

Rachel's Environment & Health News

#341 - Incineration: New Evidence Of Danger

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EPA's reform of incineration rules, announced on the front page of the NEW YORK TIMES May 18, may have even less substance than we first reported (RHWN #338). EPA's May 18th announcement contained several features, but for incinerator fighters the two main ones are:

First, a moratorium on new hazardous waste incinerators;

Second, a promise of new scrutiny for existing machines that began the permitting process as early as 1984 but have never received a full operating permit.

Clarification of the Announced Moratorium

We reported May 20 that EPA's "moratorium" on new hazardous waste incinerators does not affect new incinerators that may be proposed in 46 states. These 46 have been authorized by EPA to operate the RCRA [Resource Recovery and Conservation Act] programs which issue licenses (called permits) to incinerators and other waste disposal facilities. RCRA-authorized states are free to continue issuing licenses to new hazardous waste incinerators, if they choose to.

It is true that EPA does retain ultimate authority over every RCRA facility, including all incinerators. The RCRA regulations say very clearly that the EPA administrator can deny, amend, or cancel any RCRA permit at any time to protect public health and safety.[1]

However, based on recent history, it seems unlikely that EPA chief Carol Browner would exercise this authority to prevent the operation of a new hazardous waste incinerator after a state has allowed such a machine to be built. Ms. Browner was specifically asked to exercise such authority in at least one case (the WTI incinerator in East Liverpool, Ohio), and she has refused.

In the case of WTI, there were several compelling reasons that EPA could have used to deny WTI a permit for commercial operation. The East Liverpool incinerator failed two parts of its test burn--it failed to destroy carbon tetrachloride (a known human carcinogen) with the required 99.99 percent efficiency, and it emitted more than three times as much mercury as is allowable into the local community during the test burn. Despite these documented failures, EPA has allowed WTI to begin commercial operation.

Dioxin emissions from WTI provide another reasonable basis upon which WTI's permit could be denied or revoked. The dioxin danger from WTI was scrutinized in a federal court in Ohio during February, 1993. Federal judge Ann Aldrich concluded, in her written opinion March 5, 1993, that "...[T]his Court finds it clear that the operation of the WTI facility during the post trial burn period clearly may cause imminent and substantial endangerment to health and the environment. It is patently unsafe to subject the population exposed to the facility's emissions to the risks involved in incineration while the US EPA determines what the risk is and what risk is acceptable."

Despite Judge Aldrich's conclusion that commercial operation of WTI is "patently unsafe," EPA refuses to restrict WTI's operations. Why? Vice-President Al Gore explained to a town meeting in Omaha, Nebraska March 10th that there were two reasons: because the Bush administration had tied the Clinton administration's hands by issuing WTI's first permit, and because WTI had "invested tens of millions of dollars." [2] The part about the Clinton administration's hands being tied was simply not true, as a matter of law. The part about WTI having gained the right to operate a dangerous machine because they had invested a lot of money building it was surprising not for its logic but for its candor.

Since EPA's May 18th "moratorium" on incinerators will allow states to issue permits to build new incinerators, heavy investments in new incinerators will likely force EPA to rubber stamp commercial operating licenses, just as happened at WTI.

Stricter Control of BIFs--But When?

EPA's May 18th announcement covered 184 hazardous waste incinerators.

Even more importantly, the announcement also affected 171 so-called BIFs (boilers and industrial furnaces), including 34 cement kilns that burn hazardous waste as fuel for making cement.

Together, these incinerators and BIFs burn 5 million tons of hazardous waste each year.

The main question is whether BIFs (boilers and industrial furnaces, including cement kilns) will be brought under stricter controls soon. Of the 171 BIFs operating today, none has a final RCRA permit; all are operating under "interim status."

In announcing the imposition of new, stricter controls on existing BIFs, EPA chief Carol Browner said the new BIF standards were needed to "immediately strengthen the environmental safeguards" of these facilities.

However, the DAILY ENVIRONMENT REPORT [DER], a Washington insider's newsletter, on May 20 published interviews with EPA officials putting the agency's new incineration policy into perspective:[3]

** State officials, and EPA regional offices, have been given up to 3 years to develop a process that would bring BIFs under new, stricter controls. Agency officials told DER that new, stricter incinerator rules will be proposed in 18 months to 2 years. After regulations are proposed, they will be subject to comment and public hearing, further study and revision by EPA, and eventually final issuance.

** States and EPA regional offices will have 12 months before they must begin to review interim permits for 34 cement kilns that now burn hazardous waste on a commercial basis.

** Fred Chanania, an EPA official in Washington, told DER that EPA would "not by any stretch of the imagination" be ready to issue final BIF permits in the next 18 months.

In sum, President Clinton's first term may well have ended before today's BIFs are brought under stricter control.

And stricter control is clearly needed now.

An official EPA summary of a meeting held December 7, 1992, between four EPA officials and 19 BIF operators says, "We are finding violations of basic, long-standing, fundamental requirements of the RCRA program. Many of the requirements we are discussing have been in place for 12 years...." [4]

The summary goes on to describe the following kinds of violations by BIFs:

Sixty-two percent of BIFs have violated feed-rate regulations (measuring, controlling and documenting the rate at which hazardous wastes are fed into BIFs).

Fifty-six percent of BIFs have violated the requirements for analyzing wastes (to find out what is in them before they are fed into the furnace).

The summary provides evidence of many other violations of law and regulations by BIFs. The BIF record of compliance, as revealed in this document, is nothing short of scandalous.

Furthermore, there is growing evidence that operation of incinerators and BIFs is taking a toll on human health. Last month in Atlanta, Georgia, at the International Congress on the Health Effects of Hazardous Waste, five separate studies linked various

illnesses to exposure to hazardous waste incinerators:[5]

No. 1: Charles E. Feigley at University of South Carolina in Columbia interviewed a random sample of 894 residents, 508 of whom lived downwind of a commercial hazardous waste incinerator, and 386 of whom lived upwind. Downwind residents reported a 50 to 100 percent greater prevalence of coughing, phlegm, wheezing, sore throat and eye irritation, compared to upwinders. Even after adjusting for age, and exposures to tobacco smoke, mold, and pets, downwinders were 20 to 90 percent more likely than upwinders to have been diagnosed with emphysema, pneumonia, sinus trouble, asthma, or allergies.

No. 2: Using Feigley's questionnaire, Dietrich Rothenbacher at University of North Carolina at Chapel Hill polled some 400 households in two communities near a hazardous waste incinerator--one upwind, the other downwind. Downwinders reported more diagnoses of emphysema, sinus trouble, and sleep-rouching or morning coughs.

No. 3: Michael Straight and his co-workers at the federal Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta compared 713 people living within 1.5 miles of a hazardous waste incinerator to 588 people about 8 miles from the plant. The closer community reported almost nine times more coughing and wheezing, 2.4 times as much neurologic disease (such as seizures and tremors), and 40 percent more neurologic symptoms (including tingling, blackouts, and incoordination).

No. 4: Melody M. Kawamoto of the National Institute for Occupational Safety and Health (NIOSH) in Cincinnati followed up documented reports of headaches, hot flashes, irritability, memory problems, tremors, and erratic blood pressure changes in workers from a then-closed hazardous waste incinerator. All 14 symptomatic former employees suffered headaches, dizziness, and memory problems.

No. 5: A team of researchers led by Woodall Stopford of Duke University Medical Center in Durham, N.C., examined 29 men, ages 23 to 50, who complained of chronic nausea, headache, dizziness, and feelings of intoxication. All the men had worked at hazardous-waste incinerators. Eight of the 15 men with joint pain had arthritis of unknown cause; more than half the men had middle-ear disease causing vertigo [a sensation as if the external world were revolving about the individual] or gait problems; roughly half had memory problems; and 22 exhibited sweating or wide fluctuations in pulse and blood pressure. Sleep disorders, severe depression, and recurring suicidal thoughts plagued 27 of the 29 men. "And all [27] had difficulty controlling impulses--rage reactions--either verbally or physically," Stopford said. Sixteen of the men said they had "homicidal thoughts."

--Peter Montague

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[1] EPA's licensing authority under RCRA has been summarized in a 5- page letter from Lynn E. Moorer to Vice-President Albert Gore, dated March 15, 1993.

[2] Gore quoted in a transcript of a March 10th meeting, attached to Moorer's letter, cited above.

[3] Jeff Johnson, "States, EPA Regions Given Three Years to Start Applying New Standards for BIFs," DAILY ENVIRONMENT REPORT May 20, 1993, pgs. AA-1, AA-2.

[4] Thanks to EPA's Hugh Kaufman, who provided a copy of the Dec. 7 meeting summary and a memo Kaufman himself wrote to Carol Browner May 7, 1993, about the summary.

[5] All five studies were described briefly in "Hazardous incinerators?" SCIENCE NEWS Vol. 143 (May 22, 1993), pg. 334.

Descriptor terms: incineration; hazardous waste incineration; epa; carol browner; interim status; rcra; bifs; wti; east liverpool, oh; carbon tetrachloride; mercury; dioxin; ann aldrich; al gore; cement kilns; international conference on the health effects of hazardous waste; morbidity statistics; mortality statistics; statistics; studies;