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Comprehensive Review

of

Environmental Defense Institute
Comments

on

Argonne National Laboratory –West
now called
Materials Fuel Complex

at the
Idaho National Laboratory

December 2015

RE: Public Comments for inclusion in the public record on US Department of Energy (DOE) Draft HWMA/RCRA Partial Permit, Argonne National Laboratory-West (ANL-W) Idaho National Laboratory (INL) and the following operations:
Contaminated Equipment Storage Building (CESB)
Hot Fuel Examination Facility (HFEF)
Sodium Components Maintenance Shop (SCMS)
Sodium Process Facility (SPF)
Sodium Storage Building (SSB)
Transient Reactor Test Facility (TREAT)

EPA ID No. ID4890008952
Idaho Department of Environmental Quality
Public Notice April 12, 2004 Docket # 10HW-0404

I. Summary

The Idaho Department of Environmental Quality (IDEQ) is once again rushing forward in its INL RCRA permitting campaign presumably in response to the EPA Office of Inspector General 2/04 report that severely criticized IDEQ's permitting process, and/or lack thereof.

IDEQ fails to mention that the agency has allowed these operations to function for many decades without the necessary oversight and permits to ensure protection of the public's health and safety. Again inadequate information on the permit is offered to the public via its Notice, Fact Sheet [hereinafter referred to FS], and inadequate public availability of the full draft permit for review.

Although IDEQ offers its three page "Fact Sheet" on its internet website, no additional facility description or reasonable discussion on the multitude of operations and regulatory issues related to these operations is offered.[2] Therefore, a member of the public is consequently left in the dark with respect to the importance of this permit and the potential for impact on the public health and safety.

Generally, these ANL-W plants house some of the most toxic and radiologically hazardous operations on the INL site, such as an ongoing fast breeder reactor program, spent reactor fuel reprocessing to extract highly enriched uranium and plutonium, and highly toxic contaminated reactor sodium coolant (pyrophoric when exposed to air) waste processing, and storage/maintenance of four metric tons of bomb grade plutonium. [3]

These operations deserve the kind of full disclosure and permit process transparency requisite for such significant regulatory actions under (40 CFR 270). Even the more inquisitive member of the public that takes the additional effort to "log-on" to IDEQ's website, still would not have a clue as to the enormity of this ongoing public health and safety hazard. Therefore, IDEQ fails to offer the public even the most cursory information upon which any informed decisions on the subject permit can be based.

Given the current challenges by EPS's Office of Inspector General, and EPA's Office of Compliance Assurance to IDEQ's inadequate permitting process, Idaho cannot expect to ram through this, or other RCRA/CAA permits without fully demonstrating, and disclosing to the public that IDEQ's inadequacies have been corrected.

The Environmental Defense Institute (EDI) offers only these cursory comments because the crucial detailed draft permit application information is not readily available that would be otherwise necessary to submit a substantive critique of the subject permit application. What limited analysis EDI offers below is largely based on Freedom of Information Act requests and other government agency information sources also not readily available to the general public.

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[1] See IDEQ website: www2.state.id.us/deq

[2] Plutonium Working Group Report on Environmental, Safety, and Health Vulnerabilities Associated with the Department's Plutonium Storage, USDOE, DOE/EH-0415, 11/94.

II. Argonne National Laboratory-West Background

A. Radioactive Scrap and Waste Facility (RSWF)

Argonne National Laboratory-West (ANL-W) has a solid high-level waste site called the Radioactive Scrap and Waste Facility (RSWF) that is seldom acknowledged. IDEQ's (3/04) Fact Sheet only states: "[T]he RSWF is 448 feet long x 388 feet wide and consists of a fenced area, used for storage of the remote handled mixed waste in rows of sealed carbon steel pipes, referred to as liners that are buried vertically in the ground." That's it!!!

No other description! No definition of what "remote handled mixed waste" means; (i.e. if this waste came into contact [not necessarily physical but proximally without shielding] by a worker, he/she would potentially receive a lethal dose of radiation).

The RSWF actually has 12-foot-deep steel walled underground repositories (27 rows on 12 ft. centers and 40 rows on 6 ft. centers for a total of 1200). According to DOE, the existence of severely corroded storage wells coupled with the lack of a monitoring program for soil contamination was identified as vulnerability. RSWF had as of 1981, 81 cubic meters containing 9,823,000 Ci of radioactive materials, including 40.73 grams of plutonium. [ID-10054-81@19] Responding to pressure, ANL-W upgraded 1,016 of the RSWF vaults in 1995 and plan on upgrading another 350 in the next three years.[RSWF] Even the new upgrades do not meet regulatory requirements for spent fuel storage because the contents cannot be inspected due to the welded cap on the top of the vault. However, the IDEQ regulators granted ANL-W a variance that would have otherwise disqualified the operation under federal regulations.

B. ANL-W Radioactive Airborne Releases

Historically, ANL-W radioactive airborne releases have been significant (1952-81 periods were 44,580 Ci). [ID-10054-81@19] More recent (1998) ANL-W releases were 4,804,362.6 mili-curie. [4] The proposed Argonne National Laboratory - West (ANL-W) Permit offers no guarantees that upgrade to emission control systems will be required for the new SNF processing. In 1999, ANL-W released 1,911 curies and 402.5 curies in 2000 of radioactivity into the atmosphere. [5] These release numbers are considered grossly understated because ANL-W release data is nearly all based on what DOE/ANL-W calls "**engineering calculations**" **and because only two of the ANL-W fourteen identified release sources are "continuously monitored.**"[ibid note# 4] IDEQ and DOE continue this obfuscation of environmental law in the INL Permit to Construct a Pollution Source where IDEQ allows DOE to a "self-exemption from permitting requirements of certain small emission sources, removal of permit requirements on boilers that predate permit to construct requirements, and to eliminate the requirement for a nitrogen oxide ambient monitoring network." [6]

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[3] 1998 INL National Emission Standard for Hazardous Air Polutants-Radionuclides, Annual Report, June 1999, USDOE/ID, DOE/ID-10342(98).

[4] Idaho High-Level Waste and Facilities Disposition, Final Environmental Impact Statement, page 4-30, September 2002, DOE/EIS-0287.

[5] State of Idaho, Department of Environmental Quality, Notice of Opportunity for Public Comment on a Permit Application with the Option to Request a Public Comment Period on the Proposed Permit to Construct, Joan Lechtenberg, Air Quality Division, 20 March 2003.

[6] Michael S. Alushin, Director, Compliance Assessment and Media Programs Division Office of Compliance, U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance, January 29, 2003 letter to Chuck Broscious, Environmental Defense Institute.

A curie of radioactive gas/liquid/solid is an enormous amount of radioactivity. To put this into perspective, most standards for public exposure to radioactivity is expressed in pico-curies, or one-trillionth of one curie, or one part per trillion, due to the extremely biological toxic nature of radioactive (gas/liquid/solid) material on the human body.

Although the ANL-W electrometallurgical reprocessing uses a high-temperature melting process that generates less solid/liquid waste than the conventional (PUREX) liquid acid/solvent dissolution process used by DOE, the air emissions are apparently significantly higher due to the release of volatized radioactive and toxic contaminates. Currently, only HEPA particulate (dust) filters are used, which are ineffective at removing volatized pollution.

Recent findings by EPA (1/29/03) state that the INL Title V Clean Air Permit was rejected due to understated emissions of hazardous air pollutants. [7] Additional Spent Nuclear Fuel (SNF) reprocessing and other operations included in the proposed RCRA permit will only increase these emission violations. Additionally, IDEQ's recent attempt to grant DOE/ANL-W a variance to the State of Idaho's Settlement Agreement that prohibits additional waste shipments to INL. This variance would allow significant quantities of "out-of-state" nuclear reactor spent fuel to be reprocessed at ANL-W. [8] [See Attachment A] The current status of this variance is uncertain.

A reasonable and credible predictor of future compliance is analyzing past history of an operation. Therefore, EDI offers additional historical data that is useful in evaluating ANL-W current waste miss-management of legacy waste and an ongoing propensity to disregard regulatory requirements as well as shipping waste to the INL waste burial-ground RWMC as a means to shift management responsibility. The 1977 radioactive content of ANL-W's annual waste generation sent to the RSWF or RWMC is 1,300,126 curies. [ERDA-1552 @V-23] DOE claims that ANL-W dumped 1.1 million curies at the RWMC between 1952 and 1983. [EG&G-WM-10903] ANL-W's Zero Power Physics Reactor fuel was releasing fission product because the uranium has oxidized and hydrided on approximately 25% of the plates, causing stainless steel cladding to bulge. In a few isolated cases, the cladding is breached. A total of 83,276 spent fuel elements/assemblies are stored at ANL-W.
[DOE Spent Fuel Working Group Report, p.25]

There is no apparent documentation that waste interred in the RSWF has been moved, so it is assumed that the inventory based on previous documentation is what currently is interred in the ANL-W RSWF burial ground vaults. It must be noted that ANL-W in previous years, and in a desperate attempt to obfuscate RCRA regulations, "classified" the material in the RSWF as "product" destined for further processing to extract nuclear material for DOE.

C. ANL-W Liquid Waste Management

One of the most glaring examples of IDEQ's proposed ANL-W permit deficiencies is the apparent exclusion of all the 130 waste treatment, storage and disposal operations directly related to the subject permit operations. Below is a brief discussion of the ANL-W liquid waste management operation issues related to unlined percolation ponds and other waste operations.

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[7] Comments on Argonne National Laboratory-West Spent Nuclear Fuel Processing Variance Proposed by State of Idaho, Environmental Defense Institute, March 18,2003. www.environmental-defense-institute.org

ERB-II Leach Pit Sediment Sampling Data

Detected Radiochemical	Maximum Detected Value pCi/g
Yttrium-90	2,247.00
Americium-241	0.65
Cobalt-60	196.00
Cesium-134	1.80
Cesium-137	29,110.00
Uranium-234	35.64
Uranium-235	2.18
Uranium-238	3.54
Neptunium-237	329.00
Strontium-90	2,247.00
Iodine-129	124.00

[ANL-5277]

ANL-W thumbs their nose at the law and continues to use leach pits that currently pose unacceptable hazards to environmental health and safety. Specifically, ANL-W intends to continue to use the contaminated Industrial Waste Pond (ANL-01) and the Sewage Lagoons (ANL-04) and the State and EPA regulators are silent. Continued waste water discharge perpetuates the leaching of contaminates into the soil column and eventually to the aquifer below. ANL-W acknowledges that: "Human health risks from cesium-137 will be at acceptable levels within 130 years due to radiological decay." [Plan@14] Yet in the next paragraph, the plan states: "Institutional controls are assumed to remain in effect for at least 100 years." What about the remaining thirty years?

ANL-W mismanagement of liquid waste "contaminates to the ground water show arsenic and chromium exceeded the risk based screening levels." The ANL-W RI/FS well (M-13) 1993 sample data shows strontium-90 at 1,330 pCi/L at 642 feet. [RI/FS,Vol.III App. H pg. 3] EPA maximum concentration level for strontium-90 in drinking water is 8 pCi/L. The Plan does not acknowledge this strontium migration or propose remedies that will correct the problem.

The Sanitary Waste Lift Station (ANL-31) is listed as a no action site presumably because ANL wants to continue to use the pumps. The Plan offers no data to substantiate this no action decision. The Track 2 Investigation shows maximum concentrations of sludge collected from the Lift Station as follows: cesium-137 at 9,380 pCi/g, strontium-90 at 2,470 pCi/g, uranium at 4.8 pCi/g, neptunium-237 at 13 pCi/g, and cobalt-60 at 16.3 pCi/g.[Vol. III Track 2 App.-H pg.4] This contamination suggests that this Lift Station was inappropriately excluded from the cleanup. May 1995 Track 2 reflect continued high gross alpha and gross beta in the pump water and sludge. [Vol. III Appendix - E]

The EBR-II Leach Pit (ANL-08) underwent an interim "cleanup" action in 1993 when only "the majority of the sludge was removed "and the pit was backfilled. The Plan fails to acknowledge that the remaining sludge had the following pCi/g concentrations: cesium-137 at 29,110, iodine-129 at 124, neptunium-237 at 329, strontium-90 at 2,247, yttrium-90 at 2,247. [RI/FS Vol.II, pg.59-60] Inadequate interim actions end up being permanent because of the additional volume of contaminated soil used as backfill is now part of the problem.

D. Integral Fast Breeder Reactor Program

The IDEQ draft RCRA permit fails to disclose the operation or the waste generated by the EBR-II or its immediate/current progeny the Integral Fast Breeder Reactor.

Argonne-West's current Integral Fast Reactor (IFR) project at ANL-W (previously called the Experimental Breeder Reactor [EBR-II] completed in 1996 and extensively modified) is the most recent application of DOE's Advanced Liquid Metal Reactor (ALMR) program. The Experimental Breeder Reactor-II is also part of the ALMR program. The IFR (ANL-764) represents a grave safety, environmental, and proliferation threat. The reactor "breeds" new plutonium as it operates, uses sodium coolant that can burn or explode if it comes in contact with air or water, and depends on exotic new technologies for separating plutonium, exacerbating already serious nuclear weapons proliferation and waste disposal problems.

Earlier in 1993, President Clinton had announced that the IFR program was to be phased out. This was due, in part, to "significant proliferation policy concerns," as well as its failure to generate commercial interest, according to Budget Director Leon Panetta. In a March 8 letter to Idaho Governor Cecil Andrus, Panetta said, "The IFR reactor consumes as well as produces a wide array of transuranic isotopes, including plutonium_239. This administration plans to continue the bipartisan policy of discouraging support for reactor programs that are based on a transuranic fuel cycle." IFR work is conducted largely at the Department of Energy's Idaho nuclear facility and its Argonne, Illinois laboratory. Idaho and Illinois officials have been lobbying hard to revive the program, and succeeded in getting the Clinton Administration to restore IFR funding it had previously pledged to cut. Fiscal year 1993 funding level for ALMR was $130 million. Argonne's budget is $425 million. President Clinton and Secretary O'Leary were successful in cutting the ALMR program in the 1994 Budget, however nearly $30 million was put into the 1996 budget for the IFR's spent fuel preprocessing facility.

In the 1970s, the U.S. established a national nonproliferation policy opposing the "plutonium economy"___nuclear fuel cycles dependent upon separating plutonium from spent nuclear fuel and using that plutonium in reactors that produce more plutonium as they consume it. Plutonium separation is known as "reprocessing," and reactors that both use and produce plutonium are known as "breeders." In the early 1980s, President Reagan quietly abrogated that policy and pushed work on new reprocessing and breeder technologies. The centerpiece of that work is the IFR.

By way of background, the IFR breeder is a "fast" reactor. Current commercial reactors utilize fuel based on low enriched uranium as fuel and water as a coolant/"moderator" to slow the neutrons down to make fission more efficient. Fast reactors, by contrast, use plutonium for fuel, so powerful a material that no moderator is needed to slow the neutrons to make the reaction more efficient. These reactors run, therefore, on "fast" neutrons; hence the name, "fast" reactor.

Because of its use of sodium as a "liquid metal" coolant, the IFR is particularly dangerous because sodium, in the presence of air or water, can explode and/or burn, causing the whole reactor to catch fire. Additionally, the reactor uses plutonium_ based metallic fuel, which itself is flammable. Neither risk _ coolant nor fuel catching fire___exists with traditional reactors, which use water as the coolant and uranium oxide rather than plutonium metal as fuel.

Furthermore, because of the use of plutonium as fuel, a meltdown in such a reactor is especially dangerous. If the molten plutonium forms a critical configuration, a small-scale nuclear explosion can occur, releasing the radioactivity into the environment. Such an event cannot occur in a normal reactor using low enriched uranium and no added plutonium.

But the central concern about the IFR is that it is a "breeder" reactor. The IFR is designed to produce new plutonium constantly as it consumes old plutonium. This produces major nuclear weapons proliferation risks. If that plutonium were diverted or stolen, the results could be grave.

Finally, an important component of the IFR is a new reprocessing technology called "-Preprocessing" or "electro_ refining." Traditional techniques for separating plutonium from spent nuclear fuel involve dissolving it in acid and using solvent extraction, a process known as PUREX (Plutonium Uranium Extraction). IFR advocates are attempting to develop a far cheaper technique, in which spent nuclear fuel is dissolved into a molten salt at high temperature ("pyro processing") and an electric current is passed through it, with the plutonium and other Transuranic elements "plating out" on one of the electric poles ("electro refining"), with the remaining fission products (90+% of the waste) staying behind in the salt. The remaining high level waste would, in some proposals, be disposed of in surface low-level dump sites rather than more expensive deep geological repositories as currently planned a very dangerous outcome.

The IFR reprocessing technique would, thus, vastly increase the volume of radioactive waste; put it in a far worse chemical form, far more difficult to dispose of properly (soluble salt); involve large environmental releases during routine operations; and pose major accident risks. Most importantly, it would provide a new, cheaper, easier technique for separating plutonium from spent fuel, creating a major proliferation problem. And it would lead to a kind of plutonium economy, with large amounts of plutonium available for theft or diversion for weapons purposes. (Claims by IFR advocates that the plutonium would be mixed with other actinide elements such as americium and neptunium are misleading; these are readily removed.)

Proponents of the IFR are now trying to call it an "actinide burner" rather than a breeder reactor, and call its plutonium separation technology "pyro processing" rather than reprocessing. However, a name change cannot alter the fact that the IFR is simply the long discredited breeder reactor and plutonium reprocessing system in new clothes.

Because the IFR produces more plutonium as it consumes other plutonium, studies by the National Academy of Sciences, Livermore National Laboratory, and the American Physical Society have concluded that one would have to run numerous IFR's for a thousand years to even reduce plutonium inventories to 1% of current levels___and that would still be a tenfold poorer result than the IFR design goals. Every time some plutonium would be consumed in such a reactor, a good deal of additional plutonium is produced, plus a huge quantity of other high level radioactive wastes. Orwell would be bemused by an industry that calls such a scheme the “solution" to the problem of radioactive wastes.

Because of concerns that a "plutonium economy" would radically increase proliferation risks, the U.S. government in the 1970s forbade commercial reprocessing of plutonium from spent

nuclear fuels and its subsequent "recycling" in breeder reactors. What is not widely recognized is that this policy was quietly reversed in the 1980s by the Reagan Administration, and that a far-flung DOE program was quietly undertaken to develop new technologies for plutonium reprocessing and breeder reactors. These projects have advanced with little public attention to date, yet pose a major unaddressed proliferation risk. This program, under the general rubric of "partitioning and transmutation" or "actinide burning" is actually a very dangerous effort to develop exotic new nuclear technologies for plutonium separation and recycle. It is imperative that there be a serious review of an effort to expose to public scrutiny this program that could so severely exacerbate proliferation problems.

The new partitioning and transmutation (PT) projects have two major components: (a) new methods of separating plutonium and the minor actinides from spent fuel, particularly using pyro processing or electro refining techniques, and (b) recycling those actinide elements, primarily as fuel in a new generation of reactors called "actinide burners." These new reactors are essentially breeder reactors modified so that the breeding ratio is below 1.0, i.e., so that they produce somewhat less plutonium than they consume. Because they do produce substantial amounts of new plutonium as they fission the old, they are very inefficient "transmutes." It has been estimated that one would have to run such reactors for 1000 years to reduce plutonium inventories in spent nuclear fuel by a factor of 100.

The IFR project is designed to be a self-contained full cycle facility where the reactor fuel is fabricated, burned up in the reactor, reprocessed, and finally full cycle back to new fuel fabrication. All these functions occur within the same facility. Reprocessing of high plutonium content spent fuel by melting the fuel elements is a hazardous business due to the volatilized nuclides that go out the stack. This issue is particularly problematic if the spent fuel is not put in cooling ponds for a year or more to allow the short lived isotopes to decay prior to reprocessing. Emission control system technology simply has not yet evolved to adequately filter/scrub out volatilized nuclides such as iodine and krypton species.

Credible challenges have been raised by Jim Smith, a metallurgical engineer who worked on the IFR fuel design. Smith uncovered flawed ANL-W scientific data on IFR fuel's ability to sustain temperatures that will be generated in the reactor. ANL-W harassed Smith for exposing the flawed data and ultimately fired him. Smith petitioned DOE's Inspector General to review his harassment/dismissal case. DOE responded with a 1991 report from the Office of Nuclear Safety, authored by Steve Blush. The report understated Smith's allegations as a result of ANL-W's pressure on DOE, but was extremely critical of ANL-W's handling of Smith's termination. Recent Congressional legislation that extends "whistle blower" protection to DOE and DOE contractor employees mandated that the agency challenge ANL-W's actions. Smith however has yet to be reinstated, and reportedly is extremely concerned that IFR fuel designs have not been independently reviewed.

A coalition of organizations - Nuclear Control Institute, Friends of the Earth, Greenpeace International, INL Research Bureau, Natural Resources Defense Council, Public Citizen, Safe Energy Communication Council, Snake River Alliance, and US Public Interest Research Group, threatened to file suit against DOE and Argonne National Laboratory (ANL) for violation of the National Environmental Policy Act (NEPA). DOE and Argonne tried to proceed with the IFR electro refining/pyro processing without conducting an Environmental Impact Statement (EIS) required under NEPA. Selected text of the coalition letter to DOE (8/25/95) written by Dan

Horner follows in section D. In December 1995, DOE agreed to only conduct an Environmental Assessment which is an abbreviated form of an EIS.

E. Pyro-processing of Spent Reactor Fuel

Electro refining (often used interchangeably with the terms "pyro processing" and "Electrometallurgical technology") is summarized as follows in a recent report by the National Academy of Sciences: "The Electrometallurgical technology under development at ANL is derived from many years of R&D on molten salt systems for the production of materials for nuclear reactors and weapons....The heart of the process is the electro refining step, which employs a metallic feed, molten alkali metal salts as the reaction medium, and two cathodes, one steel and the other an immiscible pool of molten cadmium, to separate actinides from fission products and other nuclear reactor fuel materials."

The electro refiner was originally designed to serve as the reprocessing component of DOE's Advanced Liquid Metal Reactor (ALMR) program. Reprocessing is the general term for separation of actinides, including uranium and plutonium, from fission products in spent nuclear fuel. The ALMR, also known as the Integral Fast Reactor or IFR is a special type of nuclear reactor known as a "breeder" capable of producing more plutonium than it consumes. In conjunction with the electro refiner, it formed a so-called closed fuel cycle. The spent fuel produced by operation of the ALMR was to be reprocessed in the electro refiner and the resulting uranium and actinides were then to be fabricated into fresh fuel, and returned to the ALMR to continue the cycle.

In 1994 Congress, with the support of DOE terminated the ALMR program. A paramount reason, along with the budgetary one, for terminating the program was its inconsistency with US non-proliferation policy - a point that the Department emphasized in its communications with Congress.

At the same time ANL began to suggest other applications for the electro refiner. A key current mission of the DOE is to reduce the environmental hazards of certain types of its spent nuclear fuel (SNF). DOE contends that the electro refiner could be applied to this mission. That application is the basis for DOE's seeking to start up the electro refiner.

Start-up of the electro refiner clearly falls into the category of "major Federal actions significantly affecting the quality of the human environment," the criterion established by NEPA for determining whether an EIS is required. The initial application of the electro refiner will involve the processing of the more than 20 metric tons (100 EBR-II spent fuel driver assemblies and 25 irradiated blanket assemblies). This amount, while clearly significant enough in itself to justify an EIS, represents only a small fraction of the thousands of tons of DOE SNF that is planned or contemplated for pyro processing.

Among the effluent streams are metallic waste forms that have not been characterized and are likely to be unsuitable for emplacement in Yucca Mountain or a similar repository environment. Because they are metallic, they will tend to be more reactive in such an environment than alternative waste forms. This factor would delay, complicate, and raise the cost of ultimate disposition, as well creating difficulties for interim storage. Therefore, these uncharacterized waste forms clearly would have significant environmental impacts.

Disposition of the other effluent streams, those containing uranium and transuranic,

respectively - is uncertain, and DOE's plans even for the interim storage have not been well articulated. Neither of the streams is amenable to direct geologic disposal. Under the most likely processing scenarios, at least one, and very possibly both, of these streams would consist of nuclear-weapons usable material. Therefore, the uranium and Transuranic streams would have significant environmental and non-proliferation impacts.

Use of the electro refiner also raises broader environmental and nuclear-proliferation issues. For example, pyro processing of spent fuel produces a net increase in the amount of radioactive waste, a fact that calls into question its utility as a tool of environmental management. Indeed, since DOE's enormous spent-fuel management problems were largely caused by reprocessing, with little thought for the long-term consequences; claims that a reprocessing technique will solve these problems deserve to be treated with skepticism. Furthermore, if the environmental-management mission, at least with regard to the EBR-II spent fuel, is to remove sodium, it is not at all clear why that mission requires separation of the spent fuel into various streams - particularly when this separation would result in nuclear-weapons-usable material.

DOE's claim that it has fulfilled its NEPA obligations rests primarily on a 1990 Environmental Assessment (EA) and Finding of No Significant Impact and secondarily on a very limited treatment in a 1995 programmatic EIS. Reliance on the 1990 document is plainly unacceptable. In light of the significant environmental impacts presented by the proposed action, the Department cannot rely on an EA to satisfy its NEPA obligations here. Start-up and operation of the electro refiner demands the detailed environmental analysis and opportunities for public participation afforded by the EIS. Moreover, DOE's own NEPA regulations require preparation of an EIS as opposed to an EA, for proposals to start-up and operate reprocessing facilities.

Even if an EA could satisfy DOE's NEPA obligations here (a notion we vigorously contest), the 1990 EA is so outdated that it cannot possibly support the proposed agency action. First, the mission for which the electro refiner originally was designed (the ALMR program) was fundamentally different in 1990 from what it is today (treatment of EBR-II spent fuel and other DOE SNF). Second, analyses in the intervening period have raised important environmental questions about the storage and disposition of the electro refiner's effluent streams - questions that arise in large part because of the change in the electro refiner's mission. Third, US non-proliferation policy has changed significantly since 1990; indeed, President Clinton's non-proliferation policy, announced on September 27,1993, constituted one of the key reasons for cancellation of the ALMR, the electro refiner's parent program in 1994. None of these crucial factors were (or could have been) analyzed in the 1990 EA. Nor are they analyzed in the 1995 PEIS. Moreover, the discussion of electro refiner operation contained in the PEIS is general and cursory. The document was not intended as a site-specific NEPA analysis of electro refiner operation, and it does not function as such. Thus, the Department cannot rely on it.

But even if nothing had changed since 1990, the existing documentation fails to meet the requirements of the law. The documents fall far short of the NEPA requirement to"rigorously explore and objectively evaluate all reasonable alternatives," including the No Action Alternative. Indeed, the two key sets of alternatives, storage of the EBR-II spent fuel, as has been done for the past 30 years, and exploration of alternative processing techniques are addressed only in the most cursory and dismissive fashion. This omission is particularly striking in light of DOE's acknowledgment that the EBR-II spent fuel, as presently managed, presents no compelling environmental, safety, or health concern.

Given the shortcomings in the analyses contained in the existing DOE documents, the fundamental changes in the program that are not addressed in those documents, and the critical environmental and non-proliferation implications of start-up of the electro refiner for its new proposed mission, we find it astonishing that DOE deems it unnecessary to prepare an EIS. In its failure to consider the environmental impacts of the course it has chosen, to analyze alternatives to that course, and to obtain input from the public, DOE has exhibited precisely the type of decision making that NEPA was designed to prevent.

Operation of the electro refiner would produce effluent streams about which there are many uncertainties. An EIS, incorporating the latest information from recent analyses much as those conducted by the National Academy of Sciences (NAS), would have been an appropriate way to address key issues to the extent possible on the basis of the available information, and to indicate what uncertainties remain. But DOE has done none of that.

The environmental problems arise from both of the two basic groups of effluent streams that would, or could, be produced by the electro refiner. The first of these is the metallic waste forms. In terms of the geologic disposal problems, these waste forms differ in important ways from those with which DOE is most familiar. In its NEPA documents, DOE has not addressed the implications of these differences, much less proposed a credible solution to the problem.

In a recent study on plutonium disposition - another application of pyro processing that its backers at ANL and DOE had advocated - a panel of the NAS rejected pyro processing, in large part because "it would produce a waste form that has not been characterized at all for long-term disposition and would probably be unsuitable for emplacement in Yucca Mountain."

Another NAS report, requested by DOE specifically to examine the utility of pyro processing for spent fuel treatment, expressed similar concerns. It said, "The major limitation of the electro-metallurgical process (whether applied to [Hanford] N-Reactor fuels or other SNF) is its present inability to produce waste forms with behavior that is well understood (in comparison, for example, to the degree to which glass forms have been studied)...The time and cost for qualifying any waste form are expected to be large, and the qualification process is fraught with technical and political pitfalls. To date, no waste forms have been licensed or qualified for geologic disposal, although a large body of knowledge has been accumulated on borosilicate glass, which is the leading candidate waste form for high-level waste and is favored over other waste types."

DOE's NEPA analysis does not in any way address this key drawback of pyro processing. Nor does it address the problem with the second set of effluent streams. In this set are one stream consisting of uranium and another consisting largely of Transuranic elements, including plutonium. Again, the comments of the Basolo [NAS] report are instructive. "According to the ANL's proposal, the first two output streams would be directed to interim storage rather than to final geologic disposal. Nonetheless, there are attendant safety and proliferation issues with respect to the surface storage of such materials for an unspecified duration." ... "If [spent fuel treatment] processes and waste streams were to yield separated uranium and plutonium, the storage problems would be significantly increased, as would the need to safeguard these separated materials from theft and diversion. Above all, product streams from this development program must be of a nature that their later treatment for ultimate disposal after interim storage is not precluded." And in its concluding list of the disadvantages of pyro processing, the NAS said, "Uranium and TRU [Transuranic] products might be considered waste, destined for TRU waste

storage or permanent disposal. Disposal would probably require oxidation of the uranium metal and TRU metal streams to oxides. If the uranium product were to be a waste stream but not acceptable for geologic disposal, the additional processing steps (e.g. oxidation) would bring into question the usefulness of the proposed electro-metallurgical technology."

This last paragraph indicates a key dilemma posed by pyro processing. If the uranium ultimately is to be disposed of as a waste, then additional time and costs will be required. At least as important, the figures for the amount of waste produced by the process and, consequently, its environmental impact, would increase dramatically. If, on the other hand, the uranium is stored in the form in which it was produced - up to 68 percent enrichment according to DOE - either in Idaho or at the Oak Ridge National Laboratory in Tennessee, or blended down to a lower enrichment level, then there are a host of environmental and non-proliferation issues concerning the processing, transportation, use, and physical security of this material.

DOE avoids addressing the troublesome realities of either of these options by failing to consider anything beyond interim storage (and even that phase, as noted above, is addressed only in the most cursory way). The failure to address long-term consequences as a result of alleged near-term needs is precisely the type of situations in which an EIS is most needed. The far-reaching environmental implications of start-up of the electro refiner, in both the short term and the long term, plainly warrant detailed analysis in an EIS.

Proliferation consequences arise from both the transuranic stream and the uranium stream. The uranium stream contains nearly pure uranium at the enrichment level of the fuel from which it is derived. EBR-II driver fuel, one of the principal components of the initial application of the electro refiner, is highly enriched - at levels up to 68%, according to DOE. As noted in the previous section, a recent National Academy of Sciences study highlighted the "attendant safety and proliferation issues with respect to the surface storage of such materials for an unspecified duration".

In addition, there are important policy considerations that would be raised by the separation of highly enriched uranium (HEU). The US government led by DOE has made the ending of the production and use of HEU a central element of US non-proliferation policy. What then, would be the impact of going forward with a process that would separate HEU - particularly when the plans for its ultimate destination are so poorly articulated?

Plutonium, the other weapons-usable material, is contained in the transuranic stream, which raises equally serious concerns. While pyro processing advocates have disputed the proliferation implications of their process, the NAS for all practical purposes, settled this point when it said, "Although the developers of the electro-metallurgical technique argue that the technology is proliferation resistant, any SNF processing that is capable of separating fissionable materials from associated fission products and Transuranic elements could be redirected to produce material with nuclear detonation capability."

The nuclear proliferation concerns raised by this fact create a serious drawback to the whole ALMR pyro processing program. These concerns are, in at least one important respect, exacerbated under the new mission for pyro processing because the transuranic stream will not, as planned under the original ALMR concept, is recycled back into a reactor. Since its principal radiological self-protection comes from Cerium-144 (the much longer-lived Cesium-137 is removed by pyro processing), this protection tapers off to such an extent that after several years it no longer meets the "spent fuel standard". Cerium's short half-life (284 days, in contrast to the 30

year half-life of Cesium-137) was not considered a serious problem when the Transuranic were intended to be recycled quite promptly into the ALMR. But with the longer storage times now contemplated, the problem could be far more serious. This issue provides an important example of the way in which the change in missions since the 1990 EA renders that EA completely inadequate.

Similarly, on a broader policy level, a crucial development that has taken place since 1990 is the enunciation of the Clinton administration's non-proliferation policy on September 27, 1993. This policy statement committed the US "to seek to eliminate where possible the accumulation of stockpiles of highly-enriched uranium or plutonium" and further stated, "The US does not encourage the civil use of plutonium and, accordingly, does not itself engage in reprocessing for either nuclear power or nuclear explosive purposes." This policy, and the specific actions the administration has taken to implement it, would be directly contradicted by proceeding with pyro processing.

We emphasize that we strongly support the Department's stated goal of expediting the safe shutdown and defueling of the EBR-II. The EIS we seek should not interfere with that goal, and it may serve to expedite it. First, it is clear that use of the pyro processor is not the only option for dealing with the EBR-II fuel. The spent fuel from this reactor has been stored for 30 years, apparently without ill effects. Proponents of start-up in DOE's Office of Nuclear Energy have argued that storage is politically untenable, because of anticipated objections from the State of Idaho. It should go without saying that political circumstances should not allow one option to prevail when other technically acceptable alternatives, including storage, are available - particularly when those alternatives are more environmentally benign and more supportive of US non-proliferation efforts than the proposed option.

Second, in the context of this letter, the alleged political difficulties of an alternative most assuredly do not relieve DOE of the responsibility of carrying out the analysis of that alternative (and others) as required by NEPA. Nor do they relieve DOE of its obligation under NEPA to provide an analysis of the environmental impacts of the alternative it has chosen.

Finally, it must be emphasized that the 1995 PEIS covers not just EBR-II blanket treatment, but also "Electro-metallurgical Process Demonstration". As noted above, the EBR-II spent fuel represents only a small fraction of the vast amounts of material that could be treated by pyro processing. DOE has not given any indication that it plans to conduct any NEPA analysis beyond that contained in the 1995 PEIS. Therefore, we are asked to accept the superficial and grossly deficient analysis in that PEIS as the basis for processing at least tens of tons - perhaps eventually thousands of tons - of highly radioactive material. [NAS]

III. Comments on IDEQ's Summary of Permit Requirement

A. Generally, IDEQ appears to be carving out arbitrary exemptions to statutes and regulations that would otherwise be required of DOE to comply with applicable environmental laws. These IDEQ actions again demonstrate the arguments presented by EDI/KYNF/McCoy in our joint petition filed with EPA Office of Inspector General (OIG) Aug 8, 2000 that requests withdrawal of IDEQ's enforcement authority.

EPA/OIG published a report responding to our petition 2/5/04 that identified numerous

IDEQ permitting deficiencies related to INL operations as well as an earlier September 1998 OIG Audit Report on Idaho's Air Enforcement Program that found, "We concluded that the State's administration and the Region [10] oversight of the stationary source air enforcement program of Idaho's significant violators were not sufficient to ensure compliance with federal and State laws and regulations." [9]

As a public advocate, EDI must continue to emphasize that the problem is over a decade old, and reiterate that these operations at issue here are processing the most deadly material on the planet - waste generated from the legacy of reprocessing nuclear reactor fuel at INL. IDEQ has never demonstrated anything close to "due diligence" in exercising enforcement authority as clearly indicated by the fact these INL operations have always operated **(for more than a decade)** without the required permits and emission control oversight (as clearly and specifically articulated in EPA/OIG reports cited herein).

B. IDEQ is required that the Permittee must inspect data gathered from monitoring and leak detection equipment and overfill controls once each operating day. Visual inspections of the tank systems will be performed daily whenever a cell is entered for equipment maintenance or repairs. Without this is a violation of the regulations that requires daily visual inspection, not whenever the "cell is entered." (40 CFR 264.1034(c))

C. 40 CFR 270 requires DOE to submit reports verifying compliance. The EPA/OIG reports clearly articulate that DOE has failed over many years to provide IDEQ or EPA timely or credible documentation on data substantiating compliance. The OIG report notes, "Further, we found that IDEQ had incomplete emissions data and waste characterization information because inspections ... of major RCRA requirements." [10] (40CFR 265.1035(a)(3)(G)(v))

IV. Lessons Not Learned

This must not be called a comprehensive plan because it does not include ANL-W's underground high-level waste site (Radioactive Scrap and Waste Facility) which as of 1981 has 81 cubic meters of waste containing 9,823,000 curies of radioactive materials including 40.73 grams of plutonium.[ID-10054-81@19] DOE must not continue to postpone treatment and disposition of this waste.

The polluter's continue their criminal arrogance by thumbing their nose at the law and continuing to use leach pits that currently pose unacceptable hazards to environmental health and safety. Specifically, ANL-W intends to continue to use the contaminated Industrial Waste Pond (ANL-01) and the Sewage Lagoons (ANL-04) and the State and EPA regulators are silent. Continued waste water discharge perpetuates the leaching of contaminates into the soil column and eventually to the aquifer below.

The Plan acknowledges that: AHuman health risks from cesium-137 will be at acceptable levels within 130 years due to radiological decay. [Plan@14] Yet in the next paragraph, the plan states: "Institutional controls are assumed to remain in effect for at least 100 years. What about the remaining thirty years." Once the CERCLA process is wound up in a few years, there are uncertainties that DOE or any other federal agency is going to fulfill its questionably enforceable commitment to provide monitoring and institutional control to ensure no people gain access to the waste sites. Again, a trust fund is warranted and a requirement under the NRC 10 CFR ss 61.63 Financial Assurances for Institutional Controls.

ANL-W's Plan, like the NRF deficient Plan, is to consolidate all the contaminated soil into the Industrial Waste Pit, and again, it does not meet Applicable or Relevant and Appropriate Requirements (ARARs). The Plan offers no maximum contaminate levels or TCLP results of all the waste planned for the Pit. This lack of full disclosure by the polluter and the regulators is unacceptable. The drawing offered in the Plan [Plan@15] of the Industrial Pit does not vaguely resemble the near 20 foot deep localized depression that the pit is in. The Plan drawing shows a flat terrain with the leach pit being the only depression. This is a major discrepancy. Continued pooling of surrounding precipitation runoff into the pit (covered or not) will provide water to leach contaminates toward the aquifer. Moreover, the cap does not include an impermeable seal to keep precipitation out. The Waste Pit currently receives drainage from a considerable area to the southeast in addition to storm water from the ANL-W site. A major flaw in the Plan is not providing drainage diversion away from the pit regardless of the alternative chosen. The fact that chromium, mercury, selenium, and zinc are in the pit sediments compels DOE to do Toxicity Characteristic Leaching Procedure (TCLP) to determine if it qualifies the waste as a mixed hazardous/radioactive waste and it must be then disposed pursuant to RCRA land disposal restrictions (40 CFR-148). DOE's preferred remedial alternative simply is not supported by essential information.

The Plan states at page 8 that: contaminates to the ground water show only arsenic and chromium exceeded the risk based screening levels. The ANL-W RI/FS data for well (M-13) 1993 sample data shows strontium-90 at 1,330 pCi/L at 642 feet. [RI/FS,Vol.III App. H pg. 3] EPA maximum concentration level (MCL) for strontium-90 in drinking water is 8 pCi/L. Sampling in 1994-95 shows Well M-12 contains organic chemicals hundreds of times over the MCL. [RI/FS@ Vol.V] The Plan does not acknowledge this strontium and chemical migration or propose remedies that will correct the problem. This contaminate migration exemplifies the disastrous impact of the leach pits and why the ANL Industrial Pond must be immediately closed and appropriately cleaned up.

Alternative 5 (phytoremediation) that would use plants, over five growing seasons, to absorb the contaminates in the leach pit, is so ludicrous in an arid environment that it does not deserve rebuttal. There are issues of plant density to prevent wind erosion (contaminate dispersion). What is ANL going to do after annual harvest and between growing seasons to prevent wind erosion? Bench scale tests in ANL's greenhouse will only reflect efficiencies in an artificial climate controlled environment, not the real desert thing.

The Sanitary Waste Lift Station (ANL-31) is listed as a no action site presumably because ANL wants to continue to use the pumps. The Plan offers no data to substantiate this no action decision. The Track 2 Investigation shows maximum concentrations of sludge collected from the Lift Station as follows: cesium-137 at 9,380 pCi/g, strontium-90 at 2,470 pCi/g, uranium at 4.8 pCi/g, neptunium-237 at 13 pCi/g, and cobalt-60 at 16.3 pCi/g.[Vol. III Track 2 App.-H pg.4] May 1995 Track 2 reflect continued high gross alpha and gross beta in the pump water and sludge. [Vol. III Appendix - E] This contamination suggests that this Lift Station was inappropriately excluded from the cleanup.

The EBR-II Leach Pit (ANL-08) underwent an interim cleanup action in 1993 when only Athe majority of the sludge was removed@and the pit was backfilled. The Plan fails to acknowledge that the remaining sludge had the following pCi/g concentrations: cesium-137 at 29,110, iodine-129 at 124, neptunium-237 at 329, strontium-90 at 2,247, yttrium-90 at 2,247. [RI/FS Vol.II pg.59-60] Inadequate interim actions end up being permanent because of the additional volume of contaminated soil used as backfill is now part of the problem.

The public has demanded for many years that DOE treat its radioactive waste into a stable vitrified form so that it can be stored onsite until a safe permanent repository can be established. At the very legal minimum, all contaminated soil should be shipped off INL to a licensed and permitted RCRA hazardous/radioactive disposal site. A compromise would be if there is an area on the INL site that is not over the Snake River Plain Aquifer, use it to build a licensed and permitted RCRA hazardous/radioactive disposal site for INL low-level wastes only.

The ANL-W Plan makes it very clear that DOE and the regulators refuse to learn from past mistakes. So far three of the six U.S. commercial radioactive waste dumps are now closed and undergoing CERCLA cleanup. The Institute for Energy and Environmental Research's book *High-Level Dollars Low-Level Sense* notes the following about these dumps:

> "At each of the three sites (located at West Valley, New York; Maxey Flats, Kentucky; Sheffield, Illinois), water has leaked into the burial trenches and in some cases caused extensive movement of radionuclides into the surrounding environment. Rather than being maintenance-free stabilized landfills, as was intended, these sites have ended up requiring active maintenance and remedial activities within ten years of closure. The problems at Maxey Flats which was first opened in 1962, provide an instructive example. A 1974 report by the state of Kentucky found that radioactive materials, including plutonium had moved hundreds of feet from where they had be buried. Although the operator of the site, U.S. Ecology had claimed that significant subsurface migration of plutonium was not possible, a 1975 report by the EPA found plutonium in core drilling samples, monitoring wells, and drainage streams. The EPA report noted that although Maxey Flats had been >expected to retain the buried plutonium for its hazardous lifetime >the plutonium had actually migrated from the site in less than ten years." [IEER(c)@69]

Even the fact that INL Subsurface Disposal Area (SDA) at the Radioactive Waste Management Complex is a CERCLA cleanup site seems to have been forgotten. Shallow burial of radioactive waste resulted in contaminate migration hundreds of feet below the SDA.

The Explanation of Significant Difference (ESD) for WAG 9, OU-9-04 dated 2/14/00 represents yet another example of a long tradition of EPA and DEQ's bankrupt and illegal interpretation of this nation's environmental laws.

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 ARAR's. The agency's ESD fails to meet this most basic of criteria because the selection of the Central Facilities Area Industrial Waste Landfill does not even qualify for even a RCRA permit as municipal garbage dump, let alone a RCRA hazardous waste Sub-Title C disposal site.

Additionally, the failure of Phytoremediaiton 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 INL and ANL contaminated sites. It is unconscionable that EPA and DEQ allow the continued use of the heavily contaminated Industrial Waste Pond until 2003 and Sewage Lagoon at ANL-W until 2033 that allows more pollution to migrate through these unlined pits to the Snake River Aquifer.

Respectfully Submitted,

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Attachment A: David B. McCoy, Comments on Argonne National Laboratory - West Spent Nuclear Fuel Processing Variance Proposed by Idaho INEEL Oversight Program

References:

1. Comprehensive Remedial Investigation / Feasibility Study for Argonne National Laboratory-West Operable Unit 9-04 at the Idaho National Engineering Laboratory, U.S. Department of Energy.
2. High-Level Dollars Low-Level Sense, Arjun Makhijani, Scott Saleska, A Critique of Present Policy for the Management of Long-Lived Radioactive Waste and Discussion of an Alternative Approach.
3. US Environmental Protection Agency, Office of Inspector General, Audit Report Air Idaho's Air Enforcement Program, EIGAF8-10-0018-8100249, report from Truman R. Beeler to Chuck Clark, EPA Regional Administrator, September 30, 1998, page 1. www.epa.gov/oig/reports
4. EPA/OIG, 2004, page 4.
5. Evaluation Report, Review of EPA Response to Petition Seeking Withdrawal of Authorization for Idaho's Hazardous Waste Program, Report No. 2004-P-00006, February 5, 2004, Office of Inspector General, US Environmental Protection Agency, herein after referred to as EPA/OIG 2004. Also see US Environmental Protection Agency, Office of Inspector General, Audit Report Air Idaho's Air Enforcement Program, IGAF8-10-0018-8100249, report from Truman R. Beeler to Chuck Clark, EPA Regional Administrator, September 30, 1998. See both reports at: www.epa.gov/oig/reports

Attachment A

David B. McCoy
Comments on

Argonne National Laboratory - West
Spent Nuclear Fuel Processing Variance
Proposed by Idaho INEEL Oversight Program

March 18, 2003

I am opposed to the importation and examination of nuclear spent fuel rods at Argonne National Laboratory West (ANL-W).

1. Sending commercial spent fuel rods from the La Salle nuclear power reactors in Illinois to Idaho National Engineering and Environmental Laboratory (INEEL) is a violation of the 1995 Settlement Agreement. Providing a waiver to the 1995 Settlement Agreement allows the DOE camel's nose back into the tent for reprocessing spent nuclear fuel in Idaho. The Settlement Agreement is crystal clear: spent fuel can only be shipped to INEEL in accordance with the terms and conditions of the Settlement Agreement. Spent fuel shipments are limited only to DOE spent fuel and from Fort St. Vrain (under limited conditions). **No legal authority exists to allow a onetime waiver of the Settlement Agreement for the shipment of commercial spent fuel to INEEL for reprocessing.**

2. The Settlement Agreement was the resolution of a lawsuit filed in federal court which contained numerous findings. The Settlement Agreement (p. 13) provides for "continuing jurisdiction of the Court..." Under the Settlement Agreement, Oversight or another entity lack the unilateral authority to set aside the Settlement Agreement without going back into federal court to accomplish the waiver.

3. Oversight has presented no legal authority, which is based upon any language contained in the Settlement Agreement, for Idaho or Oversight to propose the waiver. Oversight has incorrectly presented the idea that a one-time waiver to the 1995 Settlement Agreement can be made for a private commercial entity, the Framatone Corporation. The Settlement Agreement only gives Idaho the ability "to waive performance by the **federal parties** of any terms, conditions and obligations contained in this Agreement." (Emphasis supplied). The Settlement Agreement does not provide Idaho the right to request a waiver for private commercial entities in Illinois or elsewhere to ship spent fuel to INEEL for reprocessing, inspection or other activities. Idaho and Oversight thus have no authority to request a one-time waiver to the 1995 Settlement Agreement for INEEL to receive spent fuel from commercial nuclear reactors in Illinois.

4. Likewise, ANL-W has offered no legal authority from the Settlement Agreement that allows ANL-W as a private institution operating on the DOE INEEL site to request an exception to the Settlement Agreement in order to benefit a private commercial corporation, the Framatone Corporation. Oversight has additionally not provided any statement as to the authority or due process to be used by Oversight or any other person or state agency of Idaho to accomplish a waiver of the terms of the Settlement Agreement.

5. Idaho has no authority to attempt to undo or act counter to federal law by allowing a waiver under the Settlement Agreement. The 3/03 Oversight states, "Argonne's treatment process would extract the usable uranium and about 21 kilograms of solid ceramic and metal waste." The extraction of "usable uranium" from commercial spent fuel violates the Presidential Directive 8 signed by President Jimmy Carter in 1977. This executive order renounced reprocessing and plutonium breeder research. The order was declassified in 1994 and survives today as President Bill Clinton's Presidential Decision Directive 13. For reprocessing research to resume, the directive would have to be either rescinded or reinterpreted. Because the executive orders are federal law they are preemptive. While Oversight may be in favor of cranking up a plutonium reprocessing economy it is currently prohibited from doing so.

6. The Idaho National Engineering and Environmental Laboratory (INEEL) lacks the appropriate federal permits under the Resource Conservation Recovery Act (RCRA) and the Clean Air Act (CAA) for atmospheric emissions. It would moreover be illegal for the spent fuel rods to be shipped to INEEL because the rods constitute mixed waste and must be sent to a RCRA compliant facility.

7. The use of the golden retriever dog analogy for comparison with the spent fuel volume in six spent fuel rods is ridiculous considering the toxic potential of the waste being processed. (Why not instead compare the waste to four 10 pound bags of Idaho #1 potatoes?) Oversight has missed the point entirely.

   Idaho has been horribly polluted by the activities of reprocessing radioactive and chemical waste from the DOE and sent from other commercial entities. The job has been mismanaged in the past and is currently mismanaged, i.e., lack of RCRA and/or CAA permits, excessive emissions and contamination of the Snake River aquifer.

   Recent findings by EPA (1/29/03) state that the INEEL Title V Clean Air Permit was rejected due to understated emissions of hazardous air pollutants. Additional Spent Nuclear Fuel (SNF) reprocessing will only increase these emission violations. The proposed Argonne National Laboratory - West (ANL-W) variance offers no guarantees that upgrade to emission control systems will be required for the new SNF processing. In 1999, ANL-W released 1,911 curies and 402.5 curies in 2000 of radioactivity into the atmosphere.

8. The notion that because Idaho already has so much toxic waste and is a nuclear waste dump for the U.S. "a little more toxic waste can't hurt us" is wrong to use as a reason to import more waste. Oversight should bring itself to the idea that the nuclear and chemical waste in Idaho should be cleaned up to protect the environment while excluding the addition of more waste into Idaho.

9. ANL-W SNF electro-metallurgical reprocessing operations have **no** hazardous waste RCRA Part B Permit as required by law. An application for a Part B Permit is not scheduled until July 2003, with a theoretical final application after resolving IDEQ's Notices of Deficiency slated for 10/04.

10. Oversight Monitor has failed to inform the public that ANL-West's nuclear project for Generation IV reactors is a proposal to bring commercial nuclear reactors back into production and operation in Idaho. The Mission Change statement and commitment of federal resources to begin this project have been conducted in the absence of any Environmental Impact Statement.

11. Oversight has provided an extremely limited time until April Fools Day for comments on this important issue. I received a mailing from Oversight of the Monitor on March 15, 2003. Framatone Corporation's "short time frame" to "make a decision on who does the work" should not be used by Oversight to impose an unreasonable comment period on the citizens of Idaho who were involved for years in litigation to prevent precisely the importation of more commercial spent fuel into Idaho.

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