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What's in the Waste Slated for the Plutonium Incinerator?

What waste will go into the INEEL plutonium incinerator? This basic of all questions should have been answered by the Department of Energy (DOE) before 1996 when it signed a \$1.2 billion contract with British Nuclear Fuels Ltd. (BNFL) to build and operate the Plutonium Incinerator. Prior to committing to this contract, DOE had a legal obligation, under the National Environmental Policy Act, to first conduct an Environmental Impact Statement (EIS). The purpose of an EIS is to accurately and comprehensively evaluate and fairly disclose the consequences of alternative courses of action. The law is very clear that the EIS must be conducted before an agency makes a decision and commits resources for a project.

DOE released an EIS in January 1999, three years after the Plutonium Incinerator contract was signed with BNFL. However, a comprehensive characterization of all the waste slated for the incinerator over its operating history has yet to be disclosed. The environmental study only analyzed a small fraction of the least hazardous waste that will be processed in the incinerator and related operations. Consequently, the assertions in the EIS of small short-term and long-term environmental impacts are unfounded because they are not based on all the relevant information. The public has been denied its legal right to full disclosure of what will be fed into the incinerator. This article, utilizing internal DOE reports gained through the Freedom of Information Act, primarily addresses the waste DOE failed to characterize. This crucial information is essential to determining what the environmental, health, and safety impacts will be over the operating history. Without a full accounting of what will go into the incinerator there is no way to accurately estimate what will come out the stack.

DOE only analyzed the plutonium contaminated transuranic waste currently in Idaho National Engineering and Environmental Laboratory (INEEL) storage buildings, but did not characterize the transuranic waste in the burial ground pits and trenches or other waste slated for the incinerator. This is a significant issue because the waste in the burial ground alone contains seventeen times more radioactivity than the waste in the storage buildings. Failure to fully characterize all incinerator candidate waste, means the EIS is fundamentally flawed.

Other waste slated for the Plutonium Incinerator identified in the EIS but not characterized include wastes from future treatment of INEEL high-level waste, wastes from the decontamination and decommissioning program, and similar

wastes from other DOE sites. To acknowledge these waste inventories without providing appropriate breakdowns as to what contaminants are in the waste, constitutes a violation of the National Environmental Policy Act. BNFL applications for State of Idaho Permits to Construct are equally flawed due to the same fundamental waste characterization deficiencies. DOE is required to document that the incinerator contaminate releases into the environment are below regulatory limits. By not analyzing all waste to be fed into the incinerator, contaminate release estimates in the EIS have no validity. DOE is therefore violating the law and denying the public its Constitutional right to due process, and accurate information upon which to base an informed decision. Therefore, the Plutonium Incinerator project must be canceled.

What Waste is Slated for the Plutonium Incinerator?

DOE's incinerator EIS acknowledges the 65,000 cubic meters (cm) waste stored in buildings plus an additional uncharacterized 120,000 cm of plutonium contaminated transuranic (TRU) waste to be processed, for a total of 185,000 cm.¹ An equivalent waste volume would be a football field stacked 146 feet high.

The planned Plutonium Incinerator EIS determined what the likely toxic and radiation dose will be to the effected population based only on the 65,000 cm of stored TRU waste to be treated. Since this stored waste is much less radioactive than the buried waste, the emission estimates are not representative of what will actually be released to the air in later years when DOE begins incinerating the buried and other candidate waste. There is a direct "linear" relationship between what goes into the incinerator and what goes out the stack. If DOE is going to be candid, the Department must tell the public what is in all the waste fed into the incinerator over its entire operating history.

Comparatively, the 65,000 cm of stored waste in buildings at the Transuranic Storage Area is more recently generated and is less radioactive than the buried TRU waste in the burial grounds. In the earlier years (1950-75), DOE and its predecessors, dumped all categories (including high-level) waste together in shallow burial ground pits, trenches, and "soil vaults." After 1975, TRU waste was segregated from low-level waste. Consequently, the buried waste constitutes a greater hazard than the stored TRU waste.

What is In the Waste Slated for the Incinerator?

The stored TRU waste evaluated in the environmental study contains 647,000 curies of radioactivity, including 473,600 curies of plutonium.² Although, DOE is not publically acknowledging the fact, its internal reports show the buried waste contains 11,000,000 curies of radioactivity including 1,455 kilograms (700,400 curies) of plutonium.³ This buried waste alone represents potentially 17 times more radioactivity to be processed than apparently is considered in the Plutonium Incinerator environmental study or the applications for State and federal Permits.

The DOE internal report's that estimate 11 million curies in the burial ground is considered by Environmental Defense Institute (EDI) as grossly understated. EDI researchers used the Navy waste shipments to the burial ground as a test case to evaluate the reliability of DOE's inventory estimates. DOE's 1994 inventory attributes only 4.2 million curies shipped from the Naval Reactor Facility.⁴ EDI, using the DOE's Radioactive Waste Management Information System data base printouts for each shipment (obtained through a Freedom of Information request), added up the Navy shipments between 1960, and 1993, and determined that the curie content amounted to 8.14 million curies.⁵ This huge discrepancy, in just one of dozens of waste shippers to the INEEL burial grounds, suggests that DOE's waste inventory claims may be significantly understated. Is this just an academic dispute between bean counters? When put in the context of radioactive and hazardous waste to be fed into the Plutonium Incinerator, it immediately becomes a crucial issue of public health and safety that DOE is not being candid about.

What Buried Waste is Slated for the Incinerator

The Plutonium Incinerator EIS states that: "Other potential sources [of incinerator throughput] include similar wastes buried in the [Radioactive Waste Management Complex] RWMC pits and trenches at the INEEL (approximately 60,000 cubic meters) . . ." ⁶ This buried waste is clearly the most problematic in terms of environmental impact because contaminants are migrating into the Snake River Aquifer. In the "good old days," everything that was not usable went into the burial grounds, including some 90 metric tons of irradiated reactor fuel.⁷ The curie content of the buried waste is more than 11 million curies as previously cited. The only spent reactor fuel that went into storage at the Idaho Chemical Processing Plant was fuel that DOE could reprocess to extract materials for the nuclear weapon programs. In other words, only aluminum, stainless steel, or zirconium clad fuels could be reprocessed. There was no reprocessing of fuels such as ceramic clad fuels used in the Aircraft Nuclear Propulsion reactors, the Navy fuel test specimens, the Army reactors, the reactor fuel left after meltdowns where the cladding was compromised and thus difficult to store. This fuel that was not to be reprocessed went to the burial grounds and was mixed with the other radioactive waste.⁸

This cavalier dumping practice resulted in significant contaminate migration into the underlying soils⁹ and the Snake River Aquifer.¹⁰ The consequence of this pollution migration means that huge volumes of contaminated soils must be exhumed in addition to the waste to prevent further contaminate migration into the environment. Estimates of contaminated soils are 690,000 cm of which 170,000 cm is plutonium contaminated TRU waste.¹¹ This contaminated soil would be candidate waste for the incinerator because it contains significant quantities of hazardous chemicals that were mixed in with the other radioactive waste. This soil waste is not characterized in the EIS.

In the years after the mid-1970's, waste was separated between the high-activity and low-activity waste. The "remote handled" high-activity waste was put in the Intermediate Transuranic Storage Facility, and the "contact handled" low-activity TRU waste went into the Transuranic Storage Area. Low-level waste continued to be dumped in the shallow pits and trenches in the burial ground. This highly radioactive "remote handled" TRU waste in the Intermediate Transuranic Storage Facility and other locations at INEEL is also not characterized in the plutonium incinerator EIS despite being "candidate waste." The Intermediate-level Transuranic Storage Facility's below-surface "vaults" where the recently generated and really "hot" remote handled waste are interned consists of about 57 concrete lined vaults divided between Pad #1 and #2. Internal DOE documents note that this TRU waste has radiation readings as high as 25,000 rad per hour at the container's surface.¹² Direct contact even to the outside of the waste container would deliver a lethal dose of radiation. None of this waste is characterized in the plutonium incinerator EIS.¹³

Additionally, the buried waste contains a witch's brew of toxic chemicals and heavy metals which DOE is not including in the Plutonium Incinerator environmental analysis. A 1994 DOE internal document inventory of this buried waste shows more than 2,868.42 metric tons of these toxic chemicals in the shallow pits and trenches.¹⁴ The State Air Permit Application predicts (based only on incineration of the 65,000 cm stored waste) that 30.728 metric tons of toxic materials will go out the stack every year.¹⁵ This pollution figure could be significantly higher if the buried waste and other waste sources slated for the Plutonium Incinerator were included in the emissions.

Alpha Low-Level Waste Slated for the Incinerator

What radioactive/hazardous material is in the plutonium contaminated mixed alpha-low-level waste? Characterization of this waste is, again, not in the EIS or the Applications for State Permits. This waste is located on Pad-A (previously called the Transuranic Disposal Area) inside the Radioactive Waste Management Complex Subsurface Disposal Area (SDA). Pad-A is an asphalt surface-level site where waste barrels and boxes shipped predominately from Rocky Flats were stacked and later covered with soil to provide radiation shielding. DOE claims that the waste is greater than 10 and less than 100 nano curies

per gram (nCi/g) which is a middle category between low-level and TRU waste. The Settlement Agreement with the State requires DOE to treat this alpha contaminated waste the same as TRU waste. Internal DOE reports show the hazardous/toxic portion of the Pad-A waste amounts to 4,640 metric tons, and the radioactive portion (primarily uranium) totals 72.4 metric tons (159,642 lbs.).¹⁶ By not including this radioactive/toxic material into the plutonium incinerator emission calculations, the estimated atmospheric releases can only be viewed as inadequate.

High-Level Waste Slated for the Incinerator

DOE states in the Plutonium Incinerator EIS that, "Other potential [waste] sources include . . . wastes from future treatment of INEEL high-level waste (possibly several hundred cubic meters). . ."¹⁷ As a means to cut costs in treatment and disposition of the INEEL high-level waste, DOE is concocting a reportedly illegal scheme to reclassify liquid high-level waste to a less hazardous category. The National Academy of Sciences December 1999 report titled "Alternative High-Level Waste Treatments at the INEEL" puts this waste number at 5,000 cm (131,926 gallons). This formerly classified mixed liquid high-level "sodium bearing" waste in underground tanks¹⁸ is what DOE wants to reclassify as "liquid low-level mixed transuranic waste."¹⁹ The 5,000 cm is significantly understated because it is not including the sediments (tank heels) in the bottom of the tanks which DOE wants to illegally and permanently leave in the tanks. This change of waste classification is a slight of hand designed to fast track this waste to the Plutonium Incinerator. The Environmental Defense Institute's review of the contents of the INEEL high-level waste tank farm contents shows little difference between "sodium and non-sodium" tanks.²⁰ Failure to fully disclose and characterize this waste in the incinerator EIS is again, a violation of NEPA.

DOE also is attempting to reclassify high-level waste at the Savannah River Site. The Natural Resources Defense Council filed a legal petition with the Nuclear Regulatory Commission (NRC) "to assume and exercise immediate licensing authority over all high-level radioactive waste that is stored in the 51 underground tanks located on the DOE Savannah River Site (SRS)."²¹ If the NRC rules that the SRS waste comes under its jurisdiction as high-level waste, then INEEL will be blocked from reclassifying its liquid high-level waste as low-level mixed transuranic waste, and therefore not candidate for the Incinerator.

Other Incinerator Candidate Waste

Another potential waste source for the Plutonium Incinerator is the Argonne National Laboratory-West (ANL-W) waste at INEEL. The Radioactive Scrap and Waste Facility (RSWF), which is an underground storage area which has (as of 1981) 81 cubic meters of waste containing 9,832,000 curies of radioactivity, including 40.73 grams of plutonium.²² The RSWF has 12-foot-deep steel walled buried pipes (27 rows

on 12 ft centers and 40 rows on 6 ft. centers for a total of 1,366).²³ This waste, although, a likely throughput to the Plutonium Incinerator because of its mixed chemical and TRU components, is not factored into the incinerator emissions calculations.²⁴ ANL-W Electrorefiner reactor fuel reprocessing waste may also be fed in the Plutonium Incinerator according to the INEEL Site Treatment Plan.²⁵ None of the ANL-W waste is characterized in the EIS.

DOE's Plutonium Incinerator mentions in the EIS: "Other potential sources [of waste] include . . . wastes from the INEEL's decommission and decontamination [D&D] programs."²⁶ This waste is candidate throughput for the incinerator, however it is not characterized as to what radioactive and hazardous materials are in it. On the surface this D&D waste sounds intentionally innocuous, like demolished building rubble. A closer look will reveal a much different picture. For instance, each of the INEEL permanent nuclear reactors had water storage "canals" to store reactor spent fuel coming out of the reactor during refueling. The fuel was put in these water canals next to the reactor to allow the short-lived radiation to decay. Unfortunately, the fuel stayed in these canals for decades because DOE refused to spend the money to remove it to safer dry storage. Consequently, a significant amount of the fuel disintegrated and fell to the bottom of the canals. DOE euphemistically calls it "canal trash" which should be classified as high-level waste but never has been appropriately classified as such. Nearly, all of the INEEL reactors and their respective fuel canals and are slated for D&D. This means that there will be a significant amount of "canal trash" extracted for treatment in the Plutonium Incinerator.²⁷ This waste is extremely radioactive since it came from irradiated reactor fuel, and therefore should have been fully characterized in the EIS, but was not.

This Plutonium Incinerator project documentation is a rift with conflicting waste volume numbers that undercut the credibility of the government's knowledge of waste inventory. For instance, DOE's EIS acknowledges 65,000 cm of waste in the Transuranic Storage Area (TSA) slated for the incinerator and related operations. Yet, the British Nuclear Fuels Ltd. Hazardous Waste/ Toxic Substances Control Act State of Idaho permit application cites 99,930 cm in the TSA that will be processed in the incinerator.²⁸ This State Permit also acknowledges 11,183 cm or 10,156,394 kilograms of hazardous chemicals in the TSA.²⁹ These hazardous material inventories were not included in DOE's EIS. Public confidence is justifiably skeptical about the federal government's voracity due to these significant inconsistencies in its documentation.

Defense Nuclear Facility Safety Board Review

DOE's Defense Nuclear Facility Safety Board (DFNSB) reviewed the Plutonium Incinerator plans and found many serious problems related to waste characterization and environmental release estimates. The DFNSB found that: "...the predicted releases from . . . accidents do not appear appropriately bounding

with regard to material quantity and type and for each type of receptor (i.e., the public, collocated workers, and facility workers).³⁰ This is a technical way of saying accident scenarios are understating what will go out the stack and who will be effected. The DNFSB additionally found that DOE has inadequate knowledge of the characteristics of the waste to be incinerated. Consequently, the radiation released during normal operations and/or accident scenarios is understated. This problem of not knowing what is in the waste resulted in INEEL losing its certification to ship its TRU waste to the Waste Isolation Piolet Project in New Mexico in June and again in November of 1999.³¹

State/DOE Settlement Agreement and the Incinerator

DOE vaguely identifies candidate waste slated for the Plutonium Incinerator, however no specific volumes or characterization is offered for all the individual waste groups in the EIS. Given this uncertainty, it is useful to consider other legal requirements DOE is under. After years of protracted litigation, the State of Idaho and DOE entered into a 1995 court sanctioned Settlement Agreement that laid out an enforceable time table by which DOE would remove radioactive waste from the State. The State is interpreting the Agreement broadly in terms of what waste is included. This Agreement lays out a schedule for shipment of plutonium contaminated transuranic (TRU) and high-level waste out of Idaho. The State is relying on Agreement language that: "DOE shall ship all transuranic (TRU) waste now located at INEL [sic], currently estimated at 65,000 cubic meters in volume to the Waste Isolation Piolet Plant ... by 2015."³² [Emphasis added] The 65,000 cm TRU waste figure indirectly identifies the TRU waste currently stored in above ground buildings.

A reasonable conclusion based on the Settlement Agreement and the EIS language, is to assume that the buried INEEL TRU along with large quantities of other INEEL and non-INEEL waste will be eventually processed by the Plutonium Incinerator. DOE offers no characterization of this other 120,000 cm waste in terms of how much radioactivity and hazardous chemicals are in that waste, although a characterization document is referred to in the EIS.³³ What limited information there is about the INEEL buried and other "candidate" waste indicates that it is much more hazardous than the stored waste characterized in the Plutonium Incinerator EIS, the State Air Permit to Construct a Pollution Source, the State Hazardous Waste Management Act Permit, or the Toxic Substances Control Act Permit applications. These represent additional deficiencies in compliance with NEPA.

Conclusion

DOE is violating the National Environmental Policy Act (NEPA) by not characterizing and analyzing all waste slated for the Plutonium Incinerator. Consequently, the EIS and State of Idaho Permit Application environmental contaminate release

numbers are based on the least radioactive waste in INEEL's inventory slated for incineration. The really nasty stuff has yet to be factored in presumably because it is the really "hot" waste which might make the project look more risky. Therefore, the EIS and the State Permit Applications are using incomplete numbers by only analyzing the stored waste slated for treatment. This is illegal because it violates NEPA that requires federal agencies to provide accurate and comprehensive environmental analysis and data that shows the project will not compromise the health and safety of citizens living downwind of the incinerator over its operating history. A fundamental violation of trust also exists in the federal government's deliberate unwillingness to fully disclose its intentions and the health and safety impacts on citizens living in the shadow of this incinerator. A reasonable conclusion, based on the facts presented, is that DOE never intended to tell the public the whole truth, and fully intends to plow ahead regardless of clear violations of the law.

Endnotes:

1. Advanced Mixed Waste Treatment Project, Record of Decision, March 1999, U.S. Department of Energy, Idaho National Engineering and Environmental Laboratory.
2. BNFL Advanced Mixed Waste Treatment Plant Air Permit to Construct, January 12, 1999, to Idaho Division of Environmental Quality, page 33, Table 4-2.
3. A Comprehensive Inventory of Radiological and Non-radiological Contaminates in the Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952-1983, Volume 1, Idaho National Engineering Laboratory, EG&G Idaho, Inc., June 1994, page 6-25, herein after referred to as EGG-WM-10903.
4. EGG-WM-10903, page 6-25
5. Citizens Guide to INEEL, May 1998, C. Broschius, Environmental Defense Institute, citing Radioactive Waste Management Information System Master Database, P61SH090, 10/24/89; Also see, Senate Armed Services Committee, Subcommittee on Nuclear Deterrence, Arms Control and Defense Intelligence, Hearing on: shipment of Spent Nuclear Fuel, 28 July 1993, Questions and Answers for the Record, @ 25.
6. Advanced Mixed Waste Treatment Project, Final Environmental Impact Statement, January 1999, U.S. Department of Energy, page 1-4, herein after referred to DOE/EIS-0290.
7. Radioactive Waste Management Information System; Solid Master Database, P61SH090, printouts, 1954 to 1989, Books 1 through 5, a.k.a. RWMIS. Also see EGG-WM-10903, page 2-12 to 2-14, 2-36 and 2-44.
8. EGG-WM-10903, pg 2-12, 2-14, 2-21, 2-24, 2-28, 2-58, 2-58.
9. Early Waste Retrieval Final Report, J. Bishoff, EG&G Idaho, Idaho National Engineering Laboratory, August 1979, TREE-1321, notes that the project was to investigate methods, risks, and hazards associated with the retrieval of 65,000 cm of transuranic waste in the burial ground. "Waste retrieved included drums, loose waste, and contaminated soil. Approximately 67% of the drums retrieved were severely breached. Free liquid leaked from about 6% of the drums, and

5% were externally alpha-contaminated. Although alpha-contamination levels often exceeded 2,000,000 counts per minute, available equipment and established operating and safety procedures protected personnel ...”

Also see: The Subsurface Migration of Radionuclides at the Radioactive Waste Management Complex, EG&G Idaho, 1976-1977, TREE-1171, page 29.

10. Hydrology of the Solid Waste Burial Ground, as Related to the Potential Migration of Radionuclides, INEL, J. Barraclough, U.S. geological Survey, August 1976, page 66, Open File Report number 76-471, IDO-22056.

Also see: Pit-9 Remedial Investigation Feasibility Study, Volume II, page 134, Department of Energy Idaho Operations Office, Administrative Record.

11. Integrated Data Base Report - 1994: U.S. spent Nuclear Fuel and Radioactive Waste Inventories, Projections, and Characteristics, U.S. Department of Energy, September 1995, Rev. 11, page 166. Herein after refereed to as DOE/RW-0006.

12. Transport, Handling, and Interim Storage of Intermediate-Level Transuranic Waste at the INEL, September 1977, EG&G Idaho, Department of Energy, page 26.

13. DOE/RW-0006, page 18, 88, and 103. Classified as remote handled Transuranic waste, the volume at three INEEL sites is 58 cm with an activity content of 7,490 curies.

14. EGG-WM-10903, page 6-6

15. Advanced Mixed Waste Treatment Plant, State of Idaho Air Permit to Construct, January 12, 1999, page 63, Table 4-15

16. Record of Decision, Declaration for Pad-A, at the Radioactive Waste Management Complex, at Idaho National Engineering Laboratory, January 1994, pages 10 to 12.

17. DOE/EIS-0290, page 1-4

18. High-level waste is defined in statutes (10 CFR 60.2) as being irradiated spent nuclear fuel or the waste resulting from the reprocessing of spent nuclear fuel. The sodium bearing liquid high-level waste is the product of spent nuclear fuel reprocessing at the Idaho Chemical Processing Plant in the 1950's and 60's.

19. "Alternative High-Level Waste Treatments at the Idaho National Engineering and Environmental Laboratory", National Academy of Sciences' National Research Council, December 1999.

20. Department of Energy Idaho Operations Office, October 8, 1997, Freedom of Information Request, Constituent Concentration Sampling Data From Idaho Chemical Processing (ICPP) High-Level Waste Tanks, Carl Robertson, Freedom of Information Officer, response to Chuck Brosious, Environmental Defense Institute. The plutonium and other transuranic radionuclides element concentration variation between sodium-bearing waste tanks and non-sodium bearing waste tanks (WM-188) is less than an order of magnitude. This data does not support DOE's contention that the sodium-bearing waste is not high-level waste.

21. The United States Nuclear Regulatory Commission, In the Matter of U.S. Department of Energy Savannah River High-Level Waste Tanks, Petition to Exercise Licensing Authority, Natural Resources Defense Council, Thomas Cochran, David Adelman, July 28, 1998.

22. Radioactive Waste Management Information System, 1981 Summary and Record to Date, June 1982, U.S. Department of Energy, Idaho Operations Office, IDO-10054-81, page 18. DOE and its contractors consistently and deliberately mis-classify waste inventories in order to avoid regulations. The ANL-W Radioactive Scrap Waste Facility waste is inappropriately classified. The curie content suggests it is either TRU or a mixture of TRU and high-level waste.

23. Radioactive Scrap and Waste Facility, T.P. Zahn, November 11, 1995, Argonne National Laboratory presentation to the INEL Site Specific Advisory Board.

24. Idaho National Engineering Laboratory, Proposed Site Treatment Plan, March 30, 1995, page 4-6, and Appendix A-4 & A-4-15. Herein after called DOE/ID-10493.

25. DOE/ID-10493, page 4-8.

26. DOE/EIS-0290, page 1-4

27. DOE/ID-10493, Appendix A, page A.4-136, and A.4-127.

28. Hazardous Waste Management Act/Toxic Substances Control Act (HWMA/TSCA) Permit Application for the Advanced Mixed Waste Treatment Facility, Book 1(b) Appendix C-1, volume includes Pad-1, Pad-2, and Pad-R. Also see Book 4c Appendix D-4, table 1 that shows hazardous waste inventory at 11,183 cm, or 10,156,393 kilograms, September 1999.

29. HWMA/TSCA Permit Application, Book 4c, Appendix D-4, Table 1.

30. Conway, John, Chairman Defense Nuclear Facility Board cover letter to James Owendoff, Acting Secretary for Environmental Management, Department of Energy, December 22, 1998, conveying DNFSB Staff Issue Report Memorandum for G.W. Cunningham, Technical Director on subject of Advanced Mixed Waste Treatment Project at Idaho National Engineering and Environmental Laboratory. Herein after called DNFSB.

31. Shipping halted at INEEL DOE audit finds problems with waste documentation," Associated Press, Idaho Falls, June 23, 1999. INEEL lost its certification to ship waste to a New Mexico dump until it fixes waste-handling and record-keeping problems.

"N.M. NUKE WASTE SHIPMENTS SUSPENDED" The Associated Press November 29, 1999 by Sue Major Holmes, ALBUQUERQUE, N.M. (AP) - The federal government has suspended shipments of nuclear waste to the nation's first repository of such material until waste-generating weapons sites can prove what is in their barrels. The shipments were stopped because of a state permit for the waste that went into effect Friday. Environmentalists and the Department of Energy have challenged the permit.

32. Settlement Agreement, in Public Service Co. of Colorado v. Batt, No. CV 91-0035-S--EJL (d. Id.) And United States v. Batt, No. CV-91-0065-S-EJL (d. Id.), page 2.

33. DOE/EIS-0290, page 1-3. Characterization Information on additional INEL and Offsite Transuranic Contaminated and Mixed Low-Level Waste Potentially Available for Treatment by the Advanced Mixed Waste Treatment Project (September 1995).