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April 11, 1996

U.S. Dept. Of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026 - 3786

Re: Draft Programmatic EIS for Storage and Disposition of Weapons Usable Fissile Materials (DOE/EIS - 0229D).

Dear Sirs,

The authors of this draft PEIS have accepted conventional wisdoms without due caution or consideration. It is wishful thinking to imagine that fissionable materials can be disposed of as if they were worthless annoyances. This error is expressed in the comment (page 4-393) that "Pu (disposed of) is lost forever". Fissionable isotopes have a natural property which gives them a unique value. That property cannot be destroyed by wishful thinking. It is wasteful and futile to bury fissionable isotopes in unguarded, unmonitored graves. An EIS on the storage and disposition of fissile materials must consider the efforts that most people are willing to make to acquire extremely valuable materials. Only worthless trash has a chance of remaining undisturbed after burial. 1/01.02.00

Those who stand in awe of the fissionable isotopes don't seem to appreciate the fact that the separation of one isotope from its sister isotopes is a difficult operation, a "value-added" operation. The current market price of natural uranium is $13.25 per pound or approximately $3300 per pound of separable U-235. That is more than half the current price of refined gold. Separation of isotopes usually increases value by 100 to 10,000 times depending upon the "difficulty" and degree of separation. 95% pure U-235 is probably worth over $3 million per pound, about 500 times the value of pure gold. The fissionable isotope, Pu-239, can be assumed to have a value similar to that of U-235.

The draft PEIS is proposing to store or dispose of 38.2 metric tons of surplus Pu-239 worth about $250,000,000,000. One suggestion involves digging 23 boreholes (graves) about 4 km deep. Each grave is to contain about 180 critical masses of Pu in a 500 foot length of each grave. That suggestion constitutes expensive, hazardous, insecure storage, not disposal. For 5000 years, enterprising grave robbers have outwitted the best efforts of people to take their wealth with them in death. Fissionable isotopes are already appearing on the clandestine markets of a world with maturing plutonium economies. 1/01.02.00 cont.

The suggestion that surplus Pu be adulterated with glass, zeolites and/or Cs-137 is perverse. Dilution is an additional operation requiring expense and resulting in a volume increase. A volume increase will make storage and recovery more expensive. Cs-137 has a half-life of 30 years. It will have to be replenished at least every 300 years. Future supplies of Cs-137 will have to be purchased from countries which have developed economically successful plutonium economies. 2/05.00.08

M-037

01 02 00 Comment Number 1

Comment noted. Use of the Borehole Alternative for disposition would provide barriers to recovery and reuse that do not exist with current storage practices. These include both radiological and physical barriers. Further, if the Borehole Alternative were chosen, it would not be left unguarded. Appropriate monitoring, safeguards, and security measures would be provided. With regard to burning Pu in reactors, some individuals argue that this alternative is more unacceptable than the Borehole Alternative because it results in residual Pu that could, under some conditions, be recovered and used in a weapon. All of the alternatives considered in the PEIS result in Pu being placed in a condition where diversion and reuse is extremely unlikely due to a combination of physical and radiological barriers, administrative controls, and international inspections. NEPA requires that DOE consider a range of reasonable alternatives for Pu disposition, and accordingly, both the Borehole and Reactor Burning Alternatives were included. The preference for continued secure storage noted in this comment is also addressed in the PEIS under the No Action Alternative.

05 00 08 Comment Number 2

Diluting Pu makes it unattractive for reuse in weapons and, hence, enhances nonproliferation goals. A need to reestablish a radiation barrier after 300 years using cesium-137 (Cs-137) would be precluded by geologic disposal of these material forms. As discussed in the PEIS (Appendix H), all surplus Pu disposition alternatives ultimately require geologic disposal.

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The lack of due consideration in this PEIS is clearly demonstrated by the suggestion which requires that the U.S. purchase Cs-137 from a more advanced country. Apparently, there has been no consideration of the environmental-economic impact of spending about $10 billion to build an industrial complex to (1) downgrade the value of our surplus Pu or (2) to recover valuable Pu from the "much larger and growing quantity of Pu that exists in spent nuclear fuel". Only fools would attempt to make a weapon from reactor-grade plutonium. Economically successful companies make products by adding value to their raw materials. Wasteful policies have quintupled the federal debt since 1980. 2/05.00.08 cont. 3/07.01.00

The separated fissionable isotopes of uranium and plutonium command the custodial care due to extremely valuable and potentially dangerous materials. They should be stored in a repository at least as secure as Fort Knox. They must be stored in containers representing a small fraction of a critical mass. The containers must be separated by neutron absorbing barriers or walls. The storage rooms must be able to drain rapidly by gravity if the rooms should start to fill with water for any reason. The economic and environmental damage that might be caused by uninformed or haphazard disposition of fissionable materials could be enormous.

Our government's alleged concern about the imaginary hazards of weapons proliferation from consuming weapons-grade plutonium to produce nuclear electricity is contradictory, as noted above. The government's real concern has to do with the ability of nuclear energy to compete with fossil energy. Secure storage of our surplus fissile materails should be sufficient to satisfy this mean and unpatriotic concern. Continuing growth of the federal debt should force us back onto the road to peace and prosperity within a few years. 1/01.02.00 cont.

Sincerely,

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M-037

07 01 00 Comment Number 3

Cost data, along with technical and schedule data, were provided in Technical Summary Reports for disposition beginning in late July 1996. Recovery of Pu from the "much larger and growing quantity of Pu that exists in spent nuclear fuel" is outside the scope of the PEIS.