate: Not Testing Will Not Make the Problem Go Away

EPA’s elimination of public information on important health threats does not stop with air pollutants. A major drinking water contaminant has also recently fallen into what could be called the “wishful thinking approach to environmental protection”, where not looking for pollution is confused with actually controlling pollution. Controlling pollution is EPA’s job, and in order to control it, they need to look for it.

In December 2006, EPA issued a final rule saying that there will be no further requirements to test drinking water for the endocrine disrupting chemical perchlorate. In 1999, EPA had issued an Unregulated Contaminant Monitoring Rule (UCMR) covering the period 2001-2005, and requiring that all public water systems serving a population greater than 10,000 people sample for perchlorate by December 31, 2002. The rule also required testing of 800 representative small public water systems serving 10,000 or fewer people. Results of the testing were required to be published in the 2003 Consumer Confidence Reports (CCR) provided by water systems to their customers. Despite detections of this chemical in 402 water systems serving approximately 41.2 million people nationwide, and after initially proposing to extend the requirement, EPA has now decided not to require any further testing, saying: “based on public comment and further consideration, EPA has removed the requirement for monitoring perchlorate.”³⁹

³⁷ The Dec. 2005 Regional Memo observed in admirably understated disbelief that these twin justifications were “unfounded and overly optimistic,” and contrary to the experiences of EPA Regional officials. Dec. 2005 Regional Memo, at 4.

³⁸ EPA-HQ-OAR-2004-0094-0055 (Dec. 20, 2006).

³⁹ 72 Fed. Reg. at 370.

Perchlorates are used in rocket propellants, explosives, road flares, air bags, and other applications.⁴⁰ Perchlorates have also been introduced onto soil in fertilizer products imported from Chile.⁴¹ As a consequence of widespread use and water solubility, huge amounts of perchlorate have leached into surface and groundwater used as drinking water sources.

Perchlorate is highly mobile in water and can persist for decades under typical ground and surface water conditions.⁴² Research has also shown that perchlorate can concentrate in crops such as wheat, lettuce, alfalfa, and cucumbers, thereby resulting in much greater exposures than might be predicted by water or fertilizer concentrations.⁴³ Newer data have shown perchlorate contamination to be widespread in store-bought fruit, vegetables, cow's milk, beer and wine.⁴⁴ Perchlorate has been found in human breast milk, and was found in every one of 2,820 urine samples tested by the CDC.⁴⁵

Perchlorate is a powerful inhibitor of the normal uptake of iodine into the thyroid gland, as well as normal transport of iodine across the placenta and into the lactating mammary gland. Inhibition of iodine uptake can cause decreased production of thyroid hormones. In the developing fetus and infant, adequate levels of thyroid hormones are necessary for normal brain development. Subtle alterations of thyroid hormones during pregnancy – even within the normal range – have been associated with decreased intellectual and learning capacity in childhood.⁴⁶

A recent analysis by CDC scientists of a nationally representative sample of over 2,200 U.S. residents has documented that exposure to perchlorate poses potential health risks to women of child-bearing age and especially to their babies.⁴⁷ This study revealed that

⁴⁰ U.S. EPA Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization Based on Emerging Information (External Review Draft). Office of Research and Development, Washington, D.C. NCEA-1-0503, 1998.

⁴¹ PK Dasgupta, et al. Perchlorate in the United States. Analysis of Relative Source Contributions to the Food Chain. *Environ Sci Tech.* 40(21):6608-6614.

⁴² U.S. EPA Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization Based on Emerging Information (External Review Draft). Office of Research and Development, Washington, D.C. NCEA-1-0503, 1998.

⁴³ Jackson WA, et al. 2005. Perchlorate accumulation in forage and edible vegetation. *J Agric Food Chem.* 53(2):369-73.

⁴⁴ El Aribi, H, et al. Analysis of perchlorate in foods and beverages by ion chromatography coupled with tandem mass spectrometry (IC-ESI-MS/MS). *Analytica Chimica Acta.* 567(1): 39-47; Food and Drug Administration. 2004. Exploratory Data on Perchlorate in Food. Available at <http://www.cfsan.fda.gov/~dms/clo4data.html>

⁴⁵ Kirk AB, et al. Perchlorate and iodide in dairy and breast milk. *Environ Sci Technol.* 39(7):2011-2017, 2005; Blount BC, et al. 2006. Perchlorate exposure of the US population, 2001-2002. *J Expo Sci Environ Epidemiol.* Oct 18, 2006 [Epub ahead of print].

⁴⁶ Haddow JE, et al. Maternal thyroid deficiency during pregnancy and subsequent neuropsychological development of the child. *New Eng J Med* 341:549-555, 1999; Pop VJ, et al. Low maternal free thyroxine concentrations during early pregnancy are associated with impaired psychomotor development in early infancy. *Clin Endocrinol.* 50:149-155, 1999.

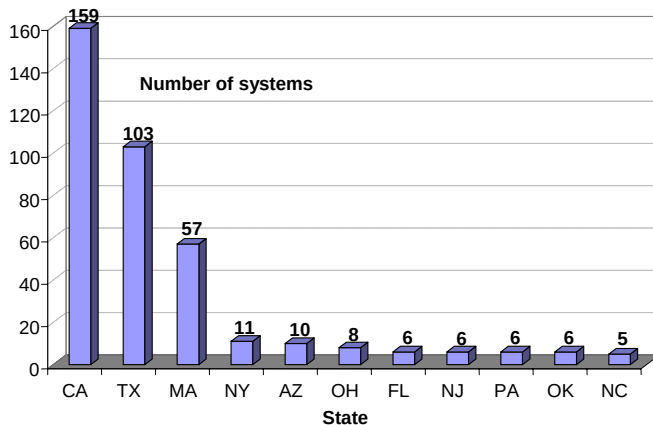
⁴⁷ Blount BC, et al. 2006. Urinary perchlorate and thyroid hormone levels in adolescent and adult men and women living in the United States. *Environ Health Perspect*, Online 5 October, 2006.

among women with low iodine intake (as defined by the World Health Organization),⁴⁸ very low levels of perchlorate exposure - well within the range found in the general U.S. population today - are associated with up to a 30 percent decrease in thyroid hormone levels; the CDC estimates that 36 percent of U.S. women have iodine intakes in this low range.

The unique physiology of pregnancy and interactions between the mother and fetus makes both especially susceptible to the harmful effects of perchlorate. Recent studies have shown that the cognitive development of the fetus is impaired in mothers with even mild disruptions in thyroid hormone levels, prompting many in the medical community to recommend thyroid hormone replacement therapy for pregnant women who are found to have even sub-clinical hypothyroidism.⁴⁹

Perchlorate has emerged as an important threat to drinking water sources over vast areas of the United States. An NRDC analysis of available 2005 EPA data showed that public water systems in 27 states, the District of Columbia and two U.S. territories have detected perchlorate in treated water or in their water sources, with concentrations ranging from 0.2 to 1,300 parts per billion (ppb). Of 5,369 systems tested, 402 (7.5 percent) detected perchlorate in their water. California has the largest number of systems with perchlorate detections, 159, serving a total population of approximately 31.4 million. Texas and Massachusetts follow with 103 and 57 systems, respectively (Figure 3). These are also the states with the most perchlorate monitoring conducted to date.

Figure 3: States with the Largest Number of Systems with Perchlorate Detections
(Source: NRDC analysis of 2005 EPA data)



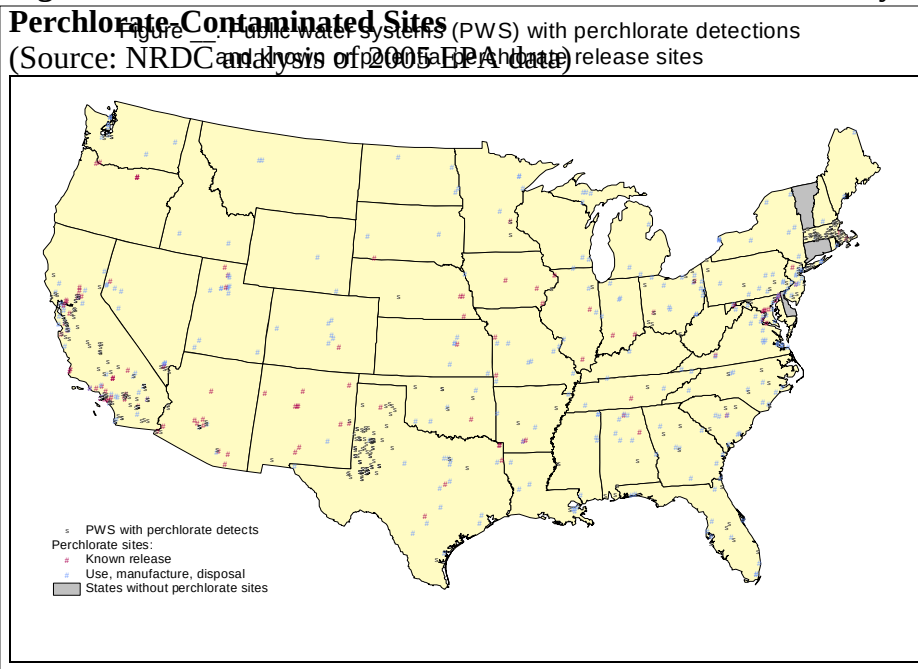
⁴⁸ World Health Organization (WHO). 1994. Indicators for assessing iodine deficiency disorders and their control through salt iodization. WHO/NUT/94.7. Geneva: WHO/International Council for the Control of Iodine Deficiency Disorders.

⁴⁹ Cooper, D. Sub-clinical thyroid disease: consensus or conundrum. *Clinical Endocrinology* 60:410-412, 2004; Haddow JE, et al. Maternal thyroid deficiency during pregnancy and subsequent neuropsychological development of the child. *New Eng J Med* 341:549-555, 1999; Pop VJ, et al. Low maternal free thyroxine concentrations during early pregnancy are associated with impaired psychomotor development in infancy. *Clinical Endocrinology* 50 (149) 1999; Surks M, et al. Subclinical Thyroid Disease. *J Am Med Assoc*: 228-238, 2004.

Nationwide, 402 water systems have reported finding perchlorate contamination (Figure 4). These systems serve 41.2 million people, or approximately 15 percent of the population served around the country. This is likely to be a low estimate, since less than five percent of community water systems have analyzed their water for perchlorate. Another reason this may be a low estimate is that most of the systems tested their water only a few times. Under EPA rules, public water systems serving more than 10,000 people had to sample once per quarter during a one-year period if they used surface water sources. Groundwater systems had to test only twice in a one-year period. Less than one percent of smaller systems were required to test at all. Most states outside of California do not require any testing for perchlorate. Such limited testing is likely to miss pollution that may put vulnerable populations at risk.

EPA's decision to stop testing at a national level for perchlorate means that there will be no current data on tap water contamination with this hazardous chemical. To date, monitoring for perchlorate has been conducted in only 5,369 out of the approximately 158,000 public water systems in the United States – only 3.4 percent of all water systems.⁵⁰ Small public water systems serve a total of about 69 million people in the United States, and only 600 such systems (0.4 percent) were required to be tested under the UCMR so far.⁵¹ We have seen only the tip of the iceberg for this contaminant. Testing needs to continue in order to ensure water quality and to inform consumers – especially pregnant women and families with babies. In addition, the new data will be needed in order to inform a drinking water standard that will adequately protect public health.

Figure 4: Locations of Perchlorate Detections in Public Water Systems, and Perchlorate-Contaminated Sites



⁵⁰ U.S. EPA (2006) FACTOIDS: Drinking Water and Ground Water Statistics for 2005. http://www.epa.gov/safewater/data/pdfs/statistics_data_factoids_2005.pdf [visited February 2, 2007].

⁵¹ Id. Calculation based on System size table, p. 2.

Closing EPA Libraries Slashes Science and Loses Money

For decades, EPA's network of 26 scientific libraries has served as a gold mine of resources for scientists, community members, and EPA's own staff. Expert librarians made themselves available to locate information, and the library collections themselves contained unique materials, not available elsewhere. I have used EPA libraries in Region 1 and Region 9 on many occasions and consider them indispensable. As a result I was distressed to learn that over the past four months EPA has closed five libraries and reduced access at four others, including my local EPA library.⁵²

According to press reports, the EPA libraries fielded about 134,000 information requests in fiscal year 2005.⁵³ Of these, the now-closed EPA regional libraries in Chicago, Kansas City, and Dallas handled more than 32,000 requests for information.⁵⁴ Representatives of 10,000 EPA scientists, engineers, environmental protection specialists and support staff protested the closure of the technical libraries in a letter to the chair and ranking member of the Senate Appropriations Committee, Interior and Related Agencies Subcommittee in June of 2006.⁵⁵

The library closures have been done under the guise of budgetary restraint, but that argument holds absolutely no merit. The library closures represent a budget cut of about \$2 million. However, an EPA cost-benefit assessment in 2004 concluded that the libraries provide "substantial value" to the agency and the public, and represent a benefit-to-cost ratio of somewhere between 2:1 and 5.7:1.⁵⁶

Unfortunately, much of the information from the closed EPA libraries has apparently vanished or become very difficult to find. These libraries contained scientific journals, EPA documents, and documents from other entities including reports from EPA contractors. Documentation exists that scientific journals were thrown into dumpsters and recycling bins when the libraries were closed.⁵⁷ Linda Travers, acting Assistant Administrator for the EPA Office of Environmental Information was quoted in December 2006 assuring that all EPA-generated documents from the closed libraries would be online by January and the rest of the agency's 51,000 reports would be digitized within

⁵² Congressional Research Service. Restructuring EPA's Libraries: Background and Issues for Congress. RS22533. January 3, 2007.

⁵³ Joal A. Mintz and Rebecca Bratspies. Closing Agency Libraries Deals Serious Blow. South Florida Sun-Sentinel. December 11, 2006.

⁵⁴ Robert McClure. EPA gets an earful on library closures. Seattle Post-Intelligencer. January 22, 2007.

⁵⁵ Letter from Dwight A. Welch et al. Presidents of 16 Local Unions to Conrad Burns and Byron Dorgan, United States Senate. June 29, 2006.

⁵⁶ EPA Office of Environmental Information. Business Case for Information Services: EPA's Regional Libraries and Centers. EPA 260-R-04-001. January 2004.

⁵⁷ Email from Vicki Simons to Brion Cook, Todd Holderman, Randall Brinkhuis, John Dady. Update on library move. November 17, 2006.

http://www.peer.org/docs/epa/06_20_11_EPA_order_recycle_OPPTS_library_materials.pdf [Visited on February 1, 2007].

two years.”⁵⁸ That’s an ambitious task and I am curious to learn whether the January deadline has been met.

As of June 2006, the National Environmental Publications Internet Site (NEPIS) contained about 13,000 documents, and EPA librarians estimated that there were about 80,000 more documents that needed to be retained but had not yet been digitized.⁵⁹ More recent communications from EPA librarians are not encouraging. Librarians indicate that the NEPIS – now integrated into the National Service Center for Environmental Publications (NSCEP) system - is not working effectively for information retrieval.⁶⁰ Apparently documents are not appearing even if the search is done by EPA publication number. Furthermore, digitizing between 50,000 and 80,000 reports is a monumental task and there does not appear to be any budget for carrying this out. Rather than saving the agency money, these closures will cost the agency in staff productivity, and in money and time for digitization. The cost to local communities is hard to calculate, since information – when you really need it – is priceless.

Conclusion

It is abundantly clear that the concerns I have raised for the integrity of the science, for the protection of public health, and for the public availability of information are shared by the Chairwoman and the other members of the Senate Committee on Environment and Public Works. Each of the issues addressed in today’s hearing has been raised already in letters and press releases issued by Senators on the Committee. We all are suffering from the pain of foresight. When we look into the future with these EPA rollbacks in place, we see communities breathing dirtier air, children exposed to more toxic lead, pregnant women unknowingly drinking thyroid-disrupting rocket fuel, scientists sidelined, and information vanishing. It’s not a pretty future. Yet I am optimistic that many of these bad outcomes can be averted. EPA has not finalized several of these proposals, and some of the actions can be reversed. I am hopeful that after today’s hearing EPA will heed our combined urging to re-focus their efforts where they should be -- on protecting public health.

⁵⁸ Tim Reiterman. Closure of 6 federal libraries angers scientists: Cost-cutting moves at the EPA and elsewhere deny researchers and the public access to vital data, critics say. Los Angeles Times, December 8, 2006.

⁵⁹ Letter from Dwight A. Welch et al. Presidents of 16 Local Unions to Conrad Burns and Byron Dorgan, United States Senate. June 29, 2006.

⁶⁰ Jeff Ruch. Anonymous reports from EPA librarians. Public Employees for Environmental Responsibility. http://www.peer.org/news/news_id.php?row_id=815 [viewed February 2, 2006].