

INEEL NEWS
Environmental Defense Institute
News and Information on
Idaho National Engineering and Environmental Laboratory

April 2000

Volume 11 Number 3

Environmental Groups Announce Victory over DOE's Plutonium Incinerator

Last September, Gerry Spence, Jackson, Wyoming attorney, filed a law suit on behalf of five organizations, including the Environmental Defense Institute. At issue was the Department of Energy's (DOE) failure to comply with environmental laws in its plan to build a plutonium incinerator at the Idaho National Engineering and Environmental Laboratory (INEEL).

On March 24 of this year, DOE offered to settle the lawsuit shortly before it was slated to go to court. The Settlement Agreement was unanimously approved by all the Plaintiff organizations which included Keep Yellowstone Nuclear Free, the Environmental Defense Institute, the Sierra Club, the Jackson Hole Conservation Alliance, and the Snake River Alliance.

This Settlement Agreement represents a significant win for the public in terms of eliminating yet another unnecessary source of radiation pollution in our air. This major victory shows how hard the people will fight for our environment and our children's future. Similar DOE incinerators were shut down by citizens suits in California, New Mexico, and Colorado. The main terms of the Settlement Agreement include:

- DOE agrees to postpone any further permit activities for the incinerator portion of the Advanced Mixed Waste Treatment Project at INEEL.
- DOE will ask EPA and Idaho to issue partial permits which allow the non-incinerator part of the project to go forward. This involves the waste characterization and "super compactor" part of the project. Eliminating the incinerator portion of the project vastly reduces the environment threat.
- DOE agrees to be "committed to pursue the goal of environmentally sound alternatives to incineration" on a nationwide basis. It will pursue that goal, in part, by appointing a "blue ribbon panel" of independent scientists to study non incineration alternatives.

- At a minimum, DOE will not further pursue the INEEL incinerator until after the blue ribbon panel releases its conclusions, slated for December 2000.
- Plaintiffs will dismiss the federal court case in Wyoming without prejudice to refile if DOE decides later to pursue the incinerator.
- DOE agrees to pay \$150,000 in attorney and expert fees which Keep Yellowstone Nuclear Free has incurred.
- All plaintiffs may pursue the petition to DOE to "debar" British Nuclear Fuels as a federal contractor. BNFL is the contractor DOE chose to build and operate the Plutonium Incinerator.

Uncertainty remains about the final outcome of this issue because the findings of the blue ribbon panel are not binding on DOE and the next Administration may not be sympathetic to downwinder concerns. This is only the first round of many in this incinerator battle.

This interim victory over the plutonium incinerator came at considerable cost to people living in the shadow of INEEL's radioactive releases. It is a tragic commentary on the regulatory climate in the State of Idaho and DOE's blatant disregard for environmental law, that allowed this project to proceed as far as it did. Regulators and federal agencies supported by our collective tax dollars are fiercely opposing public interest groups advocating for compliance of this nation's laws! That statement in itself is a tragic acknowledgment that the system is functioning in opposition to the very populace it is mandated by law to protect.

Thus far, success in this litigation, was possible **only** because the good folks in Jackson Hole generously contributed a half million dollars required to hire the best attorneys and technical consultants to launch a credible legal challenge that DOE knew it could not overcome in court. ❁

Environmental Groups File Notice of Intent to Sue Over 18 Year Operation of High-Level Nuclear Waste Incinerator

On April 11th, Keep Yellowstone Nuclear Free of Jackson, Wyoming, the Environmental Defense Institute of Troy, Idaho, and David McCoy, an Idaho Falls attorney, filed a Notice of Intent to Sue U.S. Department of Energy over operation of the New Waste Calcine Facility at the Idaho National Engineering and Environmental Laboratory (INEEL).

"The incineration of high-level radioactive wastes is, without question one of the most dangerous forms of thermal waste treatment in the world," said Tom Patricelli, Executive Director of Keep Yellowstone Nuclear Free. Yet, the Environmental Protection Agency and the State of Idaho have not required this operation to meet the same regulatory requirement of far less dangerous municipal waste incinerators. The EPA and the State of Idaho have turned a blind eye to a far more dangerous incineration facility, which burns extremely radioactive materials—which in minute quantities are dangerous to human health."

The Notice cites violations of three federal statutes in operating the New Waste Calcine Facility for eighteen years without the required permits. The Calciner is an incinerator that burns deadly liquid high-level radioactive waste left over from a process that dissolved reactor fuel rods to reclaim highly enriched uranium for nuclear weapons programs. A month of direct negotiations with Chuck Finley, EPA Region X Deputy Administrator over the Calciner's illegal operation produced no results, leaving the Plaintiffs no alternative but to initiate legal action.

The Notice states that: "The current operation of the Calciner violates multiple aspects of federal law, and cannot be allowed to continue. We request the DOE immediately halt operations of the Calciner, and suspend any further operations until such time as appropriate permits have been issued and the facility complies with all federal laws."

Internal DOE reports show plans to operate the Calciner through 2012, incinerating an additional 2.15 million gallons of high-level radioactive waste.

The Calciner has been operating without a hazardous waste permit for over eighteen years, and on "interim status" for over eleven years. "This violates both the spirit and the letter of this nation's environmental laws, which were enacted in order to ensure that hazardous waste management practices are conducted in a manner that protects

human health and the environment," said Dave McCoy an attorney and resident of Idaho Falls. "The State claims to have put a June deadline on permitting the Calciner, however DOE has an eighteen year track record of getting the State to grant further extensions for the Calciner's 'interim status.'"

The Notice comes only three weeks after DOE agreed to settle a separate lawsuit with some of the same organizations by postponing construction of a Plutonium Incinerator at INEEL until alternatives to incineration are analyzed. "The risks of this dangerous Calciner operation are unacceptably high for the residents, workers and the environment," said Chuck Broschius, Executive Director of the Environmental Defense Institute. "DOE is taking advantage of a regulatory loophole by using interim status when more appropriate and stringent hazardous waste regulations should apply."

Since the early 1960's the INEEL operated two high-level radioactive facilities for the purpose of converting this waste to a solid and more stable form for storage. The first was called the Waste Calcine Facility which incinerated 4.06 million gallons of high-level waste between 1963 and 1981. The second high-level incinerator called the New Waste Calcine Facility burned an additional 4 million gallons between 1982 and the present, for a total of over 8 million gallons.

The process involved a technology known as calcination. Calcination of high-level radioactive wastes involves the use of fluidized-bed combustion of kerosene to dry out nitric acid high-level wastes. The high-level wastes come from the Idaho Chemical Processing Plant (ICPP) which extracted plutonium and highly enriched uranium from spent naval reactor fuel shipped to the Idaho site. The ICPP's name was recently changed to INTEC.

The liquid high-level waste was generated from the chemical separation of highly enriched uranium and other materials from "high-burn-up" spent naval reactor fuel at the Idaho Chemical Processing Plant. These nitric acid wastes contained large concentrations of transuranic and fission products and were stored in eleven underground stainless steel tanks. The wastes were then drawn from the Tank Farm and sprayed into a vessel containing an air-fluidized bed of granular calcine solids. The bed is heated by combustion of a mixture of kerosene and oxygen.

All the liquid evaporates, while the radioactive fission products that do not go out the stack, adhere to the granular calcine bed material in the vessel.

The Calciner involves several systems including a Denitration Plant which reduces the nitric acid content of the wastes, a High-level Liquid Waste Evaporator to further reduce the liquids, and a fluidized bed incinerator that burns off the liquid leaving behind a granular mixture. In effect calcination is a technology to bake away the liquids from the waste. In doing so, this process involves the handling of extremely dangerous radioactive wastes—which in minuscule quantities can be lethal.

A high-level liquid waste Calciner, if not adequately controlled can be a major aerosol emitter of extremely dangerous radioactive wastes. By virtue of the extremely concentrated radioactivity in the wastes, the Calciner is even more dangerous than the proposed BNFL plutonium incinerator.

John Walsh, Spokesman for the Department of Energy, is reported as stating that “the Calciner, built in 1962 and upgraded in 1982, does not need state or federal permits because it predates environmental regulations.”

The Calciner and related INTEC operations (where the Calciner is located at INEEL) have a disturbing history of accidents, environmental contamination and excessive worker exposures. According to official records obtained from the Energy Department between 1991 and the present:

- There were at least 34 incidents where equipment, and filter failures, power outages, and poor conduct of operations resulted in excessive atmospheric releases of radioactive aerosols. In some cases there was widespread and severe contamination. For example, in April 1992 employees were forced to remain indoors after an accidental release from the main stack went beyond the plant boundary. Forty acres of land were contaminated.
- On March 25, 2000, the Calciner exceeded regulatory limits for release of hazardous pollutants to the air.
- In 1991, an explosion at INTEC caused worker over exposures and significant damage to the facility.
- There were at least six fires at INTEC. Inspectors found several instances where fire and radiation alarms were shut off.
- There were at least 19 incidents where workers were overexposed to radiation.

- DOE safety oversight teams have reported a continuing decline in safety. According to a 1998 September report by the DOE Headquarters Office of Environment, Safety and Health, “Workplace safety at INEEL has deteriorated since 1994 . . . corrective action plans found that deficiencies were not resolved and that lessons learned from previous accidents were not being effectively applied. In environmental management and controls, data indicate weak regulatory compliance and inadequate, short-term, quick fix solutions . . . one fifth of all INEEL occurrences in 1997 were related to radiation protection (personnel contamination) and environmental management occurrences have increased by one third from 1994 to 1997.”

- In the last five years, the Defense Nuclear Facility Safety Board issued nine unsatisfactory reports on the Calciner and related high-level liquid waste evaporator. All five reports challenge the Calciner’s readiness to restart operations. The June 2, 1997 report “commented on the failure of the DOE Idaho Operations Office to identify inadequacies in the contractor’s state of readiness before certifying readiness for operations and commencement of the Operational Readiness Review for the [Calciner] HL liquid waste evaporator.”

- The High-level Waste EIS says that “technical constraints, have hindered DOE’s efforts to sample off-gas emissions from the New Waste Calcine Facility,” so there is uncertainty about what is going out the stack.

If the State and EPA, respond to public pressure, and finally force the Calciner shutdown until it receives an operating permit, there is no public confidence that the regulators will fully enforce all the legal requirements. The most recent example of this lax enforcement is the State and EPA’s approval of the Plutonium Incinerator Permits. If the lawsuit goes to trial, the gross deficiencies in DOE’s permit application will be exposed.

Another example of lax regulatory enforcement is the sixteen year operation of the INEEL hazardous low-level Waste Experimental Reduction Facility (WERF) incinerator without required permits. WERF incinerated over 3.55 million cubic feet of radioactive waste since 1984. DOE admits that WERF does not meet Clean Air Act requirements yet operations will continue through 2002.