

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

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## **DOE Announces Temporary Shutdown of High-Level Radioactive Waste Incinerator**

On May 5th, the Environmental Defense Institute, Keep Yellowstone Nuclear Free, and David McCoy filed a Notice of Intent to Sue the Department of Energy (DOE), State of Idaho, and the Environmental Protection Agency (EPA). The Notice cite's violations of environmental law related to the continued operation of the mixed hazardous chemical and high-level radioactive waste incinerator known as the Calciner located at INEEL.

The State and EPA are named as potential defendants in the Notice because the regulatory agencies failed over the Calciner's 18 year operating history to force DOE to comply with the required permitting requirements. The Calciner never was able to meet regulatory emission requirements and thus never received a permit, yet the regulators allowed the Calciner to operate under "interim status." Federal statutes only allow a five year "interim status grace period" for operating incinerators to get into compliance. That means interim status expired for the Calciner in 1987. On June 5, the State of Idaho announced that it had received a declaration from DOE to close the Calciner and submit a Closure Plan by August of this year.

This welcome news was tainted when DOE also announced that it reserves the right to restart the Calciner if it is selected as a treatment alternative in the INEEL High-Level Waste Environmental Impact Statement Record of Decision, due for release in January 2001.

The first Waste Calcine Facility stated incinerating high-level liquid waste in 1963 and was replaced by the New Waste Calcine Facility in 1982. Between the two incinerators, over eight million gallons of liquid waste from a chemical process that dissolved reactor fuel rods was solidified into a granular calcine material and put into storage silos.

Internal DOE documents show that if the Calciner is restarted, DOE intends to permit it as a "thermal treatment" rather than the more restrictive category of hazardous high-level radioactive waste "incinerator." Current federal statutes would disqualify both "thermal treatment" and "incineration." The only statutorily

approved treatment for mixed hazardous high-level radioactive waste is vitrification, which turns the liquid waste into glass/ceramic logs.

In creative waste category gerrymandering, DOE is trying to reclassify what has always been classified as high-level waste to a less restrictive "mixed transuranic" category. If successful at this slight of hand, DOE may be able to restart the Calciner with only modest upgrades to the emission control systems, and save hundreds of millions of dollars.

The State of Idaho considers the 1.4 million gallons remaining in the INEEL Tank Farm as high-level waste. However, the State is leaving the door wide open for DOE to reclassify the waste to a mixed transuranic or "waste incidental to reprocessing (WIR) determination." A similar attempt by DOE to reclassify high-level waste at Hanford was summarily dismissed by Washington and Oregon State regulators.

If DOE is successful in reclassifying the high-level waste as mixed transuranic, or "incidental waste," then it will avoid the regulatory requirement of vitrification specified in the Code of Federal Regulations.

Since 1982, the second Calciner incinerator has operated in an interim status, under a "Consent Order" with the State and EPA. The DOE was not held to the requirements under Part B of a Resource Conservation Recovery Act (RCRA) permit. It only had to meet vague requirements for the past eighteen years under a regulatory regime that is best described as "hands off." Thus, one of the most dangerous hazardous waste incineration facilities in the country was allowed to operate between 1982 and the present with *ad hoc* RCRA regulatory requirements that were not tied to quantifiable performance standards normally required for hazardous waste incinerators.

The incineration of high-level radioactive wastes is, without question one of the most dangerous forms of thermal waste treatment in the world. The federal government should be held too at least the same standards

as the private sector, particularly for ultra hazardous facilities with the potential for severe harm to the human environment.

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 requires municipal garbage incinerators to undergo full permitting before operation, but has 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.

Keep Yellowstone Nuclear Free (KYNF) Vice President Mary Woollen Mitchell noted that, "The Calciner has a horrible record of accidents, radioactive releases, worker exposures, and environmental contamination," said Mitchell. "As such, we informed the DOE that we intended to sue if they attempt to operate the Calciner into the future, and we also notified the EPA that we intend to sue them due to the intolerable dereliction of their oversight responsibility at the Calciner," she said. "This type of incineration degrades what is becoming a scarce commodity these days - clean air. We cannot and will not accept the threat the Calciner poses to human health and the environment."

KYNF and EDI lead attorney Gerry Spence hailed the announcement of the Calciner as well. "We've struck another blow against the culture of contamination coming from the DOE," he said. "The Calciner is yet another example of the environmental and public health travesties perpetrated by DOE on an unsuspecting public. We're winning this war one battle at a time." ☺

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## Whom Can You Trust to Tell the Truth About Incineration of High-Level Radioactive Waste?

Has Beverly Cook, INEEL Manager told you that this high-level liquid waste, left over from a process that dissolved reactor fuel rods to reclaim highly enriched uranium for nuclear weapons programs, is the most deadly radioactive and toxic material in the world? **No.** The DOE completely trivializes the irreparable damaging properties of this most dangerous high-level nuclear waste, especially if they are incinerating it.

Has Chuck Finley, Deputy Administrator of EPA

Region X told you that the only other comparable dangerous operation to high-level nuclear waste is the incineration of nerve gas in Utah and Oregon? **No.** EPA's self-adopted role is to provide DOE a kinder, gentler buffer to the public by denying that any regulatory violations exist and denying that five independent investigative reports by the Defense Facility Nuclear Safety Board showed major problems with the Calciner operation.

Has DOE's spokesman, Brad Bugger told you that the two generations of high-level waste incinerators, called the "Calciner," burned more than eight million gallons of this most hazardous witches brew since the 1960's? **No.** DOE spokespersons do not want to confuse the general public with what they consider "highly technical" information, like, in the past ten years there have been at least 34 incidents where equipment and filter failures, power outages, and poor conduct of operations resulted in excessive atmospheric releases of radioactivity.

Has Steve Allred, Director of the Idaho Department of Environmental Quality, the primary environmental law enforcer, told you that the present high-level waste incinerator has been operating for eighteen years without the required hazardous waste treatment permit? **No.** DEQ endorses a legally nonexistent "interim status permit" for the incinerator that is not in the statutes. Interim status is a five-year grace period allowed by the law for DOE to get into compliance with the regulations, however, interim status ran out the Calciner in 1987.

Has Charles Clark, Administrator of Environmental Protection Agency Region X told you that the high-level waste incinerator never could meet the legal emission requirements, and thus, never could qualify for a hazardous waste incinerator permit? **No.** EPA will not even acknowledge that only vitrification meets hazardous waste treatment standards for high-level waste. Yet EPA allows the Calciner to operate for decades in violation of the treatment standards spelled out in the Code of Federal Regulations, sign off on illegal "interim status" extensions which lets DOE off the compliance hook that otherwise would require "trial burns" to demonstrate emissions compliance.

Do you believe John Walsh, Idaho spokesman for DOE who reported that the high-level waste "Calciner" built in 1962 and upgraded in 1982 does not need state or federal permits because it predates environmental regulations? **No** federal judge in this country will believe such an outrageous statement.

Has Joel Case, Director of INEEL's High-level Waste Program told you that incineration violates the cardinal principal of containment which is to contain radioactivity, not to disperse to the air? **No.** Incineration is the least expensive way of converting this most destructive of all liquids into a solid form, the consequence of which spreads radiation into the atmosphere.

Have the injured and dying INEEL workers been given a chance to tell their story of rejected compensation and medical benefits for radiation and chemical exposures at the site? **No.** This human tragedy is happening right here, just like it is happening at other DOE sites across the country where workers are considered expendable and their legitimate calls for adequate protection, health care, and injury compensation are criminally ignored by the federal government.

Can you trust attorney Gerry Spence who filed a winning legal challenge in federal court that showed DOE was operating illegally and putting Idaho and Wyoming residents in harms way? Most reasonable people would conclude that if DOE could have won the AMWTP Plutonium Incinerator case in federal court, they would not have settled the case before it went to trial.

Noone disputes the fact that high-level liquid waste leaks from the INEEL Tank Farm pose a catastrophic risk to the Snake River Aquifer. For the past twenty-five years, DOE promised to build a state of the art high-level waste vitrification treatment plant that would turn the waste into glass, like the plant at DOE's Savannah River Site. That commitment has yet to be fulfilled. The DOE continues to use this cost cutting inaction as an excuse to run the Calciner as the "lesser of the two evils." That is like dealing with the devil who says, "You must choose between radioactive air and radioactive water." As long as the State of Idaho and EPA are co-conspirators allowing the old decrepit Calciner and WERF incinerators to operate without permits and without meeting regulatory emission limits, DOE has no incentive to build new compliant treatment plants.

We must all join together to implement the changes necessary to ensure that the high-level liquid waste is converted to a safe stable/storable form, and our tax dollars to state and federal environmental regulators are spent to stop illegal and unethical operations and not coverup polluters. We have a right to the truth! This truth will not jeopardize INEEL's place as a viable part of our economy. It is the entrusted job of those agency directors to honestly

educate the public about matters that affect our health, welfare and future. The truth is the only solid basis for our ability to make informed decisions that affect our lives and we cannot accept anything less. ☺

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## WERF Incinerator Continues to Operate Without Permit

The DOE has operated the Waste Experimental Reduction Facility (WERF), a mixed hazardous chemical and low-level radioactive waste incinerator since 1982 to treat INEEL and off-site waste. In May, DOE announced plans to shutdown WERF by September 2002. The plan reflects a decision to use commercial facilities and nonthermal processes to treat mixed low-level radioactive waste rather than upgrade the WERF incinerator to meet new air emissions standards established by the Environmental Protection Agency (EPA).

The Environmental Defense Institute is calling on DOE too immediately shutdown the WERF. If the incinerator cannot meet current standards and qualify for a permit, continuing to run it for another 27 months is unconscionable and illegal. The fact that the State of Idaho and EPA are not opposing DOE's September 2002 shutdown time line is consistent with a long history of regulatory enforcement malfeasance. The situation is especially egregious when commercial non-incinerator options are available to DOE whose bottom line is to save money regardless of the environmental and health damage that results from continued operation of the WERF.

The WERF incinerator is a dual-chamber controlled-air system, with capacity to burn approximately 700 tons of waste per year. The incinerator is typically scheduled to operate for 10 to 20 days per month to incinerate mixed hazardous chemicals and low-level waste. Liquid chemicals are frequently mixed with absorbent material like ground up corncobs prior to being fed into the incinerator apparently to reduce the concentration level imposed by regulatory standards. For instance, PCB waste must be below concentrations of 50 parts per million.

As of July 1999, WERF incinerated 3.5 million cubic feet of radioactive and mixed hazardous radioactive waste, 5,300 cubic feet of which was shipped in from other sites. According to the Idaho Department of Environmental Quality, WERF (incinerator operation) has never received a full Resource Conservation Recovery Act

(RCRA) permit during its eighteen years of operation. RCRA permit exists for handling and storing hazardous waste, but the incinerator part of the operation remains unpermitted.

The WERF experienced between 1991 and 1999 six-system failures, two filter failures, and four worker exposures. Two WERF trial burns conducted in 1997 and 1998 to determine if the WERF effluent met regulatory limits **failed minimum destruction and removal efficiency tests**. WERF emissions are also not in compliance with the federal Toxic Substances Control Act or State of Idaho Air Pollution regulations.

DOE's Inspector General issued a finding recently that the WERF, should be shut down by 2002 because of a poor cost-benefit analysis. The IG's report notes that the high costs of emission control upgrades required to meet the new Clean Air Act requirements that come into effect in 2002 tip the cost-benefit balance. WERF upgrades to meet the new standards would cost six million dollars.

The WERF has to date processed more than three million cubic feet of mixed hazardous low-level radioactive waste, but the facility has yet to receive a permit under RCRA; has operated in violation of the interim status regulatory obligations, has violated air quality emissions requirements; has violated the Toxic Substances Control Act; has failed to comply with State of Idaho Air Pollution regulations; and has not met the environmental review requirements of the National Environmental Policy Act ("NEPA"). These violations represent not only a willingness on the part of DOE and its regulatory overseer's Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (DEQ) to default on their statutory obligations, but also present a serious and immediate environmental risk that our environmental laws are intended to avoid. Since its operation, the WERF has experienced numerous accidents and safety failures and has posed serious threats to human health and safety.

The WERF has been operating without a permit under RCRA for more than eighteen years and on so-called "interim status" for over eleven years. This violates both the spirit and the letter of RCRA; a law that was enacted in order to ensure that hazardous waste management practices are conducted in a manner which protects human health and the environment. The goal of the law was to require "that hazardous waste be properly managed in the first instance thereby reducing the need for corrective action at a future date."

By failing to comply with the permit requirements stated in RCRA, the DOE has defeated and nullified the objectives and national policies set forth in RCRA by the impermissible use of interim status for the WERF. Despite the requirements, no final permit has ever been issued or denied for the WERF as a hazardous waste treatment facility. Violations of the interim status provisions include failure to provide the information reasonably required to process its permit application. The DOE's failure to successfully bring the WERF emissions into compliance with State of Idaho Air Pollution regulations can result in unplanned releases of radioactive and nonradioactive hazardous pollutants to the atmosphere.

The National Environmental Policy Act (NEPA) requires federal agencies to evaluate the environmental impacts of all major federal actions significantly affecting the quality of the human environment. Current operation of the WERF is in violation of NEPA because no sufficiently detailed analysis, and consideration of alternatives, environmental costs, or balancing of the economic and technological benefits have been prepared for the WERF. In addition to emissions of environmentally hazardous radionuclides, the WERF releases many other deadly hazardous wastes into the environment in violation of the Toxic Substances Control Act, including but not limited to: dioxins, PCBs, arsenic, beryllium, chlorine, mercury, chromium, cadmium, and lead.

The 1995 Programmatic Spent Nuclear Fuel and INEEL Environmental Restoration and Waste Management Environmental Impact Statement (EIS) contains one sentence specific to WERF that states: "For the near term, stored and newly generated mixed low-level waste at the INEEL will be treated at the Waste Experimental Reduction Facility Incinerator." The body of the EIS contains only vague, conclusory, limited and general references to the WERF as a treatment facility for mixed low-level waste. There is no explanation indicating any careful balancing of environmental risk with benefits which satisfies the NEPA.

The current operation of the WERF violates multiple aspects of federal law, and cannot be allowed to continue. DOE must immediately halt operations of WERF, and implement a permanent closure plan.

**What can you do?** Call or write Brian Monsun at Idaho Department of Environmental Quality, 1410 North Hilton, Boise, ID 83706, 208-373-0502. AND

Chuck Finley, USEPA, 1200 Sixth Avenue, Seattle, WA, 98101, 1-800-424-4372. ☺



## Radwaste Dump Slated for INEEL Flood Zone

DOE is finally prepared to meet regulatory requirements by constructing a Resource Conservation Recovery Act (RCRA) Subtitle-C hazardous waste dump called the INEEL CERCLA Disposal Facility (ICDF). However, the choice to locate the ICDF at the Idaho Chemical Processing Plant (ICPP), now called INTEC, is misguided because it is in the 100-year flood zone of the Big Lost River and is above the Snake River Aquifer.

The Environmental Defense Institute has for years challenged the illegal dumping of mixed hazardous radioactive waste in unpermitted sites at INEEL.

The issue discussed here, however, is where on INEEL is the appropriate location for this hazardous waste dump. The fundamental siting criteria must be that it NOT be over the Snake River Aquifer, and Not in or near a flood zone.

The US Geological Survey released a 1998 report that modeled the **median** 100-year flow rates in the Big Lost River down stream of the INEEL Diversion Dam at 6,220 cubic feet per second (cf/s). The USGS report cross section number 22 at the ICPP puts the median flood elevation at 4,912 feet. Again, this is only the mean flow rate (as opposed to the maximum rate of 11,600 cf/s) of just a 100-year flood, and **not** including any additional cascading events like the failure of Mackey Dam. There is only five-foot difference between the ICPP elevation of 4,917 feet and the USGS predicted flood elevation of 4,912 feet that does not include Mackey Dam failure. The USGS study also employed current modeling technics and plotted 37 separate cross sections on the INEEL site.

The reason why locating the ICDF at the ICPP is a bad idea - especially underground - is because the northern half of the ICPP lies in the 100 flood plain of the Big Lost River. DOE's plan is to locate the ICDF on top of the current ICPP percolation ponds which are immediately south of the perimeter fence. The ICPP as a whole is about as flat as a table top with only a couple feet change in elevation north to south. The USGS released a study in 1996 that estimated the flow range for the Big Lost River at the INEEL. "The upper and lower 95-percent confidence limits for the estimated 100-year peak flow were 11,600 and 3,150 cubic feet per second (cf/s), respectively."

Since 1950, INEEL has experienced significant flooding events in 1962, 1965, 1969, 1982, and 1984. In an effort to mitigate the flooding problem, DOE built a

diversion dam on the Big Lost River that is designed to shunt flood waters to the south and away from INEEL facilities. USGS released another report 1998 that modeled the mean (midrange) 100-year flow rate of 7,260 cf/s upstream of the INEEL diversion dam. USGS estimated that the Big Lost flow rate downstream of the diversion dam at 6,220 cf/s with a thousand cf/s going down the diversion channel for a total median flow rate of 7,260 cf/s upstream of the INEEL diversion dam. "This peak flow was routed down stream [of the Big Lost River] as if the INEEL diversion dam did not exist. On the basis of a structural analysis of the INEEL diversion dam (U.S. Army Corps of Engineers) assumed the dam incapable of retaining high flows. The Corps indicated that the diversion dam could fail if flows were to exceed 6,000 cubic feet per second." This USGS study acknowledged that the northern half of the ICPP would be flooded with four feet of moving water, even at this midrange (mean) flow rates.

Since the radioactive waste will be extremely hazardous for tens of thousands of years and flooding will flush contaminates down into the aquifer, a conservative risk assessment would model the upper 95-percent confidence limits for the estimated 100-year peak flow of 11,600 cf/s. USGS has proposed this additional research to DOE, but the Department thus far is not willing to provide the funding. A USGS hydrologist notes, "The flow of 11,600 cfs represents the upper 95 percent confidence limit flow for the estimated 100-year peak flow."

USGS estimates the mean 500-year Big Lost River flood rates at 9,680 cf/s (34% greater flow rate than the mean 100 year flood). This 500-year flood would inundate the ICPP and surrounding area. These potential hazards must be taken into consideration when making hazardous mixed radioactive waste dump siting decisions in these vulnerable areas because of the long-term consequences and the potential for additional aquifer contamination.

Cascading events should also be considered. This is known as a worst case scenario where one event triggers another event. For instance a 500-Year flood plus failure of Mackay Dam (built in 1917) resulting in estimated flows of 9,700 + 54,000 cubic feet per second respectively would be an example of a cascading event. Failure of Mackey Dam is non-speculative in view of the 1976 failure of the Teton Dam of similar construction and the fact that Mackey Dam lies within 11 miles of a major earthquake fault line

that produced the 1983 Borah Peak 7.3 magnitude quake. An internal 1986 DOE report that analyzed the impact of Mackey Dam failure scenarios notes that, "Mackay Dam was not built to conform to seismic or hydrologic design criteria," and "the dam has experienced significant under seepage since its construction." This EG&G study acknowledged that the ICPP, Navel Reactors Facility, and the Test Area North (LOFT) facilities would be flooded with at least four feet of water moving at three feet per second.

USGS did not consider cascading events but noted previous studies showing that failure of Mackay Dam alone would result in 6 feet of water at the INEEL Radioactive Waste Management Complex (RWMC). Other studies recognized by USGS note that, "Rathburn (1989, 1991) estimated that the depth of water at the RWMC, resulting from a paleo-flood [early] of 2 to 4 million cf/s in the Big Lost River in Box Canyon and overflow areas, was 50-60 feet." "If Mackey Dam failed, Niccum estimated that peak flow at the ICPP would be at 30,000 cfs."

Comparing these flow rates with the USGS estimate 100-year mean flow of 6,220 cfs that would flood the north end of the ICPP with four feet of water, and a Mackey Dam failure becomes a real disaster potential with respect to the existing underground waste at the ICPP.

DOE is relying extensively on the Big Lost River Diversion Dam (located at the western INEEL boundary) to shunt major flood waters away from INEEL facilities. The last comprehensive analysis of this diversion dike system (below the diversion dam) was conducted by USGS in 1986 in a report titled *Capacity of the Diversion Channel below the Flood Control Dam on the Big Lost River at the INEL*. In this study USGS estimated a mean flow rate of 9,300 cf/s, 7,200 of which went into the diversion channel and "2,100 cf/s will pass through two low swells west of the main channel for a combined maximum diversion capacity of 9,300 cf/s." "A sustained flow at or above 9,300 cf/s could damage or destroy the dike banks by erosion. Overflow will first top the containment dike at cross section 1, located near the downstream control structure on the diversion dam."

This USGS study did not analyze the construction of the diversion dikes but they would likely fail as did the upstream diversion dam, built at the same time, that the Army Corps of Engineers found deficient. "On the basis of a structural analysis of the INEEL diversion dam (U.S. Army Corps of Engineers, written comments, 1997), the dam was assumed incapable of retaining high flows. The Corps indicated that the diversion dam could fail if flows

were to exceed 6,000 cf/s. Possible failure mechanisms are: (1) erosion of the upstream face of the dam that results from high-flow velocities and loss of slope protections (riprap), (2) overtopping of the diversion dam by flows exceeding the capacity of the diversion channel and culverts, (3) piping and breaching of the diversion dam because of seepage around the culverts, and (4) instability of the dam and its foundation because of seepage."

Building dams around the proposed INEEL CERCLA Disposal Facility (ICDF) as was done at the RWMC is not an acceptable flood protection answer because lateral water migration will go under the dams and local precipitation will be held in exacerbating the leachate conditions. The liner of the ICDF will not be capable of maintaining integrity with the increased hydraulic pressure during a flood because it is only capable of blocking what minimal surface water may leak past the cap and infiltrate the waste.

There are good legitimate reasons why dumps (even municipal garbage dumps) are not allowed by statute in flood zones. Dams by definition are only functional if there is regular maintenance which cannot be assumed once DOE ends institutional control of INEEL in a hundred years. Dumping the waste on top of the ground and mounding the cover over it will result in the cap eroding over the long-term which again is unacceptable.

Regulators' contention that there is a degree of efficiency in co-locating the ICDF with the ICPP percolation ponds that they must be remediated along with the "windblown" soil contamination area around the percolation ponds not only defies common sense but is also illegal. DOE must designate another location for the ICDF that is not near a flood plain and not over the aquifer. DOE's own study has identified at least two such sites where the Lemi Range meets the Snake River Plain.

Nuclear Regulatory Commission restrictions prohibiting citing radioactive waste disposal dumps on 100 year flood plains must be observed. [NRC 10 CFR ss 61.50] The reason for these restrictions is because the flood water will leach the contaminants out of the waste and flush the pollution more rapidly into the aquifer. Since these wastes will remain toxic for tens of thousands of years, they must be disposed of responsibly in a safe permanent repository.

These issues must be kept in mind also with respect to the ICPP high-level waste tanks that are some forty feet underground as well as the underground spent reactor fuel storage and calcine storage bins at the ICPP. Water acts as a moderator and if the underground spent fuel vaults are flooded, it could cause a criticality. All of these

underground high-level waste sites are extremely vulnerable. Former ICPP workers recall stacking sandbags six feet high around the plant during a Spring flood ten years ago.

The ICDF Engineering Design and Waste Acceptance Criteria (WAC) must be developed with public involvement through a free and open discussion. Only uncontainerized wastes that can be compacted during placement should be allowed so as to minimize subsidence caused by container decomposition. Biodegradable, volatile organic compounds (VOC), collapsible, soluble, TRU, or Greater than Class C Low-level, and Alpha-low-level waste must also be excluded from the ICDF dump and sent off-site. Prior to completing the ICDF Title II Design, workshops should be convened for stakeholders to comment on the proposal. Waste Acceptance Criteria maximum contaminate concentration levels must be determined from waste sampling prior to being mixed with any stabilizing materials. In other words, "dilution is not the solution to pollution."

USGS reports identified factors favoring downward waste migration. "In order for waste isotopes to be carried downward by water, four basic requirements are needed: 1.) availability of water, 2.) contact of the water with the waste, 3.) solubility or suspendability of the waste in water, 4.) permeability in the geologic media to allow water flow downward." This report describes in detail how all four conditions are met at INEEL including the solubility.

Once again, DOE is more interested in saving money than appropriately managing its deadly hazardous and radioactive waste. The choice of the ICPP Percolation Ponds as the site for the ICDF is purely economic. DOE's idea is to take an already severely contaminated site, dump more waste on top and cover it over.

Clearly, there are no lessons learned from previous waste mismanagement that resulted in contamination of the aquifer. Even if DOE did the best cleanup money could buy from this day forward, the burden on the aquifer from past dumping practices is still enormous. Is this the legacy we want to leave to future generations?

**What can you do?** Call or write: Kathleen Trevor at INEEL Oversight Program, 1410 North Hilton, Boise, ID 83706, 1-800-232-4635. Wayne Pierre, USEPA, 1200 Sixth Avenue, Seattle, WA, 98101, 1-800-424-4372. Also see a detailed "Mixed Waste Disposal in Flood Zones" report on EDI's Website at, <http://home.earthlink.net/~edinst/>

## Argonne National Laboratory-West Revised Cleanup Plan Still Deficient

DOE issued a revised cleanup plan for the Argonne National Laboratory West (ANL-W) at INEEL called *The Explanation of Significant Difference (ESD)* dated 2/14/00. This Plan represents yet another example of a long tradition of Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (DEQ) bankrupt and illegal interpretation of this nation's environmental laws.

This new Plan revises a previous plan to use bioremediation to cleanup soil contamination. The original idea was to put plants in the contaminated soil in the hope that they would absorb the radioactive and chemical waste. This process is known as phytoremediation. As Environmental Defense Institute predicted two years ago, the plan did not work in the desert environment of INEEL.

The trivalent chromium, selenium, silver, zinc and inorganic mercury in the Main Cooling Tower Blowdown Ditch and the trivalent chromium, mercury, selenium, silver, and zinc in Ditch B put these contaminated soils in the mixed hazardous radioactive waste category. By definition this category of waste must be either treated to meet Land Disposal Restrictions (LDR) [40 CFR 268.40] or disposed of at a RCRA permitted hazardous waste disposal facility in order to meet the appropriate regulatory requirements (ARAR's). The agency's new Plan fails to meet this most basic of criteria because the selection of the INEEL Central Facilities Area Industrial Waste Landfill does not even qualify for even a RCRA permit as municipal garbage dump, let alone a RCRA hazardous chemical and radioactive waste Subtitle C disposal site.

Additionally, the failure of phytoremediation in the two-year testing period at ANL-W makes it all the more criminal that the agencies continue to endorse this misguided shortcut in cleanup for other INEEL and ANL-W contaminated sites. It is unconscionable that EPA and DEQ allow the continued use of the unlined heavily contaminated Industrial Waste Pond until 2003 and Sewage Lagoon at ANL-W until 2033 that allow more pollution to migrate through these unlined pits to the Snake River Aquifer.

Also see EDI's detailed ANL-W Cleanup report: <http://home.earthlink.net/~edinst/>

## INEEL Dose Reconstruction Health Study Update

The Centers for Disease Control (CDC) is conducting an INEEL Dose Reconstruction Health Study to determine what historical health impacts resulted from operations at the site from its inception in 1949 through 1992. The cutoff date of 1992 was chosen because that was the year DOE ended reprocessing of nuclear reactor fuel at the Idaho Chemical Processing Plant (ICPP). It should be noted that Argonne National Laboratories-West at INEEL is still reprocessing reactor fuel.

CDC started this study in 1992 and to date has completed a chemical screening review to identify which chemicals contributed to the major doses. A similar screening process is near completion on radionuclides.

The document review phase of the CDC study is also nearing completion that entailed physically going into the DOE document archives and identifying what information is available that would be useful in quantifying what contaminants were released, when they were released, and how much was released. CDC established four categories for documents for the document review process in descending order of importance, Pertinence-1, 2, 3, and 9, with Pertinence 1 documents being the most important, and Pertinence-9 being less important.

Of the thousands of boxes of documents CDC identified since the study began as either Pertinence 1, 2, or 3, DOE managed to destroy 886 of these boxes. This represents potentially millions of pages of information. Dr. John Till, head to Risk Assessments Corp. (RAC), lead CDC contractor for the health study, said at a CDC meeting on June 13 in Coeur D'Alene, Idaho that 87 of the 886 boxes destroyed are Pertinence-1 and 2 documents. This represents potentially over 430,000 pages of information and a scandal of enormous proportions in terms of evidence destruction by DOE.

During the study process in 1994, CDC researchers identified over 15,000 documents or boxes of documents that may be relevant to the health study. The DOE, through a formal memorandum of understanding, agreed to place the information under a destruction moratorium until after CDC had completed its health study.

In the fall of 1998, CDC requested physical retrieval of 4,948 boxes of previously identified documents from DOE's INEEL archives. DOE contractor Lockheed Martin responded to the CDC's request by stating that 602 boxes had been destroyed and an additional 72 boxes were missing from the archive due to being "permanently recalled

by the custodian," which is an obtuse way of saying the originator of the box of documents ordered the box sent back to them without leaving any copies or record of its current location.

This new figure of 886 boxes destroyed potentially represents over four million pages of information that CDC researchers will not have available to determine how much radiation was released from INEEL over its nearly five-decade operating history. If the boxes were stacked, the pile would be more than 1,300 feet tall.

John Till believes "the issue of records being destroyed before we have had an opportunity to verify the content is very disconcerting. This should not have happened, and shows that whatever system was supposed to be in place to prevent it, did not work"

Dr. Till notes that "we [RAC] have recategorized a number of boxes from what they were categorized to be by [former CDC contractor Sanford Cohen and Associates] SC&A. Therefore, I think it is important that no further boxes be destroyed until we have had a chance to verify their contents, even the category nine boxes. I think it is critical that [CDC's INEEL Health Effects] Committee takes stock in what has happened and weighs in to recommend some rules that should be followed. It should be recognized that document destruction may be necessary to continue, but not until everyone is absolutely certain what is being destroyed." Till adds that, "...if any boxes of records are to be reviewed during the cleanup process, they must not be destroyed until after they have been looked at. Further, it must be made clear that Pertinence-9 documents from the SC&A review should not be construed as of no value until we have a chance to verify this." [see INEEL News 2/99]

A legitimate question to ask is: when did CDC learn about the document destruction problem and what-if anything is being done about it? CDC's Phase-I research contractor Sanford Cohen and Associates (SC&A) quarterly reports (October-December 1993) and (January-March 1994) acknowledge that document destruction is a significant problem area. SC&A's 1994 draft final Phase-I report quantifies the document destruction at 65,000 boxes. Eight years later CDC is still sitting on its collective bureaucratic hands without an effective plan to stop the destruction of more documents.

The National Institute for Occupational Safety and Health (NIOSH) based in Cincinnati, Ohio is conducting a



completely separate health study of the INEEL workforce called an epidemiologic morbidity study that reviews worker cause of death. Document destruction is a major problem with this study as well. In a September 1993 protocol report, NIOSH states: "While stored files are no longer being destroyed under the DOE-ordered moratorium in March 1990, prior to its implementation approximately 11,000 boxes of INEL [sic] records had been destroyed. Many of these boxes contained information germane to INEL's operations during its earlier years, and the only way to compensate for their loss is by obtaining oral histories for each INEL facility from its long-term employees." By sheer volume alone, the worker health study has a major document destruction problem along with the CDC's INEEL Dose Reconstruction Health Study.

Lockheed Martin (then DOE contractor) INEEL employee newspaper "Star" ran an article on November 24, 1998 describing a two-year campaign to clean-out files. The article titled "Site-wide files clean-out a big success" notes that 13,231 cubic feet of documents were destroyed in 1997 and 14,859 cubic feet were destroyed in 1998 for a total of 28,090 cubic feet over the two-year campaign. Lockheed Martin believes that "it costs approximately \$2,150 annually to maintain a single five-drawer filing cabinet in a local government office. Based on this last statistic alone, nearly \$3 million in soft dollar savings may be realized by eliminating a total equivalent of 1,426 file cabinets worth of records and non-records." The 2,809 cubic feet are the equivalent of 1,872 boxes. It is uncertain if there is a connection between the Lockheed Martin file clean-out initiative and the documents CDC wanted preserved, but the coincidence is telling.

Critics contend that the CDC public health agencies identified the revealing radiation release documents in 1994 and had their funding cut significantly. Progress on the INEEL health studies floundered for years. DOE/Idaho may have seen the implications and used the intervening years to clean house. Critics believe that CDC under a mandate to produce a health study will proceed with what diminished information is available. If there were smoking guns, critics allege, they were likely long since sent to the shredder.

In 1990, then DOE Secretary Watkins issued a memorandum mandating the retention of epidemiological and other related health study records. Every succeeding DOE Secretary including current Secretary Bill Richardson, have reauthorized the freeze order. Elaborate records management plans were developed to establish categories or document series that were to be included in the destruction moratorium. Unfortunately at INEEL, the plans were not adequately implemented. The DOE Idaho Operations Office is actually attempting to unilaterally drop some of the freeze categories from the moratorium. It is uncertain if the public health agencies will challenge this action.

Technically speaking, CDC has little authority over DOE documents. This is due to a Memorandum of Understanding (MoU) signed in 1996 between DOE and Department of Health and Human Services (DHHS) that establishes the mechanism for DOE to provide DHHS with funding for health studies at DOE sites. CDC is an agency under DHHS. The MoU however specifically stipulates that all documents reviewed by CDC during the health studies remain under the control of DOE. The MoU states: "The Department of Energy and its contractors shall continue to maintain documents, records, record systems, and other information sources for the conduct of epidemiologic research. Although the DHHS will be provided with access to relevant information and will possess copies of such data for use in its research, the data will remain the property of the Department of Energy."

CDC's INEEL Health Effects Subcommittee, established to give advise to the public health agencies on the INEEL health studies, unanimously recommended that CDC combine doses received by the public from INEEL, and doses received from fallout from the nuclear bomb tests conducted at the Nevada Test Site. CDC continues to refuse to combining the doses. The general public emphatically demands that they be told the whole truth - not only what was released from INEEL, but also what the cumulative impact on their health was from all domestic nuclear operations were over the last five decades.

One might ask where is the State of Idaho Division of Health in this controversy? Officially, the State is endorsing the process CDC has set up and offers no substantive critique in defense of Idahoans that may be victims of DOE's operations. Victims will find little or no support from Idaho State health agencies despite those agency's own findings that significant increases in radiogenic diseases are occurring near INEEL. [see INEEL News 1/99]

These INEEL health studies are not just another academic exercise, or the equivalent to determining where to put a new interchange on Interstate 15. It is about determining why southeastern Idahoans had next to the lowest cancer rate in the nation during the first half of the 20th century, and now in the second half of the century after INEEL's start up, southeastern Idaho ranks up there with the polluted big cities. This is about the health and safety of hundreds of thousands of Idahoans and residents of Wyoming who live in the shadow of the INEEL nuclear reservation. For more information on the Idaho Division of Health studies around INEEL that indicate increased rates of radiogenic diseases, see INEEL News, 1/99.

**What Can You Do?** Call/write Dr. Charles Miller, CDC Radiation Studies Branch, 4770 Buford Hwy NE, Atlanta, GA30341-3724, 1-888-619-6738.

And Elkie Shaw-Tulloch, Idaho Division of Health, 450 W State Street, Boise ID 83720-0036, 208-334-5950 ☎