

Testimony of Alfred A. Siess, Jr.

Pennsylvania Environmental Quality Board
Public Hearing – Mercury Pollution Reduction Rule
DEP Southeast Regional Office
2 E. Main St. Norristown, Montgomery County, PA
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INDEPENDENT REGULATORY
REVIEW COMMISSION

Good Afternoon,

My name is ALFRED A, SIESS, Jr. I'm a Civil Engineer with 50 years of government and private industry experience in engineering and construction management, 20 years adjunct teaching at both graduate and undergraduate levels, professionally employed as an environmental/economic consultant since 1986. I'm Co-founder and a member of the board of directors of S.A.V.E., Inc., a 37 year old environmental non-profit group. I also support a number of other environmental organizations, including three of the four national/statewide groups that have taken a leadership role in supporting the need for a strong state-specific Mercury Rule for Pennsylvania. I have been actively promoting sound public policy protective of the nation's environment and economy for 37 years and have specific personal experience with the regulation of the U.S. electric industry by the EPA since that Agency was established in 1970. I will be speaking today on my own behalf.

I am testifying today in support of the Pennsylvania Department of Environmental Protection's proposed rulemaking "Standards for Contaminants: Mercury" which would amend Chapter 123 of the Pennsylvania Code. State regulation is required for three main reasons:

1. MACT (maximum achievable control technology) standards for mercury must BE the MAXIMUM ACHIEVABLE for mercury in view of the serious public health consequences posed by mercury emissions.
2. EPA's "Cap and Trade" proposal is not proper for control of mercury because of its extreme toxicity.
3. The continued failure of industry to comply with provisions of the Clean Air Act, relaxation of standards, the lax enforcement of the act by the Agency, and the seemingly deliberate and systematic distortion of scientific fact by industry lobbys and the present administration of G.W. Bush.

I testified to these issues at length in Philadelphia on February 25, 2004 at the EPA hearing on proposed national emission standards for hazardous pollutants. In the interest of time I will quote from only portions of that testimony today but am including the entire testimony as an attachment hereto and ask that you consider it part of my written testimony.

ATTACH. I TO ALFRED SIESS
TESTIMONY 7-27-06
EQB - MERCURY RULE
(6 PAGES)

Testimony of Alfred A Siess, Jr.

Environmental Protection Agency
Proposed National Emission Standards for Hazardous Pollutants;
and in the Alternative Proposed Standards of Performance for New and Existing Sources:
Electric Utility Steam Generating Units; Docket ID No. OAR-2002-0056
Wyndham Hotel, Philadelphia - February 25, 2004

Good Afternoon,

My name is ALFRED A. SIESS, JR. I'm a Civil Engineer with 48 years of government and private industry experience in engineering and construction management, 20 years adjunct teaching at both graduate and undergraduate levels, professionally employed as a consultant since 1986, I'm a Co-founder and a member of the board of directors of S.A.V.E., Inc., a 35 year old environmental non-profit group. I also serve on the Board of the Pennsylvania Environmental Network. PEN is a statewide network of non-profit environmental groups and volunteers. I am Energy Team Leader for PEN. I will be speaking today on my own behalf, as well as representing both PEN and SAVE.

I would like to address three main issues today, from the viewpoint of my personal experience with the regulation of the U.S. electric industry by the EPA since it was established in 1970.

1. The present proposal for MACT (maximum achievable control technology) standards for mercury (in view of the serious public health consequences).
2. EPA's "Cap and Trade" proposals for all hazardous air pollutants (HAPS).
3. the continued failure of the Industry to comply with provisions of the Clean Air Act, relaxation of standards, and the lax enforcement of the Act by the Agency, and the seemingly deliberate and systematic distortion of scientific fact by the present administration of G.W. Bush.

MACT

Power plants are responsible for about 37% of CO₂, 33% of Hg, 23% of NO_x, and 67% of SO₂ emissions in the U.S. (1)

Across the entire electric industry fewer than 20 companies account for over 50% of reported industry emissions. (2)

PPL and Reliant, both of which operate "grandfathered" plants, with respect to New Source Review (NSR) requirements, in the Lehigh Valley rank 6th and 13th, respectively, for Hg emissions and 13th and 21st, respectively, for all sources.

- (1) Benchmarking Air Emissions of the 100 Largest Electric Generations Owners in the U.S.-2000. (NRDC, CERES, PSEG.2002)
- (2) Ibid

The adverse effects of mercury are well documented:

- In 2002, 45 states and territories issued fish consumption warnings because of unsafe levels of mercury. Advisories for mercury increased 138% from 1993-2002. U.S. EPA Fact Sheet, *Update: National Listing of Fish and Wildlife Advisories*, EPA 823-F-02-007 (May, 2003).
- The EPA recently estimated that one in six women of childbearing age have mercury levels in the blood high enough to put their baby at risk. That means that approximately 630,000 newborns are at risk each year. U.S. Environmental Protection Agency, *Methylmercury: Epidemiology Update*, Presentation by Kathryn Mahaffey, PhD at the National Forum on Contaminants in Fish, San Diego, CA (January 25-28, 2004)

December 10-11, 2003 the Food and Drug Administration's (FDA) and EPA's Food Advisory Committee met to provide a status report and response to the Committee's recommendations on methyl mercury (the toxic form of mercury) in fish and shellfish. At this meeting the Food Advisory Committee issued a draft joint advisory that for the first time combines FDA's and EPA's advice into a single uniform advisory targeted at pregnant women, women who may become pregnant, and nursing mothers. It also mentions canned tuna for the first time, although it unfortunately fails to provide specific guidelines for the consumption of canned tuna. The advisory also mentions children as a segment of the population to limit its intake of fish based on the presence of mercury, but again fails to give guidelines on this matter. This is significant because while the FDA and EPA are warning the public about consuming fish contaminated with mercury, the administration is still moving forward with a proposal that undermines our current clean air laws and allows polluters to continue spewing toxic mercury into our air when the technology exists to limit this dangerous pollutant.

- Exposure to mercury at high doses can cause tremors, inability to walk, convulsions –and even death. But at levels more commonly seen in the U.S. documented mercury exposure effects include damage to the senses and the brain. EPA Mercury Factsheet, *EPA to Regulate Mercury and Other Air Toxics Emissions from Coal-and Oil-fired Power Plants, 14 December, 2000.*
- Children exposed to far lower levels of methylmercury in the womb have exhibited delays and deficits in learning ability. In addition, children exposed after birth are more sensitive potentially to the toxic effects of methylmercury than adults because their nervous systems are still developing. EPA Mercury Factsheet, *EPA to Regulate Mercury and Other Air Toxics Emission from Cola-and Oil-fired Power Plants, 14 December, 2000.*

Further, the EPA explicitly acknowledges that current technology can achieve a three-fold larger decrease in mercury emissions by 2008 than the Bush Administration's plan could achieve by 2018.

- In 2001 the Environmental Protection Agency presented information to Edison Electric and estimated that by 2008 a 90% reduction in mercury emissions from coal-fired power plants was possible with available technology and strong enforcement of the current Clean Air Act.
- The Bush Administration plan would result in three times more mercury pollution for decades longer than strict enforcement of the Clean Air Act allows. Enforcing the Clean Air Act will cut mercury emissions from power plants to five tons per year by 2008, Under the Bush Administration's recent plan mercury emissions would decrease only to 15 tons per year by 2018.
- And while the Bush administration's proposal has a stated goal of 70% reductions in mercury by 2018, EPA's own data indicate that the proposal will reduce emissions only 38% to 46% by 2020. Cook Steve, "EPA Releases Parallel Rules to Cut Mercury, Nitrogen Oxides, Sulfur Dioxide from Utilities," January 30, 2004 Federal Register, 40CFR Parts 60 and 63.

Clearly by allowing continued violation of the law the agency will miss a great opportunity to improve public health, the environment and the economy which could have been achieved by enforcing the clean air laws and by achieving MACT.

CAP AND TRADE

At best, this practice allows the dirtiest plants to continue operating with no improvement while a distant plant becomes marginally cleaner. In practice it localizes pollution unfairly harming those living closest to the dirtiest power plants.

Consider the following "real Life" example of how electric utilities use the trading system to continue avoiding requirements to clean up SO₂ emissions. Title IV of the 1990 Clean Air Act Amendments addresses the acid rain problem by requiring electric utilities to reduce their SO₂ and NO_x emissions. Compliance with the SO₂ requirements can be achieved under the act in any of three ways: switching to low sulfur coal, installing scrubbers or purchasing allowances from other sources.

The Utilities embrace the allowance provision because it provides the opportunity to meet the letter of the law without seriously trying to reduce emissions. For example, if the utility has plants of varying age where the cost of additional emission reduction will also vary significantly, the opportunity exists for the company to be very selective in deciding what, if any, pollution will be eliminated.

For example, at Plant A it may cost \$200/ton and at Plant B it may cost \$100/ton to reduce emissions with improved scrubbers. If sufficient reduction can be achieved at Plant B to bring the company into compliance the company is able to do absolutely nothing about cleaning up the emissions from Plant A. If SO₂ pollution credits can be purchased for less than \$100/ton then the company would be able to avoid reducing emissions altogether. The sad fact is that many, perhaps all, utility companies are willing to do just that. It was the utility industry that led the lobbying effort to include this loophole in the act. The industry lobbied for the trade-off provision on the grounds that the higher cost of doing the job properly, i.e., by eliminating emissions, would hurt their competitive position. They pretended not to understand the fact that pollution control costs are passed on to their residential customers, just as other rate increases are ultimately paid by their residential customers. [Industrial and commercial customers add the rate increase to the price of their products.. School districts and municipalities obtain the needed revenue from property taxes.] As regulated monopolies, the utilities cannot use competition as an argument for not spending money on pollution control- except in the very special case where they have, through past lobbying efforts, created a thorny problem for themselves. (See PURPA below).

Another case illustrating the utility industry's short-sightedness with respect to reducing sulphur dioxide (SO₂) emissions was aired by National Public Radio in 1995. The report told how a class of sixth graders from New York State outbid a Cleveland-based utility company in the SO₂ allowances market. (SO₂ credits are traded on the open market at the Chicago Board of Trade.) Concerned with the effects of acid rain which the students had found to be "horribly acidic" (as low as 3.0), the class had raised over \$3,000 and used it to purchase the rights to 21 tons of SO₂ pollution. The spokeswoman for the Cleveland electric utility company which was outbid by the middle school students had this to say about the incident. "If for whatever reason sufficient emission allowances were not available for us to continue to use our coal plants as they're currently configured, then we would have to invest in a more expensive technology such as a scrubber or such as burning natural gas or something like that. And, if the allowance market went away that would merely drive up the price of what it would cost us to generate the energy for our customers. So, in the long run the customers are the ones who pay". (emphasis added) Siess, Alfred, "Regulatory and Legal Issues in Industrial and Hazardous Waste Management" July 1995, The 27th Mid-Atlantic Industrial and Hazardous Waste Conference – Lehigh University

CONTINUED EASING OF REGULATIONS AND DELIBERATE DISTORTION OF SCIENTIFIC FACT

George W. Bush hit the ground running in 2001. By May he was already gutting the New Source Review (NSR) requirements of the Clean Air Act. The administration's attacks on the environment have continued unabated.

The Union Of Concerned Scientists recently released a comprehensive report on the Bush administration's failures to properly enforce other mandates of the Clean Air Act including, as shown below, specifically the regulation of mercury emissions from power plants.

2004 UCS "Scientific Integrity In Policy Making"

"CENSORING INFORMATION ON AIR QUALITY : Mercury Emissions from Power Plants

'The Bush administration has long attempted to avoid issuing new standards to regulate mercury emissions by coal-fired power plants based on Maximum Achievable Control Technology (MACT), as required by the Clean Air Act. Mercury is a neurotoxin that can cause brain damage and harm reproduction in women and wildlife; coal-fired power plants are the nation's largest source of mercury air emissions, emitting about 48 tons annually.³⁰

"As a prelude to the current debate, published accounts to date have documented that senior Bush officials suppressed and sought to manipulate government information about mercury contained in an EPA report on children's health and the environment. As the EPA readied the report for completion in May 2002, the White House Office of Management and Budget and the OSTP began a lengthy review of the document. In February, 2003, after nine months of delay by the White House, a frustrated EPA official leaked the draft report to the *Wall Street Journal*, including its finding that 8 percent of women between the ages of 16 and 49 have mercury levels in the blood that could lead to reduced IQ and motor skills in their offspring.³¹

"The finding provides strong evidence in direct contradiction to the administration's desired policy of reducing regulation on coal-fired power plants and was, many sources suspect, the reason for the lengthy suspension by the White House. On February 24, 2003, just days after the leak, the EPA's report was finally released to the public.³² Perhaps most troubling about this incident is that the report may never have surfaced at all had it not been leaked to the press.

"In a more recent development, the new rules the EPA has finally proposed for regulating power plants' mercury emissions were discovered to have no fewer than 12 paragraphs lifted, sometimes verbatim, from a legal document prepared by industry lawyers.³³ Chagrined EPA officials contend that the language crept into their proposed rules "through the interagency process." But Robert Perciasepe, who headed the EPA air policy office during the Clinton Administration, stated the obvious when he called the wholesale use of industry language "inappropriate". As Perciasepe told a *Washington Post* reporter: "The regulations are supposed to be drafted by the staff-the people in the science program and regulatory branches".³⁴

“Addressing Multiple Air Pollutants

“As an alternative to the president’s Clear Skies Act, Senators Thomas Carper (D-DE), Judd Gregg (R-NH), and Lincoln Chafee (R-RI) have proposed a measure that would control carbon dioxide in addition to sulfur dioxide, nitrogen oxides, and mercury. The EPA has evaluated this proposal but has withheld most of the results from the senators. However, a copy of a briefing based on the study was leaked to the *Washington Post*.³⁵ According to the briefing, the EPA concluded that the Senate proposal would cut the three pollutants earlier and in larger quantity than the Clear Skies Act, result in 17,800 fewer expected deaths by 2020, and reduce carbon dioxide emissions at “negligible” cost to industry.

“The suppression of research on air pollution is of serious concern because of its enormous impact on public health. The Clean Air Act, which passed during the Nixon administration and was strengthened in 1990 during the first Bush administration, has saved American lives. For the period up to 1990 the EPA found that, without the act, “an additional 205,000 Americans would have died prematurely and millions more would have suffered illnesses ranging from mild respiratory symptoms to heart disease, chronic bronchitis, asthma attacks, and other severe respiratory problems. In addition, the lack of the Clean Air Act controls on the use of leaded gasoline would have resulted in major increases in child IQ loss and adult hypertension, heart disease and stroke.³⁶ In its 1999 study the EPA projected that in 2010 alone, the 1990 strengthening amendments “will prevent 23,000 premature deaths and avert over 1.7 million incidents of asthma attack...67,000 incidents of chronic and acute bronchitis...4.1 million lost work days.”

“According to *The New York Times* EPA staff members recounted that they discussed the EPA’s unreleased report indicating the advantages of the Carper-Gregg-Chafee proposal at a May meeting with Jeffrey Holmstead, assistant administrator for air programs. As these EPA staffers contend, Holmstead wondered out loud “How can we justify Clear Skies if this gets out?” although he has since stated that he did not “recall making any specific remarks.³⁷” Union of Concerned Scientists, “*Scientific Integrity in Policymaking*” February 2004