



The Secretary of Energy

Washington, DC 20585

August 1, 2003

The Honorable J. Dennis Hastert
Speaker of the U. S. House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

The purpose of this letter is to submit to Congress legislation to allow the Department of Energy (DOE), in consultation with the Nuclear Regulatory Commission (NRC), to address management and disposal of high-level radioactive wastes safely and cost effectively.

Currently, the Department of Energy manages certain waste that is the result of reprocessing spent nuclear fuel for defense purposes in storage tanks at three sites: the Savannah River Site in South Carolina, the Idaho National Engineering and Environmental Laboratory, and the Hanford Site in Washington State. Consistent with the longstanding views of the Department of Energy, the Nuclear Regulatory Commission, and their predecessor agency the Atomic Energy Commission, the Department has long planned to dispose of this material by separating the high activity fraction of this material from the low activity fraction, solidifying the high activity fraction and disposing of it in a deep geologic repository, disposing of the low activity fraction in low-level or transuranic waste facilities, removing key radionuclides from any residues to the maximum extent technologically and economically feasible, and grouting and disposing of the tanks and any remaining residues on site provided that DOE, in consultation with the NRC, concludes that this can be done in a manner that meets the NRC's health and safety standards for the disposal of low-level waste.

This strategy fundamentally assumes that DOE, in consultation with the NRC, has the authority to manage and dispose of different tank wastes according to the risks they present. A significant portion of the cost savings to be realized from accelerating the high-level waste program is likewise predicated on this assumption that DOE has the authority to manage and dispose of tank wastes in this manner.

A recent District Court decision has cast serious doubt on this entire strategy. The decision significantly limits DOE's ability to separate wastes removed from storage tanks into high and low activity fractions and to dispose of the low activity fractions in low-level waste or transuranic waste storage and disposal facilities -- even though disposing of this material in this fashion would be entirely consistent with the health and safety standards governing the disposal of low-level or transuranic waste. Instead it would require DOE to dispose of this material in a geologic repository to be developed under the Nuclear Waste Policy Act of 1982 for spent nuclear fuel and high-level radioactive waste even though the material does not require that degree of isolation. The decision also imposes significant



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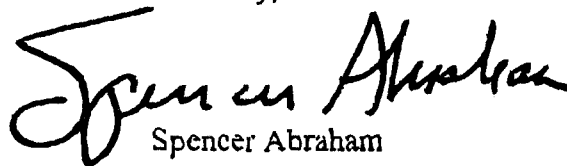
constraints on DOE's ability to close and grout the tanks -- again, even though the end result would be consistent with NRC health and safety standards for disposal of low-level waste -- and may even require disposing of the tanks themselves in the repository for spent fuel.

Because the precise principle underlying the district court's decision is somewhat unclear, we are hesitant to state a definite view about its exact effects. The result certainly may be decades of delay in removing the waste from the tanks, the need to dispose of far more material than any prior estimates have assumed in a deep geologic repository, far exceeding the statutory or physical capacity of the Yucca Mountain site, and a program to prepare spent nuclear fuel reprocessing wastes for disposal that will be orders of magnitude more expensive than the \$39 billion life cycle costs currently projected. Should this scenario come to pass, it would be most unfortunate, since the additional delay and expense in removing and disposing of this material would not be the result of health and safety considerations and would likely in fact create serious health and safety risks of their own. In any event, whatever the future may hold, one thing we can state with confidence is that the uncertainty this decision has created is of substantial concern to the Department and has made it very difficult for the Department to make firm plans about the disposal of this material at this time.

Accordingly, the Department of Energy respectfully submits the attached legislative proposal, which would clarify that the Secretary of Energy, in consultation with the NRC, retains his longstanding authority to separate and dispose of this material according to the risk it presents. Current law implies but does not state explicitly that the Secretary in consultation with the NRC is authorized to determine on that basis which reprocessing wastes are sufficiently radioactive to require disposal in a deep geologic repository as "high-level radioactive waste," and which are not. This legislation would make that implication express and thereby resolve the confusion and uncertainty created by the recent district decision in a manner that would allow the Department to move forward with its plans for accelerating the cleanup and disposal of this material.

The Office of Management and Budget advises that there is no objection to the transmission of this legislative proposal to the Congress from the standpoint of the President's program. If you or your staff have any questions regarding the proposal, please call Shannon Henderson, Acting Assistant Secretary for Congressional and Intergovernmental Affairs, at 202-586-5450.

Sincerely,


Spencer Abraham

Enclosure

High-Level Radioactive Waste

Sec _____

(a) Section 2(12) of the Nuclear Waste Policy Act of 1982 (42 U S C 10101(12)) is amended by adding at the end thereof the following:

"High-level radioactive waste does not include radioactive materials resulting from the reprocessing of irradiated reactor fuel (including wastes commingled or contaminated with such materials) that the Secretary of Energy, in consultation with the Nuclear Regulatory Commission, determines do not require permanent isolation by disposal in a deep geologic repository designed for disposal of spent nuclear fuel and high-level radioactive waste in order to protect the public health and safety"

(b) Section 6(4) of the West Valley Demonstration Project Act (42 U S C 2021a note) is amended by adding at the end thereof the following

"High-level radioactive waste does not include radioactive materials resulting from the reprocessing of irradiated reactor fuel (including wastes commingled or contaminated with such materials) that the Secretary of Energy, in consultation with the Nuclear Regulatory Commission, determines do not require permanent isolation by disposal in a deep geologic repository designed for disposal of spent nuclear fuel and high-level radioactive waste in order to protect the public health and safety"

(c) Section 11dd of the Atomic Energy Act of 1954 (42 U S C. 2014(dd)) is amended by inserting ", as amended" after "1982"

(d) For purposes of section 202 of the Energy Reorganization Act of 1974 (42 U S C 5842) the term "high-level radioactive waste" means--

(1) spent nuclear fuel as that term is defined in section 2(23) of the Nuclear Waste Policy Act of 1982 (42 U S C 10101(23)), and

(2) high-level radioactive waste as that term is defined in section 2(12) of the Nuclear Waste Policy Act of 1982 (42 U S.C 10101(12))

Explanation for High Level Waste Definition Amendment

The amendment clarifies the definition of "high-level radioactive waste" contained in section 2(12) of the Nuclear Waste Policy Act of 1982, 42 U.S.C. 10101(12), by stating explicitly that material resulting from reprocessing (as well as any material commingled or contaminated with it) is not high-level waste if the Secretary of Energy, in consultation with the Nuclear Regulatory Commission (NRC), determines the material need not be permanently isolated by disposal in a deep geologic repository designed for the disposal of spent nuclear fuel in order to protect the public health and safety. The original 1982 definition implied but did not state that the Secretary in consultation with the NRC was authorized to determine on that basis which reprocessing wastes are sufficiently radioactive to require disposal in the repository as "high-level radioactive waste." Recently, however, it has been asserted that the definition actually somehow forecloses the Secretary from making these judgments, a result not intended when the Nuclear Waste Policy Act was adopted. This assertion is contrary to the long standing practice of the DOE and the NRC, a practice begun by the Atomic Energy Commission. Accordingly the amendment adds a clause to the definition spelling out the Secretary's authority to make these determinations in consultation with the NRC and the standard he is to apply in making them.

In its current form, the NWPA's definition of high level waste states that "The term high-level radioactive waste means (A) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations, and (B) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation." The definition is currently silent on the process and standard for determining what waste from reprocessing qualifies as high-level waste under clause A.

The nuclear wastes involved are those generated in conducting the Nation's defense activities, which required "reprocessing" irradiated nuclear reactor fuel in order to extract from it nuclear materials necessary for defense programs. The reprocessing techniques involve chemical immersion of irradiated fuel elements; this yields liquid wastes containing a variety of suspended and diffused compounds. The wastes are neither chemically nor radiologically homogeneous and therefore constitute combinations of distinct waste streams.

Although the text of the current definition is silent on the question, the implication from the current definition is that determining which of these waste streams are "highly radioactive material" should be done in a manner that accords with the rest of the definition and its original purpose, which is to allow the Secretary of Energy to emplace in a geologic repository those materials from reprocessing that require the degree of isolation that this method of disposal would provide. That is also the most plausible view in light of the Atomic Energy Act's grant of authority to the Atomic Energy Commission (transferred to the Secretary by the Energy Reorganization Act of 1974 and the Department of Energy Organization Act) to provide for the safe storage, processing, and disposal of nuclear defense waste, 42 U.S.C. 2121(a)(3), an authority that the NWPA left largely undisturbed. See 42 U.S.C. 10107. Accordingly, both DOE and the NRC have taken the view that DOE, in consultation with the NRC, may properly evaluate reprocessing waste and components against the risk-based performance objective of protecting the public health and safety and thereby determine which components properly are

considered "high-level radioactive waste" that should go to a deep geologic repository, and which components can safely be disposed of through other means. As noted above this has been a long-standing practice.

In particular, the Department, in consultation with the NRC, has directed its efforts to separating the elements of the wastes, where technologically and economically feasible, in order to segregate those requiring the most extensive steps for isolation, because of their risks, from those that do not. These efforts in turn yield various waste streams, as well as contaminated containers and equipment. The proper disposition of the resulting wastes and materials raises complex issues that necessarily involve specialized technical expertise and evolving technology. Rather than applying a mechanistic formula, in making this determination the Secretary and the NRC evaluate waste streams on a case-by-case basis, taking into account a variety of relevant factors such as the types and amounts of fission products in the material under consideration, the effects of radioactive decay, the results of additional processing and treatment, and the anticipated management and disposal pathway to ensure the protection of the public health and safety. This approach is similar to that employed by the Secretary and the NRC in determining which components of the civilian reprocessing wastes at the West Valley, New York facility should be disposed of as "high-level radioactive waste."

The amendment would codify the current administrative practice by adding a provision at the end of the NWPA definition of high-level radioactive waste which, as noted above, would state explicitly that material from reprocessing is not high-level waste if the Secretary, in consultation with the NRC, determines that the public health and safety do not require its disposal in a deep geologic repository for spent fuel and high-level radioactive waste. This language is very similar to the approach taken in the WIPP Land Withdrawal Act, Pub. L. 102-579 (106 Stat. 4777) with respect to what waste constitutes transuranic waste that may be disposed of at WIPP. The EPA Administrator is the certifying authority for WIPP, as the NRC is the licensing authority for Yucca Mountain. After defining transuranic waste as "waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years," sec. 2 (18), the WIPP Land Withdrawal Act excepts from that definition waste that the Secretary has determined with the concurrence of the Administrator does not need the degree of isolation that EPA's rules for disposal of transuranic waste require WIPP to provide, Sec. 2 (18)(B), or waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61.

For consistency with other statutes that define "high-level radioactive waste," where the same issue arises, this amendment makes clear that the Atomic Energy Act of 1954's cross reference to the NWPA definition refers to the amended version and makes a similar amendment to the West Valley Demonstration Project Act. The amendment also adds a similar incorporation by reference to the licensing provisions of the Energy Reorganization Act of 1974, which employ the term "high-level radioactive waste" without defining it. In the context of those provisions of the Energy Reorganization Act the term also includes spent fuel, and the

In addition, DOE and NRC have identified certain types of material, such as job wastes (clothing, tools, equipment and the like), contaminated in the course of reprocessing operations, that do not constitute HLW. Although it has not been asserted that the current definition casts doubt on this view, it seems worth clarifying the point explicitly in the course of making other clarifying amendments to the definition.

amendment so specifies

This amendment does not affect the authority under which EPA has promulgated its radioactive waste disposal regulations at 40 C.F.R. Part 191. In addition, the Environmental Protection Agency will retain all its current authority with respect to that material from reprocessing that the Secretary of Energy determines can be safely disposed of in the Waste Isolation Pilot Plant. There will be no change with respect to EPA's current role with respect to WIPP or the applicability of the Part 191 standards to other facilities, and DOE will continue its current consultation practices with EPA regarding material emplaced in WIPP."