

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSIONERS

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OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of:)	Docket No. 72-22-ISFSI
)	
PRIVATE FUEL STORAGE, LLC)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel)	
Storage Installation))	February 11, 2002

UTAH'S SUGGESTION OF LACK OF JURISDICTION

The State of Utah ("Utah") suggests to the Commission that governing federal law, the Nuclear Waste Policy Act of 1982, as amended, deprives the Commission of jurisdiction over the license application of Private Fuel Storage, L.L.C. ("PFS") and that the Commission must therefore dismiss that application forthwith.

**I.
BACKGROUND FACTS**

PFS is a Delaware limited liability company owned by eight companies that also own and operate commercial nuclear power plants. PFS has been seeking a license from the Commission since 1997 pursuant to 10 CFR Part 72 to construct and operate an independent Spent Fuel Storage Installation ("ISFSI") about 45 miles west southwest of Salt Lake City, Utah, on the reservation lands of the Skull Valley Band of Goshute Indians. PFS proposes to construct and operate an ISFSI large enough to store all of the nation's current inventory of spent nuclear fuel ("SNF"), which equals approximately 40,000 metric tons.

Utah is a party to the PFS licensing proceedings and has strongly opposed the issuance of a license to PFS on a number of grounds, including the jurisdictional grounds raised in this Suggestion.

II. THE GROUNDS FOR THE SUGGESTION

The Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10101 *et seq.* (“NWPA”) deprives the Commission of jurisdiction over PFS’s license application. The NWPA does that by prohibiting any privately owned, away-from-reactor, spent nuclear fuel (“SNF”) storage facility. It follows that the NRC has no authority, no jurisdiction, to license what Congress has prohibited.

The NWPA established a comprehensive national nuclear waste management system for the storage of SNF from commercial reactors. Under that system, storage of SNF at away-from-reactor storage facilities may be done only at facilities owned and operated by the federal government, not at facilities owned by private parties like PFS. Utah establishes this legal reality in its concurrently filed Petition to Institute Rulemaking. There Utah petitions the Commission to amend its regulations governing ISFSIs, 10 CFR Part 72, to the extent those regulations may be deemed to relate to a privately owned, away-from-reactor, spent nuclear fuel (“SNF”) storage facility. Specifically, Utah petitions that the Commission amend the ISFSI regulations to make clear that licensing is allowed only for federally owned and operated away-from-reactor, SNF storage facilities and not for an away-from-reactor storage facility when privately owned. Utah supports its Petition by demonstrating through a complete discussion of the pertinent statutory language, legislative history, and legal authorities that Congress, with the NWPA, prohibited a

facility of the kind PFS is pursuing in this licensing proceeding. And, again, it follows that the Commission has no jurisdiction to license what Congress has prohibited.

Utah incorporates by reference here the argument sections of its Petition to Institute Rulemaking, which is attached as Exhibit 1.

**III.
THE PROCEDURAL POSTURE OF
THIS SUGGESTION OF LACK OF JURISDICTION**

Under Rule 12(h)(3), Federal Rules of Civil Procedure, a court must dismiss an action whenever it appears, by suggestion of the parties or otherwise, that the court lacks subject matter jurisdiction. The issue of the court's subject-matter jurisdiction is so fundamental that the parties cannot waive that issue by agreement or by any other action or inaction. Subject-matter jurisdiction is so fundamental that a party may raise the issue at any time by way of a Rule 12(h)(3) suggestion. The court itself may also raise the jurisdictional issue on its own initiative at any time, even for the first time on appeal.

To Utah's knowledge, the Commission does not have a rule similar to Rule 12(h)(3). The Commission, however, has often said that it will look to the Federal Rules of Civil Procedure for guidance. In matters respecting the NRC's subject-matter jurisdiction, Utah is certain that the Commission should want, as the federal courts do, to retain its right to consider its jurisdiction at any time in its proceedings, either on its own initiative or at the suggestion of the parties. For that reasons, Utah has styled this filing a Suggestion of Lack of Jurisdiction.

Utah raised the Commission's lack of jurisdiction over PFS's license application in 1997 when it filed its Contention A with the Atomic Safety Licensing Board. The contention stated that the "Congress has not authorized NRC to issue a license to a private entity for 4,000 cask, away-from-reactor, centralized, spent nuclear fuel storage facility." The Board held that Utah's

Contention A was “inadmissible in that the contention and its supporting basis impermissibly challenge the agency’s existing regulatory provisions.” The Board made this assertion even though Utah’s challenge was not to the language of the Commission’s regulations (the Part 72 regulations do not specifically address the issue of away-from-reactor ISFSIs) but to the Commission’s authority to license a facility prohibited by Congress.

The Board further noted that, although it agreed that “an adjudicatory body generally has the authority to consider its own jurisdiction ... in this instance we do not find sufficient ambiguity in the Commission’s regulatory declaration of its jurisdiction (and concomitantly ours) to permit further inquiry into that [jurisdictional] question consistent with the dictates of 10 C.F.R. 2.758.” LBP-98-7. But again the Board got it wrong. Utah was not questioning whether the Commission had unambiguously interpreted its Part 72 regulations to apply to the licensing of away-from-reactor ISFSIs; rather, Utah was asserting that the Commission’s pre-NWPA interpretation¹ of its pre-NWPA ISFSI regulations – an interpretation that applied those regulations to a private, away-from-reactor facility – was absolutely inconsistent with the NWPA, which prohibits such a private facility.

In April 2001, PFS sued Utah in federal district court claiming that several of Utah’s statutes were unconstitutional because intended to interfere with PFS’s proposed away-from-reactor, SNF storage facility. *The Skull Valley Band of Goshute Indians, et al. v. Michael O. Leavitt, et al.*, D. Utah, Case No. 2:01CV002C. Utah responded by filing a Motion for Judgment on the Pleadings based on the same jurisdictional issue raised in this Suggestion. In its Motion, Utah demonstrated that PFS lacked Article III standing to complain about Utah’s statutes

¹ Found at 45 Fed. Reg. 74693, 696 and 698-99.

because PFS has no judicially cognizable interest in building and operating an unlawful nuclear waste dump, a waste dump rendered unlawful by governing federal law, the NWPRA.

Out of an abundance of caution, Utah raised the very same jurisdictional issue in a Rule 12(h)(3) Suggestion of Lack of Jurisdiction. The federal district court will hear both Utah's Motion and its Suggestion on 11 April 2002.

In response to Utah's Motion and Suggestion, the United States Department of Justice filed on 22 January 2002 an amicus curiae brief in the PFS litigation on behalf of the Commission. Justice argued, among other things, that the federal district court lacked jurisdiction to determine its own jurisdiction; specifically, Justice stated that the district court lacked jurisdiction to decide Utah's Motion because Utah had failed to exhaust its administrative remedies – that is, that Utah had “never petitioned the Commission to rescind or in any way amend the Part 72 regulations pertaining to private offsite storage facilities.” United States Amicus Curiae Brief, p. 18.² For reasons explained in its filings with the district court but not relevant here, Utah strongly disagrees with Justice's position that the district court lacks jurisdiction to decide Utah's Motion – a motion simply demonstrating that, because of PFS's lack of a judicially cognizable injury, Article III deprives the district court of jurisdiction over PFS's action.

Moreover, given both the fact that Utah is challenging the Commission's authority to license a facility prohibited by Congress and the fact that Utah is **not** challenging any particular language in the Part 72 regulations, Utah disagrees that the only proper way to raise with the Commission the NRC's lack of jurisdiction is through a petition to amend Part 72. Nevertheless

² In its amicus brief, Justice expressly declined to take a position on whether the NWPRA prohibits a privately owned, away-from-reactor, SNF storage facility.

language in the Part 72 regulations, Utah disagrees that the only proper way to raise with the Commission the NRC's lack of jurisdiction is through a petition to amend Part 72. Nevertheless (and without prejudice to its positions in the PFS litigation), Utah wants to insure that it has placed its jurisdictional challenge before the Commission in a way immune to evasion. Accordingly, Utah files this Suggestion concurrently with the filing of its Petition to Initiate Rulemaking, with both filings making explicit (1) that the NWPA prohibits a privately-owned, away-from-reactor, SNF storage facility, (2) that the NWPA therefore precludes application of the Part 72 regulations to the licensing of such a facility, and (3) that the Commission has no jurisdiction to license what Congress has prohibited.³

IV. CONCLUSION

For the reasons explained above, Utah respectfully submits that the Commission lacks jurisdiction over PFS's application. The Commission should forthwith enter a decision so holding and, on that basis, dismiss this licensing proceeding.

Dated this 11th day of February, 2002

Respectfully submitted,



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³ In Utah's view, if the Commission were to find that it lacks jurisdiction over PFS's application and dismiss it, a rulemaking with respect to the Part 72 regulations would not be required.

CERTIFICATE OF SERVICE

I hereby certify that a copy of this paper was served on the persons listed below by electronic mail (unless otherwise noted), with conforming copies by United States mail first class, on 11 February 2002:

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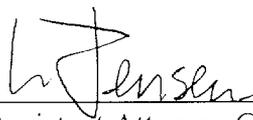
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A handwritten signature in black ink, appearing to read "L. Jensen", is written over a horizontal line.

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EXHIBIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSIONERS

IN THE MATTER OF THE PETITION OF
THE STATE OF UTAH (1) TO AMEND THE
ISFSI REGULATIONS OF 10 CFR PART 72
AS THOSE REGULATIONS RELATE TO A
PRIVATELY OWNED, AWAY-FROM-
REACTOR, SPENT NUCLEAR FUEL
STORAGE FACILITY AND (2) TO STAY
THE PENDING PRIVATE FUEL STORAGE,
L.L.C., LICENSING PROCEEDING

PETITION TO INSTITUTE
RULEMAKING
AND TO STAY LICENSING
PROCEEDING
February 11, 2002

I.
UTAH'S PETITION

Pursuant to 10 CFR 2.802(a), the State of Utah ("Utah") petitions the Nuclear Regulatory Commission ("the Commission" or "the NRC") to amend its regulations governing independent spent fuel storage installations ("ISFSIs"), 10 CFR Part 72, to the extent those regulations may be deemed to relate to a privately owned, away-from-reactor, spent nuclear fuel storage facility. Specifically, Utah petitions that the Commission amend the ISFSI regulations to make clear that licensing is allowed only for federally owned and operated away-from-reactor, spent nuclear fuel ("SNF") storage facilities and not for an away-from-reactor storage facility when privately owned.

Pursuant to 10 CFR 2.802(d), Utah also petitions the Commission to stay, until final resolution of Utah's petition to amend 10 CFR Part 72, the pending licensing proceeding *In the*

Matter of: Private Fuel Storage, LLC, Docket No. 72-22-ISFSI (“the PFS licensing proceeding”).¹

II. UTAH’S PROPOSED AMENDMENT TO 10 CFR PART 72

Utah proposes that the Commission add the following language, or an appropriate equivalent, to 10 CFR Part 72 as section 72.2(d):

Notwithstanding any other provision in this Part, this Part does not authorize the licensing of any privately owned, away-from-reactor, spent nuclear fuel storage facility. Under federal law, storage of spent nuclear fuel from commercial nuclear power plants at an away-from-reactor storage facility is not allowed except in a Monitored Retrievable Storage facility owned and operated by the federal government pursuant to the Nuclear Waste Policy Act of 1982, as amended. An away-from-reactor, spent nuclear fuel storage facility is any ISFSI not located on, or adjacent to, a reactor site.

III. UTAH’S INTEREST IN AND GROUNDS FOR THE PETITION

Utah is a party to the PFS licensing proceeding. There Utah has strongly opposed the issuance of the ISFSI license PFS seeks on a number of grounds, including the ground supporting this Petition, that governing federal law prohibits a privately owned, away-from-reactor, SNF storage facility and thus precludes the NRC from licensing such a facility.

PFS is a limited liability company owned by eight U.S. companies that also own and operate commercial nuclear power plants. None of those nuclear power plants is located in Utah. PFS is seeking a license pursuant to 10 CFR Part 72 to build and operate an ISFSI about 45 miles west southwest of Salt Lake City, Utah, on the reservation lands of the Skull Valley Band of

¹Utah is filing with the Commission, concurrently with the filing of this Petition, a Suggestion of Lack of Jurisdiction over the PFS licensing proceeding. The same arguments presented here support that Suggestion. If the Commission were to find a lack of jurisdiction over the PFS licensing proceeding, pursuant to the Suggestion, the Commission would not need to proceed with this Petition and Utah would withdraw it.

Goshute Indians. PFS proposes to build and operate an ISFSI large enough to store – above ground on open concrete slabs – all of the Nation’s current inventory of spent nuclear fuel, approximately 40,000 metric tons.

To Utah’s knowledge, PFS is the first entity to apply for a license to build and operate an away-from-reactor ISFSI since the Part 72 regulations were promulgated in 1980.

As will be explained in detail below, the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10101, *et seq.* (“the NWPA”), prohibits the storage of spent nuclear fuel from commercial nuclear power plants at an away-from-reactor storage facility, except in a Monitored Retrievable Storage facility owned and operated by the federal government pursuant to the provisions of the NWPA.² The NRC promulgated its Part 72 regulations in 1980, two years **before** the adoption of the NWPA. In 1980, Congress was working on but had not yet enacted its comprehensive scheme for the storage and disposal of SNF. Accordingly, the NRC premised its Part 72 regulations, including the Commission’s licensing authority specified in those regulations, on the general grant of licensing authority over the use and possession of nuclear materials appearing in the venerable Atomic Energy Act of 1954, 42 US.C. 2011, *et seq.* (“the AEA”) – even though the AEA then made no reference to SNF storage, . Significantly, the Part 72 regulations do not specifically authorize the licensing of an away-from-reactor ISFSI, as

² Utah has made this same argument in a Motion for Judgment on the Pleadings and in a Suggestion of Lack of Jurisdiction in a lawsuit brought against Utah by PFS, *The Skull Valley Band of Goshute Indians, et al. v. Michael O. Leavitt, et al.*, D. Utah, Case No. 2:01CV002C. The Motion and Suggestion are to be heard on 11 April 2002. Utah also raised this same argument in the PFS licensing proceeding as Utah’s very first contention. The Atomic Safety Licensing Board, however, stated in its refusal to admit the contention that the contention constituted an “impermissible challenge to the agency’s existing regulatory provisions” and that inquiry into the issue raised by it was beyond the Board’s authority. LBP-98-7, Docket No. 72-22-ISFSI.

opposed to one located at the site of the reactor. That fact merits repetition: The Part 72 regulations do not specifically authorize the licensing of an away-from-reactor ISFSI. Yet the Commission issued in 1980 an interpretation that away-from-reactor ISFSIs could be licensed pursuant to Part 72. 45 Fed. Reg. 74696.

Since enactment of the NWPA in 1982, the NRC has never amended its Part 72 regulations to reflect the NWPA's prohibition of privately owned, away-from-reactor, SNF storage facilities, nor has the NRC issued any statements clarifying that its ISFSI regulations, after enactment of the NWPA, should not be read to authorize the licensing of such facilities. But, as noted above, no entity before PFS ever sought to use the ISFSI regulations as part of a scheme to create a privately owned, away-from-reactor, SNF storage facility.

Accordingly, Utah respectfully now requests that the NRC amend its Part 72 regulations to make clear that those regulations conform to the NWPA (with its prohibition of a privately owned, away-from-reactor, SNF storage facility). Utah further requests that the Commission stay the PFS licensing proceeding pending final resolution of Utah's Petition.

IV. STATEMENT IN SUPPORT OF UTAH'S PETITION

A. Pre-NWPA efforts relative to the storage and disposal of nuclear waste from commercial reactors provided the basis for Congressional action in the NWPA prohibiting a privately owned, away-from-reactor, SNF storage facility.

In the NWPA, Congress created (in its own words) "the Nation's nuclear waste management system." 42 U.S.C. §§ 10163(a)(1)(B). As will be shown in sections IV B and C

below, that system expressly prohibits away-from-reactor storage of SNF at privately owned and operated storage facilities.³

To correctly understand Congress' actions in the NWPA relative to away-from-reactor storage of SNF, one must understand the long and somewhat involved history of federal efforts, prior to the passage of the NWPA, relative to storage and disposal of the Nation's nuclear waste. The history of these efforts has been extensively researched at the direction of Congress. The review that follows is drawn from a March 1985 report prepared by the Office of Technology Assessment ("OTA") at the request of Congress and entitled "Managing the Nation's Commercial High-Level Radioactive Waste." Chapter 4 of the OTA Report, entitled "The History of Waste Management," is attached as Appendix 1.

The first privately owned nuclear reactors were licensed in the late 1950s by the Atomic Energy Commission ("AEC"), the predecessor to the NRC, pursuant to the licensing authority granted it by the AEA. As those reactors began to generate SNF, the universal assumption was that the SNF would be reprocessed and that the fuel produced thereby would be used to generate more electricity. Permanent disposal of the high-level liquid radioactive waste that remained after reprocessing would be the responsibility of the federal government. Accordingly, the owners of nuclear reactors began storing their SNF in "water-filled basins at reactor sites, pending development of a commercial reprocessing facility." Appendix 1, at p. 83.

The AEC authorized the construction of the first commercial reprocessing plant in 1963. Located in New York, that plant operated for six years before closing in 1972. Two other

³The word "storage" in this Petition is meant to refer to the "the interim storage, protection, and safeguarding of spent fuel ... for a limited time only, pending its ultimate disposal" in a permanent repository. 10 CFR 72.3(x).

reprocessing plants were authorized, one in Illinois and one in South Carolina, but neither of them ever became operational.

In 1970, the AEC published the first federal policy with respect to the disposal of the high-level liquid radioactive wastes that result from the reprocessing of SNF. 10 CFR Part 50, Appendix F. Under that policy, the liquid wastes were to be converted by the reprocessing facility to a dry solid and placed in sealed containers. The containers were then to “be transferred to a Federal repository” which would assume permanent custody of them. All costs of “disposal and perpetual surveillance” incurred by the federal government were to be borne by the owners of the nuclear reactors.

In 1970, the AEC also announced that it had selected an abandoned salt mine in Lyons, Kansas, as the site for the first full-scale federal nuclear waste repository. Two years later, the AEC abandoned its plans for a repository in Lyons, due both to intense political opposition at the state and local level and to technical problems at the site.

The AEC then began to search for other possible repository sites. It also “proposed [for the first time] building a series of aboveground structures, called retrievable surface storage facilities (RSSFs), to store commercial high-level wastes for a period of decades while geologic repositories were developed.” However, “the environmental impact statement issued by AEC in support of the RSSF concept drew intense criticism by the public and by the Environmental Protection Agency because of concerns that the RSSFs would become low-budget permanent repository sites. As a result, AEC abandoned the RSSF concept in 1975.” Appendix 1, at p. 85

In 1974, Congress abolished the AEC and “distributed its developmental functions to the new Energy Research and Development Agency (ERDA), later changed to the Department of

Energy (DOE), and its regulatory functions to the new Nuclear Regulatory Commission (NRC).” Appendix 1, at p. 86.

In 1975, ERDA developed the National Waste Terminal Storage program. “The program involved a multiple-site survey of underground geologic formations in 36 states and was designed to lead to the development of six pilot-scale repositories by the year 2000.” Appendix 1, at p. 86. Because of political opposition, ERDA’s initial plans were scaled back. By 1980, repository sites in only six states were being evaluated.

In 1977, President Carter announced a federal spent fuel policy, “partly to ease the utilities’ growing burden of spent fuel storage.” The policy provided that “title to spent fuel would be transferred to the Government and that the spent fuel would be transported at utility expense to a Government-approved away-from-reactor facility for storage until a repository became available.” President Carter also suspended indefinitely the “reprocessing of commercial spent fuel in the United States.” Appendix 1, at p. 87. The President was concerned, in part, that the uranium-enriched fuel that was a byproduct of reprocessing would lead to a further proliferation of nuclear weapons. (Although in 1981 President Reagan reversed President Carter’s policy on reprocessing, no one stepped forward to invest in new reprocessing facilities.)

In 1980, two years prior to enactment of the NWPA, the NRC adopted the Part 72 regulations addressed by this Petition. These regulations were entitled “Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation (ISFSI).” 10 CFR Part 72. According to the NRC, the ISFSI regulations were adopted because “following [President Carter’s] deferral of reprocessing of spent fuel in April 1977 came the general recognition that, regardless of future developments, spent fuel would have to be stored for a number of years prior to its ultimate disposition, and that the storage of spent fuel in an ISFSI [as

an alternative to storage in water-filled basins] would be a likely additional new step in the nuclear fuel cycle,” pending the SNF’s ultimate disposal in a permanent repository. 45 Fed. Reg. 74,693.

Thus, at the time Congress considered and passed the NWPA in 1982, it faced the following realities: 1) increasing amounts of SNF were accumulating at reactor sites in water-filled basins that had not been designed for long-term storage; 2) the future of reprocessing, the long-assumed solution to the SNF problem, was in doubt; 3) a federal repository for the **permanent** disposal of SNF was still some years in the future, thus raising the possibility that at least some SNF might need to be stored temporarily in an away-from-reactor storage facility in order to avoid the shutdown of reactors whose water-filled basins had reached capacity; 4) previous efforts to develop a federal **interim**, away-from-reactor SNF storage facility pending completion of a permanent repository had generated fierce political opposition and had been stymied by concerns, among others, that any such facility would itself become a *de facto* permanent repository; and 5) no efforts had been made to develop a privately owned, away-from-reactor, SNF storage facility. Regarding that last point, number 5, the nuclear power industry was looking to the federal government for a solution to the industry’s long-term SNF storage and disposal problems.

B. The NWPA established a comprehensive national nuclear waste management system that prohibits away-from-reactor SNF storage at privately owned facilities.

1. Section 10155(h) of the NWPA prohibits storage of SNF at privately owned, away-from-reactor facilities.

When enacting the NWPA, Congress established a comprehensive program and national policy for the interim storage of SNF; Congress did so in order to avoid reactor shutdowns

pending completion of a permanent repository. In Subtitle B, entitled “Interim Storage Program,” 42 U.S.C. §§ 10151 to 10157, Congress established that

the persons owning and operating civilian nuclear power reactors have the primary responsibility for providing interim storage of spent nuclear fuel from such reactors, by maximizing, to the extent practical, the effective use of existing storage facilities **at the site** of each civilian nuclear power reactor, and by adding new **onsite** storage capacity in a timely manner where practical ...

Id. at 10151(a)(1) (emphasis added). But Congress also provided a carefully controlled, limited, and **federal** program for temporary, away-from-reactor storage, a program some Members referred to as an “emergency” program. Section 10155 of Subtitle B provided that up to 1900 metric tons of SNF could be stored at an away-from-reactor nuclear facility **owned by the federal government** and then **only** if the federal government owned the facility at the date of the enactment of the NWPA and then **only** if reactor owners could first show that they had done, and were doing, everything possible to expand their onsite storage capacities and then **only** if away-from-reactor storage was absolutely necessary to prevent reactor shutdowns. (In addition, in Subtitle C, Congress authorized the study – but not the implementation of – another type of possible interim, away-from-reactor, storage program known as “monitored retrievable storage” (“MRS”).)

The presence of the section 10155, or emergency, program in the 1982 Act concerned Members of Congress. Specifically, Members worried that the acknowledgment in section 10155 that SNF could be stored away-from-reactor (or “offsite”) might lead the federal government or private parties, in order to avoid reactor shutdowns, to use for interim SNF storage either the already existing, privately owned, reprocessing facilities or some new facility. The authors of the 1982 Act therefore added subsection (h) to section 10155 to make clear the

prohibition of any away-from-reactor facilities for storage, other than those owned by the federal government at the time of the adoption of the NWPA.

Subsection (h) provides:

Notwithstanding any other provision of law, nothing in this Act shall be construed to encourage, authorize, or require the private or Federal use, purchase, lease or other acquisition of any storage facility located away from the site of any civilian nuclear power reactor and not owned by the Federal Government on the date of the enactment of this Act.

This language is an express disallowance of any away-from-reactor storage other than that provided for in the NWPA; at this time, NWPA-approved storage was limited to facilities already owned by the federal government.⁴ Indeed, as is made plain by the legislative history of the NWPA, a privately owned, away-from-reactor, SNF storage facility (just what PFS is now proposing) was one of Congress' worst nightmares, and Congress added the language in subsection (h) precisely to prevent that nightmare from becoming a reality.

The House Debate on Section 10155(h). The House extensively discussed in 1982 the reasons for adopting 10155(h) as part of the NWPA. That discussion leaves no doubt that the House intended 10155(h) to prohibit privately owned, away-from-reactor, SNF storage facilities as part of the national nuclear waste management system. Because of the importance of this debate to the issue presented in this Petition, we recount the debate in some detail. (The relevant portions of the Congressional Record are also attached as Appendix 2.)

On the floor of the House, Rep. Lundine proposed that section 10155 providing for emergency offsite storage of SNF (then referred to as section 135) be deleted from the bill in its

⁴In 1987, as will be explained in III. C below, Congress also authorized the federal government, subject to many restrictions, to build and operate a new away-from-reactor storage facility known as a Monitored Retrievable Storage facility.

entirety. Rep. Lundine believed that the "interim storage needs [of reactor owners] will be and can be met at the sites of reactors, and with our research program," and that providing federal interim storage capacity (even with the onerous restrictions of section 10155) would relieve the pressure on the reactor owners to solve their problems onsite. 97 Cong. Rec. 28,034 (1982).

In response to Rep. Lundine's proposal, Rep. Corcoran expressed concern that by deleting section 10155, Congress would also be deleting the language now found in subsection (h), the language specifically providing that the NWPA was not to be read as encouraging, authorizing, or requiring away-from-reactor storage at any site other than those nuclear facilities already owned by the federal government. Rep. Corcoran had in his district one of the three existing (but non-operational) high-level radioactive waste reprocessing plants, and he was concerned that in the absence of the language in subsection (h), the reprocessing plant in his district would be used to store SNF "under emergency circumstances" so as to "preclude the shutdown of a power plant" that had run out of onsite storage. *Id.* at 28,033. He believed that section 10155 and, specifically, subsection (h) would prevent such an occurrence.

Rep. Lundine then tried to reassure Rep. Corcoran by pointing out that his (Lundine's) proposed amendment, by eliminating NWPA's sole authorization of away-from-reactor storage, would eliminate "congressional intent to establish an [away-from-reactor] program at any site," whether federal or private, thus making the language in subsection (h) unnecessary. *Id.* "The purpose of this amendment," he said, "is to try to solve the problem on site, not at away-from-reactor sites." *Id.* at 28,039. Summing up, he framed the issue for his colleagues as follows:

Are you going to keep the spent fuel rods at the end of the nuclear generating process at the site of the reactor, or are you going to ship them all over the country to various away-from-reactor storage sites, thereby incurring possible danger?

Id. at 28,034.

To dispel that specter of shipments “all over the country” raised by Rep. Lundine, Rep. Lujan, a floor manager of the bill and one opposed to Rep. Lundine’s proposed amendment, reassured his colleagues that section 10155 provided only for a “last resort interim storage facility,” and that SNF would not be shipped all over the country. “We have been very careful,” he said, “to specify [in section 10155] that [away-from-reactor storage] would be *only* at existing Federal sites, **so that any Member does not have to worry about whether or not a new interim storage facility is going to come into his district.**” *Id.* (emphasis supplied).

At the conclusion of the debate, Rep. Broyhill, another floor manager, reinforced Rep. Lujan's point:

Mr. Chairman, I would point out to the Members that the last-resort interim storage program is limited to existing Federal facilities **And I would also say that we have special statutory language in [subsection (h)],** which [Rep. Lundine] now would have us strike, **that would exclude the use of private away-from-reactor facilities for the storage of spent fuel.** We specifically put this language in here to take care of the problem that he and others have talked about; that is, the concerns they have expressed as [to] the possible use of privately owned facilities in their particular districts.

Id. at 28,040 (emphasis supplied).

In short, the House powerfully, consistently, and unambiguously expressed its intent that subsection (h) “would exclude the use of private away-from-reactor facilities for the storage of spent fuel.”

The Senate Debate on Section 10155(h). On the Senate side, Sen. Percy shared the same concern as Rep. Lundine, namely, that, in order to avoid reactor shutdowns, SNF would be placed “temporarily” or otherwise at a privately owned, away-from-reactor facility, especially one in his state. Senator Percy wanted assurance that, if the bill were to provide (as it did in

section 10155, albeit under strict limitations) for away-from-reactor storage of SNF, such storage would **not** take place in any of the existing privately owned reprocessing plants. To get that assurance, he asked Sen. Simpson, one of the bill's floor managers, this "one question":

Is it the intent of the managers of this legislation under section 135 to prohibit the Secretary from providing capacity for the storage of spent nuclear fuel from civilian nuclear power reactors at the following facilities: First. The interim spent fuel storage facility owned and operated by General Electric in Morris, Ill.; Second. The former nuclear fuel reprocessing center in West Valley, N.Y.; and Third. The Allied General Nuclear Services facility near Barnwell, S.C.?

Id. at 32560. Sen. Simpson responded, "**Yes, that is the intent of the managers of this legislation.**" *Id.* (emphasis supplied).

In short, the Senate, like the House, unambiguously expressed its intent that subsection (h) would exclude the use of private, away-from-reactor facilities for SNF storage.

Thus, based on the language of subsection (h) alone, it is clear that the NRC's 1980 interpretation of its Part 72 regulations as applying to the licensing of private, away-from-reactor SNF storage facilities became untenable in 1982 with passage of the NWPA. Accordingly, the NRC must now repudiate that interpretation.

2. The design, object, and policy of the NWPA make clear that Congress intended to preclude SNF storage at privately owned, away-from-reactor, SNF storage facilities.

Even if Congress had never enacted subsection (h), it is clear from the "design of the [NWPA] as a whole and [from] its object and policy" that Congress, in establishing a comprehensive, detailed, and national nuclear waste management system, intended to prohibit away-from-reactor storage of SNF other than as provided in the NWPA. *Crandon v. United States*, 494 U.S. 152, 158 (1990).

i. It is a fact universally accepted that Congress intended the NWPA to be a comprehensive solution to the problem of storage and disposal of SNF.

The comments of members of Congress at the time the NWPA was passed confirm that Congress intended the NWPA to be a comprehensive solution to the vexing problem of how to store and dispose of the nuclear waste from the nation's commercial reactors.

The principal Senate sponsor of the NWPA, Sen. McClure, stated in the 1982 debates:

[T]his bill is a truly comprehensive approach to the ultimate solution to disposition of the large and varied quantities of nuclear waste existing today in the United States and nuclear wastes which will be created in the years and decades ahead. [The bill] provides a firm national policy for spent-fuel storage, with clear guidelines for future utility planning.

97 Cong. Rec. 32,556.

In a similar vein, Sen. Simpson stated:

We are on the verge today of establishing the framework for this Nation's first comprehensive nuclear waste management and disposal program – a significant achievement for the Congress and the country.

Id. at 32,560.

Sen. Moynihan explained:

The passage of comprehensive Federal nuclear waste management legislation is long overdue. Many have worked diligently and thoroughly on the legislation before us today and it would be unfortunate indeed if another Congress adjourned without enacting a much needed system to deal with the long-term storage and permanent disposal of the high-level nuclear wastes being generated by this Nation's commercial nuclear power plants. There are 73 operating commercial powerplants in the United States ... Yet we have no comprehensive nuclear waste management program in place to deal with the tremendous volume of waste that will be generated by these plants. What we have before us today is a bill that will finally put us on the path to comprehensive nuclear waste management

Id. at 32,562-63.

Sen. Mitchell stated:

The drive behind the efforts to bring up and pass nuclear waste legislation is based on one steadfast concern: that for too long, Congress has failed to act on a final, comprehensive solution to the problem of nuclear waste.

Id. at 32,571.

Senate recognition that Congress was finally achieving a "final, comprehensive solution to the problem of nuclear waste" was echoed in the House. Rep. Udall, a principal House sponsor of the NWPA, stated that "the passage of this bill will, for the first time, give us a national policy on high-level nuclear waste." *Id.* at 27,772. Rep. Lujan explained:

This Congress, by passing a high level nuclear waste act, will be mandating a major Federal program for the ultimate solution of this Nation's growing radioactive waste problem. The last resort, interim storage facilities provided for in this act are an integral part of a relatively small, but essential, subprogram which contributes to the comprehensive solution.

Id. at 27,779.

Mr. Roth stated: "I rise to urge this body to carefully consider legislation that will establish a national policy for disposal of nuclear waste." *Id.* at 27,776.

Not only Congress but also the administrative agencies charged with implementing the NWPA understand that the NWPA was intended to establish a comprehensive solution to the nuclear waste storage and disposal problem. The Department of Energy has referred to the NWPA as "a comprehensive framework for disposing of high level radioactive waste and spent nuclear fuel generated by civilian nuclear power reactors." 60 Fed. Reg. 21,793. Significantly, the NRC is also of the same opinion. According to the NRC, the NWPA "establishes a comprehensive framework for the disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) generated by domestic civilian nuclear power reactors." 50 Fed. Reg. 5548.

Making a similar observation, the D.C. Circuit Court of Appeals has described the NWPA as "a comprehensive scheme for the interim storage and permanent disposal of high-level radioactive waste generated by civilian nuclear power plants." *Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272, 1273 (D.C. Cir. 1996)

Finally, the NWPA itself refers to the NWPA's comprehensive program as "the Nation's national nuclear waste management system," 42 U.S.C. §§ 10163(a)(1)(B), and "an integrated nuclear waste management system." *Id.* at § 10168(b).

In sum, there can be no doubt that Congress intended the NWPA to be a comprehensive treatment of SNF storage and disposal. As explained in detail below, the system Congress established does not provide for the storage of SNF at privately owned, away-from-reactor facilities but instead excludes such storage as unauthorized. Congress' comprehensive system gives to the federal government exclusively the authority for away-from-reactor, SNF storage. This reality compels retraction of the NRC's pre-NWPA interpretation of its 1980 ISFSI regulations as allowing licensing of private, away-from-reactor, SNF storage facilities.

ii. The design, policy, and object of the NWPA make clear its prohibition of SNF storage at privately owned, away-from-reactor facilities.

To fully appreciate the compelling and unmistakable implications of the NWPA with respect to the issue of away-from-reactor storage of SNF, it is necessary to discuss in some detail the deliberate and considered manner in which Congress has addressed that issue in the NWPA, first in 1982, then in 1987, and finally in 2000.

As noted briefly earlier, Congress addressed away-from-reactor storage of SNF in Subtitles B and C of Title I of the NWPA.

Subtitle B. Because a permanent repository would take some years to develop, Congress recognized that it needed to address the issue of what was to be done in the interim with the SNF that was accumulating in the onsite water-filled storage basins at nuclear reactors. When the NWPA was originally passed in 1982, Subtitle B, which is entitled "Interim Storage Program," was the sole provision of the Act specifying what was to be done with SNF during the interim

period prior to completion of a permanent repository. The specifications in Subtitle B do not include storing the SNF at a privately owned, away-from-reactor facility.

In Subtitle B, Congress specifically found that “the persons owning and operating civilian nuclear power reactors have the primary responsibility for providing interim storage of spent nuclear fuel from such reactors.” This responsibility was to be fulfilled in only one way: “by maximizing, to the extent practical, the effective use of existing storage facilities **at the site** of each civilian nuclear power reactor, and by adding new **onsite** storage capacity in a timely manner where practical.” 42 U.S.C. § 10151(a)(1) (emphasis supplied). Significantly, although Congress was clearly determined to have reactor owners bear the primary responsibility for SNF storage, it did not direct them to fulfill that responsibility by using or developing privately owned, away-from-reactor storage capacity. Instead, it focused exclusively on the owners’ onsite options. The obvious reason – away-from-reactor storage by private parties was not an option under the national nuclear waste management system. If there was to be away-from-reactor storage, it was to be provided by the federal government in accordance with the NWPA’s provisions.

Congress went on in a different subsection to state that the purpose of the “Interim Storage Program” was to “provide for the utilization of available spent nuclear fuel pools **at the site** of each civilian nuclear power reactor to the extent practical and the addition of new spent nuclear fuel storage capacity where practical **at the site** of such reactor.” *Id.* at § 10151(b)(1) (emphasis supplied). Significantly, although Congress again expressed in these words its intent to have reactor owners bear the primary responsibility for SNF storage, Congress did not direct them to use or develop privately owned, away-from-reactor storage capacity. The obvious reason – such storage was not an option under the national nuclear waste management system.

To assist reactor owners in the accomplishment of their interim onsite storage responsibilities, Congress directed the federal government to do three things. First, Congress directed the Secretary of DOE, the NRC, and “other authorized Federal officials” to “take such actions as such official considers necessary to encourage and expedite the effective use of available storage, and necessary additional storage, **at the site** of each civilian reactor” *Id.* at § 10152. Significantly, although Congress was clearly determined to have reactor owners bear the primary responsibility for SNF storage, Congress did not direct the federal officials to take actions to encourage and expedite the use or development of privately owned, away-from-reactor storage capacity. The reason – such storage was prohibited by the NWPA.

Second, Congress directed the NRC to “establish procedures” for the licensing of new technology “for use **at the site** of any civilian nuclear power reactor.” *Id.* at § 10153. Significantly, although Congress was clearly determined to have reactor owners bear the primary responsibility for SNF storage, Congress did not direct NRC to establish procedures to facilitate the use of new technology at privately owned, away-from-reactor storage facilities. The reason – such storage was not an option under the national waste management system established by the NWPA.

Third, Congress streamlined NRC procedures pertaining to “an application for a license, or for an amendment to an existing license, ... to expand the spent nuclear fuel storage capacity **at the site** of a civilian nuclear power reactor” *Id.* at § 10154. Significantly, although Congress was clearly determined to have reactor owners bear primary responsibility for SNF storage, Congress did not streamline NRC procedures pertaining to applications to use or develop privately owned, away-from-reactor storage capacity. The reason – such storage was prohibited by the NWPA.

Having made clear, as a matter of national policy, that reactor owners bear the primary responsibility for interim storage of SNF and that they are to accomplish such responsibility solely through the use and/or expansion of their onsite storage capacities, Congress then spelled out the severely restricted circumstances under which SNF could be stored away-from-reactor. A review of the restrictions on away-from-reactor storage makes clear that Congress in 1982 viewed such storage as truly a last resort, intended that such storage was to be employed only after reactor owners had exhausted their own onsite storage capabilities, and further intended that such away-from-reactor storage was to be under the exclusive control of DOE.⁵

The first restriction was that away-from-reactor storage of SNF could only be provided in one way. Subtitle B authorized DOE to use “available capacity at one or more facilities owned by the Federal government on the date of the enactment of this Act, including the modification and expansion of such facilities ...” for such storage. Moreover, Congress limited the total SNF at all qualifying federal facilities to an aggregate of 1,900 metric tons. *Id.* at § 10155(a)(1)(A). There was no authorization for the use of privately owned, away-from-reactor storage capacity in any amount.

The second restriction was that away-from-reactor storage of SNF at already established federal facilities was to take place only if the NRC first determined that 1) the entity requesting such storage cannot reasonably provide in a timely manner “adequate storage capacity” at the reactor site “to ensure continued orderly operation” of the reactor; and 2) the entity “is diligently pursuing licensed alternatives to the use of Federal storage capacity for the storage of spent

⁵ It should be noted that the offer to provide federal interim storage space was limited in time. To take advantage of the federal offer, owners of nuclear reactors had to enter into a contract with DOE to do so prior to 1990. 42 U.S.C. § 10156(a)(1). No owner did. Thus, the authority to make this storage space available to reactor owners has expired.

nuclear fuel expected to be generated by such [entity] in the future.” *Id.* at § 10155(b)(1). The “licensed alternatives” that the entity was required to diligently pursue as a condition of using federal away-from-reactor storage capacity were: 1) expansion of existing storage facilities **at the reactor site**; 2) construction of new or additional storage facilities **at the reactor site**; 3) acquisition of modular or mobile storage equipment for use **at the reactor site**; and 4) transshipment to another reactor site owned by such entity. *Id.* Significantly, although Congress was clearly determined to have reactor owners bear the primary responsibility for storing their SNF, it did not require reactor owners to demonstrate, as a condition of using storage space at the federal facilities, that they were “diligently pursuing” development of away-from-reactor storage options as means of meeting their future storage needs. The reason – such storage was not an option under the national waste management system established by the NWPA.

The third restriction was that any SNF stored at already established federal facilities had to “be removed from the storage site or facility involved as soon as practicable, but in no event later than 3 years following the date on which a repository or monitored retrievable storage facility developed under this Act is available for disposal of such spent nuclear fuel.” *Id.* at § 10155(e). Significantly, although Congress was clearly determined to limit the amount of time that SNF could be stored at away-from-reactor facilities, there is no such requirement in the NWPA for the timely removal of SNF from a privately owned, away-from-reactor storage facility. The reason – development of such storage capacity was prohibited by the NWPA and therefore did not need to be restricted in this fashion.

The fourth restriction was that affected States and Tribes had to be fully involved in any decision to use an already established federal facility to store SNF. Once DOE selected an already established federal facility as an interim storage site for SNF, the NWPA mandated that

DOE enter into a cooperative agreement with the State or Tribe under which the State or Tribe would “have the right to participate in a process of consultation and cooperation, ... in all stages of the planning and development, modification, expansion, operation, and closure of storage capacity at a site or facility within such State for the interim storage of spent fuel from civilian nuclear power reactors.” *Id.* at § 10155(d). In addition, the State or Tribe was given a right to disapprove DOE’s selection of a site. Such disapproval would block use of the site unless Congress passed a resolution overriding the disapproval. *Id.* at § 10155(d)(6)(D). Significantly, no participation rights were guaranteed to States or Tribes with respect to a decision to use or develop private, away-from-reactor storage facilities. The reason Congress did not also apply the onerous restrictions applied to a federal, away-from-reactor storage facility to a private storage facility is obvious – because privately owned, away-from-reactor storage facilities were prohibited by the NWPA.

The fifth restriction was that DOE was required to pay “impact assistance” to a “State or appropriate unit of local government” to “mitigate social or economic impacts occasioned” by the use of already established Federal facilities within their jurisdictional boundaries to store SNF on an interim basis. *Id.* at 10156(e). Significantly, no “impact assistance” was required to be paid to state and local governments to “mitigate social or economic impacts” caused by the storage of SNF at privately owned, away-from-reactor sites. The reason why Congress did not provide for such impact assistance – because such storage was prohibited by the NWPA.

These detailed statutory restrictions make clear that Congress gave careful and close consideration, in adopting Subtitle B of the NWPA, to the role that interim, away-from-reactor storage of SNF was to play in the national nuclear waste management system. Congress was concerned about where such storage would happen, how long it would last, how much could be

stored, which reactor owners would qualify to have their SNF stored at an away-from-reactor site, and what the impacts would be on affected communities. It strains credulity to suggest that the restrictions in Subtitle B only express national policy with respect to the provision of away-from-reactor storage at already established federal facilities and that Congress left reactor owners free to develop their own away-from-reactor storage facilities, at whatever sites they chose, with whatever storage capacities they wanted, with storage for however long private interests might dictate – subject only to the regulations of the NRC. Yet that incredulous suggestion is exactly PFS’s position. This fatal defect inherent in PFS’s position we refer to as “the Big Anomaly.”

The Big Anomaly is present whenever one measures PFS’s position against Congressional action on away-from-reactor storage of SNF – whether in 1982 with Subtitle B, in 1982 and 1987 with Subtitle C, or in 2000 with the Nuclear Waste Policy Amendments Act. With Congress’ 1982 action in Subtitle B set out in the previous paragraphs, we are ready to measure PFS’s position in the context of Subtitle B. PFS’s position acknowledges first (as it must) that Congress, in Subtitle B, treated the decision to use an already established **federal** facility for storage of a strictly limited amount of SNF for a strictly limited period of time with keen political sensitivity and with careful regard for the rights of the affected communities. Congress demonstrated this sensitivity and regard by enacting in Subtitle B a whole host of restrictions and limitations. These restrictions and limitations control where and when the facility can be sited, how much SNF can be stored there, how long the SNG can be stored there, and what must be the role of affected communities (including their receipt of aid).

But then PFS argues that Congress – “understanding” that private, away-from-reactor storage was certainly a continuing part of the Nation’s comprehensive scheme for SNF storage and disposal – nevertheless chose to apply none of those protective restrictions to private

facilities. In other words, PFS argues (as it must to avoid defeat) (1) that Congress perceived a fundamental difference between an away-from-reactor, SNF storage facility owned and operated by Uncle Sam and a facility of the exact same kind except for its ownership by a private entity and (2) that, on the basis of that perception, Congress chose to impose onerous, protective restrictions on the former but not the latter. Yet PFS cannot even begin to fabricate a “reason” why Congress would create such a massive difference between its treatment of a federally owned facility and a privately owned facility. Nor can PFS even begin to explain why the federal government – with all its resources and experience with things nuclear – should be the owner subjected to onerous protective measures – instead of, say, a shell Delaware limited liability company. PFS’s failure to explain – indeed, the entire Big Anomaly – is due to a simple, enduring fact: Congress created no such massive difference between its treatment of a federal owner/operator and its treatment of a private owner/operator; rather, Congress knowingly excluded private, away-from-reactor storage facilities and therefore intelligently applied its detailed restrictions to the only lawful away-from-reactor storage facilities, those owned and operated by the federal government.

The Big Anomaly does not just cripple PFS’s position, it defeats that position.⁶

NRC’s 1980 interpretation of its pre-NWPA Part 72 regulations so as to allow the licensing of private, away-from-reactor ISFSIs is inconsistent with the express provisions of the NWPA. To be consistent with governing law, the NRC must withdraw that interpretation.

Subtitle C. Subtitle C of the NWPA, which is entitled “Monitored Retrievable Storage,” also addressed the potential long-term (but not permanent) storage needs of reactor owners,

⁶ We demonstrate the Big Anomaly graphically in Appendix 3.

pending completion of a permanent repository. Congress recognized that providing assistance to the nuclear power industry in the short-term, as outlined in Subtitle B, might not be sufficient to solve the SNF storage problems the owners could conceivably face while waiting for a permanent repository to be built. Congress recognized that there might be a need for new, away-from-reactor storage facilities. Accordingly, Congress initially authorized DOE in 1982 to study the possibility of the federal government – not reactor owners – building one or more “monitored retrievable storage” facilities. MRS facilities are storage facilities capable of safely storing SNF for long periods of time but from which the SNF could eventually be retrieved for disposal in a permanent repository. The MRS concept is similar to, and a direct descendant of, the Retrievable Surface Storage Facility concept first proposed by the AEC in the early 1970s and renamed ISFSIs by the NRC in 1980.

Under Subtitle C, DOE was to “complete a detailed study of the need for and feasibility of, and shall submit to the Congress a proposal for, the construction of one or more monitored retrievable storage facilities for high-level radioactive waste and spent nuclear fuel.” 42 U.S.C. § 10161(b)(1). Each such facility was to be designed to “safely store such spent fuel and waste as long as may be necessary” and “to provide for the ready retrieval of such spent fuel and waste for further processing or disposal.” *Id.* at § 10161(b)(1)(D). DOE’s proposal was to include recommendations for “the establishment of a Federal program [not a private program] for the siting, development, construction, and operation” of MRS facilities, “which facilities are to be licensed by” the NRC. *Id.* at § 10161(b)(2). Only if “Congress by law, after review of the proposal submitted by [DOE] specifically authorize[d] construction of a monitored retrievable storage facility” was any such facility to be built. *Id.* at § 10161(c)(2). Significantly, DOE was not directed to study the need for and feasibility of a privately owned, away-from-reactor MRS,

like the facility that PFS has proposed. The reason – such a facility was prohibited by the NWPA. If there were to be new, away-from-reactor storage facilities – in addition to the facilities already owned by the federal government and employed under Subtitle B – those new facilities were to be owned and operated by the federal government, not private parties.

DOE completed its MRS study and submitted its proposal to Congress in March 1987, recommending that an MRS be authorized. After carefully reviewing DOE’s proposal, Congress amended the NWPA in 1987. Pub. L. Nos. 100-202, 100-203, codified at 42 U.S.C. §§10162 to 10169. The amendments authorized DOE to “site, construct, and operate one monitored retrievable storage facility” but only subject to a whole host of restrictions that Congress included in the amendments. 42 U.S.C. § 10162(b).

The amendments established a Monitored Retrievable Storage Review Commission, the members of which were to be appointed by Congress. 42 U.S.C. § 10163. The MRS Commission was to prepare yet another “report on the need for a monitored retrievable storage facility as a part of a national nuclear waste management system.” *Id.* at § 10163(a)(1)(C). In preparing the report, the Commission was to review, among other things, “the status and adequacy” of the MRS work done by DOE and to “make a recommendation to Congress as to whether such a facility should be included in the national nuclear waste management system in order to achieve the purposes of this chapter, including ... providing temporary storage of spent nuclear fuel accepted for disposal.” *Id.* The amendments also specifically required the MRS Commission, “in preparing the report and making its recommendation” to “compare such a [federally-owned and operated MRS facility] to the alternative of at-reactor storage of spent nuclear fuel prior to disposal of such fuel in a repository under this chapter.” *Id.* at § 10163(a)(2). Significantly, there is no direction to compare a federally-owned and operated

MRS facility to a privately owned and operated MRS or ISFSI, even though such a comparison would have been extremely valuable to Congress as it considered whether to authorize a federal MRS facility. The implication is clear – no such comparison was required by Congress because the NWPA prohibited a privately owned and operated away-from-reactor storage facility.

The 1987 amendments authorized DOE, following submission of the MRS Commission Report to Congress, to select a site for an MRS facility but only if it determined “on the basis of available information” that the site was “the most suitable for a monitored retrievable storage facility that is an integral part of the system for the disposal of spent nuclear fuel and high-level radioactive waste established under this chapter.” *Id.* at § 10165(a). Moreover, DOE’s selection of a site was made subject to disapproval by the affected State or Indian tribe, which disapproval could only be overridden by a resolution of Congress. Significantly, Congress did not require that any privately owned, away-from-reactor storage facility be built only if it was first determined to be “an integral part” of the national nuclear waste management system, nor did Congress provide any special rights to communities directly affected by the selection of a site for such a facility. The reason – such a private facility was prohibited by the NWPA.

Because Congress was concerned that the construction of an MRS facility might relieve the pressure to move ahead with the development of a permanent repository, it closely tied the development of such a facility to the development of a permanent repository. The 1987 amendments to the NWPA prohibit DOE from selecting an MRS site “until after [DOE] recommends to the President the approval of a site for development as a repository.” *Id.* at § 10165(b). The amendments also limit NRC’s licensing authority with respect to an MRS facility. Under the 1987 amendments, NRC may not authorize construction of the MRS facility to begin until after it has issued a license for construction of the permanent repository. It may

also not permit the storage of more than 10,000 metric tons of SNF at the MRS facility until the permanent repository “first accepts” SNF and may not authorize the MRS facility to ever store more than 15,000 metric tons of SNF. *Id.* at § 10168(b). In short, Congress took deliberate steps to insure that the development of any new, away-from-reactor storage facility by DOE would not impede the ultimate goal of developing a permanent repository but rather but would be an integral part of the system designed to achieve that goal.

Obviously, the development of an away-from-reactor storage facility by private parties might similarly relieve the pressure to move ahead with a permanent repository. Yet Congress did not tie the selection of a site for such a facility to DOE’s recommendation of a site for a permanent repository, nor did Congress limit the amount of SNF that could be stored in such a facility. The reason why Congress did not take steps to make such a private facility an integral part of its effort to develop a permanent repository is again obvious – because such a private facility is prohibited by the NWPA.⁷

Congress intended to maintain strict control of the development and use of any new, away-from-reactor storage facility as an integral part of the national waste management system created in the NWPA. This much is obvious from the elaborate restrictions placed by the 1987 amendments on the siting, construction, and operation of an MRS facility. It strains credulity to suggest, as PFS does, that NWPA’s MRS restrictions are an expression of national policy only with respect to DOE’s construction and operation of an away-from-reactor facility and that Congress left private parties free to develop their own away-from-reactor storage facilities, at

⁷ The facility that PFS is proposing to build under the NRC’s pre-NWPA interpretation of its Part 72 regulations is a prohibited, private facility with the potential of disrupting and frustrating Congress’ effort to develop a permanent repository.

whatever sites they chose, with whatever storage capacities they wanted, and without any regard to the federal government's efforts to build a permanent repository, subject only to the pre-NWPA ISFSI regulations of the NRC. Thus, the Big Anomaly inherent in PFS's position emerges into the light again.

Congress' 1982 and 1987 action on the NWPA, Subtitle C, again vividly illuminates the Big Anomaly inherent in PFS's position.⁸ Again, the Big Anomaly renders PFS's position insupportable and demonstrates the need for retraction of the NRC's pre-NWPA interpretation of its Rule 72 regulations as allowing what the NWPA subsequently prohibited.

The Nuclear Waste Policy Amendments Act of 2000. Further Congressional action on new, away-from-reactor, SNF storage – this time in 2000 – likewise highlights the Big Anomaly in PFS's position. In March 2000, Congress passed the Nuclear Waste Policy Amendments Act of 2000. S. 1287, 106th Cong. (2000), found at 106 Cong. Rec. S574. Although the Act was vetoed by President Clinton and therefore did not become law, the 2000 legislation nevertheless

⁸ Following Congress' authorization of an MRS facility in 1987, DOE investigated a number of potential sites, including the reservation of the Skull Valley Band of Goshute Indians. However, due to intense political opposition, DOE's efforts ground to a halt in the mid-90s when Congress failed to renew the authority for the Nuclear Waste Negotiator, who had been tasked in 1987 to "attempt to find a State or Indian tribe willing to host a . . . monitored retrievable storage facility." 42 U.S.C. §§ 10242 and 10250. To our knowledge, DOE has no current plans to seek a license to construct and operate an MRS facility.

Thus, the issue remains unresolved of what to do with SNF that truly cannot be stored at reactor sites pending completion of a permanent repository.

While Congress has provided a clear plan in the NWPA to resolve that issue, the failure of the federal government to implement the NWPA's full plan in a timely fashion has kept the issue a live one. It is the federal government's failures to proceed with plans for an MRS facility that led PFS to seek a license from the NRC for a private storage facility. The federal government's failure to implement the NWPA, however, does **not** change the facts that the NWPA is still the law and that the NWPA still prohibits away-from-reactor storage other than in accordance with its own provisions – provisions that exclude private, away-from-reactor storage facilities.

provides the most recent Congressional statement on the role that away-from-reactor storage is to play in the national nuclear waste management system established by the NWPA.

The 2000 amendments were prompted, in part, by litigation brought by reactor owners to recover damages from the federal government for its failure to begin disposing of their SNF in accordance with the 1998 deadline imposed by the NWPA sixteen years earlier and written into DOE contracts with the reactor owners. When the NWPA was first passed, Congress believed that the permanent repository would be operational by the end of 1997. As a result, it obligated DOE to begin to dispose of SNF no later than January 31, 1998. 42 U.S.C. § 10222(a)(5)(B). The D.C. Circuit has held that DOE's disposal obligation is not dependent on the availability of the permanent repository. *Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272 (D.C. Cir. 1996). As a consequence, the federal government is now liable for potentially billions of dollars of damages for the temporary storage costs incurred by reactor owners after January 31, 1998. *See Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336 (Fed Cir. 2000); *Northern States Power Co. v. Department of Energy*, 128 F.3d 754 (D.C. Cir. 1997). The damages will continue to mount until the SNF is disposed of at the permanent repository or until the federal government otherwise takes responsibility for the SNF now stored at reactor sites.

To stanch the bleeding, Congress passed the 2000 amendments. With DOE having failed to identify a suitable site for an MRS, Congress tried yet another approach to providing away-from-reactor storage pending the completion of the repository. This time Congress, in a section entitled "Backup Storage Capacity," authorized DOE to take title to such SNF as the NRC "determines cannot be stored onsite" and to "transport such spent nuclear fuel to, and store such spent nuclear fuel at, the [permanent] repository site after the [NRC] has authorized construction

of the repository.” At the repository site, the SNF was to be handled, packaged, and stored “prior to emplacement” in a “receipt facility” located “within the geologic repository operations area.” 106 Cong. Rec. S574. The hope was that the availability of such a facility for interim storage purposes would reduce the federal government’s damages bill by allowing the government to take responsibility for some SNF in advance of the opening of the permanent repository.

We see here again Congress’ now familiar solution to the SNF interim storage problem – Congress authorizing a federally owned interim storage facility that is directly tied to the development of a permanent repository and that would only be made available after a determination by the NRC that the SNF destined for storage there could not be stored onsite. We also have a repeat of the 1982 colloquy in which members of Congress sought assurance that their authorization of an interim storage facility would not lead to the storage of SNF at privately owned, away-from-reactor, storage facilities in their home states and districts. In the debate on the 2000 amendments, Sen. Hollings asked for the same type of assurance sought for and received by Sen. Percy in 1982. “I would like to inquire of the manager,” Sen. Hollings said, “whether it is possible for any spent nuclear fuel to go to South Carolina under the provisions of Section 102, ‘Backup Storage Capacity,’ of the manager’s substitute amendment.” The floor manager, Sen. Murkowski, responded, “Absolutely not. Spent nuclear fuel cannot go to South Carolina under the specific terms of the amendment’s Backup Storage Capacity provisions, which state that the government shall: ‘*** transport such spent fuel to, and store such spent fuel at, the repository site ***’” *Id.* at S573.

Significantly, some made an effort (which failed) to obtain Congressional acknowledgment in the 2000 amendments that the proposed PFS facility (or something like it) was part of the national nuclear waste management system. In an earlier version of the 2000

amendments, DOE was to be authorized to take title to such SNF as could not be stored onsite and to transport it for storage at either the “receipt facility” or at “a privately owned and operated independent spent fuel storage facility licensed by the Nuclear Regulatory Commission.” *Id.* at S494. This thinly veiled reference to the proposed PFS storage facility was not in the bill that passed, thus reaffirming that such a facility is simply not part of the national nuclear waste management system established by the NWPA.

In short, all aspects of Congress’ 2000 action demonstrate that PFS’s position is fatally flawed because premised on the false assertion that Congress intended to allow privately owned, away-from-reactor, SNF storage as a component of the Nation’s comprehensive system for the storage and disposal of nuclear waste.⁹

* * * * *

In sum, when the national nuclear waste management system established by the NWPA is considered as a whole, even without the express prohibition in section 10155(h), it is clear that Congress intended to prohibit the storage of SNF at privately owned, away-from-reactor storage

⁹ The Big Anomaly inherent in PFS’s position actually leads inexorably to what we call “the Big Parallel Anomaly.” A logical extension of PFS’s position creates the Big Parallel Anomaly in this fashion:

Nothing in the NWPA expressly repeals the NRC’s authority under the AEA to license a **private** permanent repository. Therefore, although the NRC has not issued regulations on the subject, the AEA’s general grant of licensing authority fully authorizes the NC to license a private permanent repository. That private repository would not be subject to any of the protective restrictions specified in the NWPA because the NWPA applies only to a federally owned permanent repository.

A first reaction may be to assert that the NWPA must certainly and expressly prohibit any permanent repository other than the federally owned facility proposed for Yucca Mountain. That assertion is wrong; a reading of the entire text of the NWPA reveals no express prohibition on a private entity applying for and receiving an NRC license to create and operate a permanent repository – at any site of the applicant’s choosing. Indeed, in its provisions governing a permanent repository, the NWPA does not have an equivalent of section 10155(h).

facilities. If there is to be away-from-reactor storage of SNF pending completion of a permanent repository, it is to be done only by the federal government in accordance with the provisions of the NWPA. NRC must therefore withdraw its pre-NWPA interpretation of its Part 72 regulations allowing for the licensing of privately owned, away-from-reactor storage facilities.

* * * * *

C. The NWPA alters the implications that can plausibly be drawn from the AEA about the NRC's authority to license private, away-from-reactor storage facilities.

PFS argues that Utah's reading of the NWPA amounts to an implicit repeal of the NRC's licensing authority granted to it by the AEA and then argues that, because repeals by implication are not favored by the courts, the NWPA should not be read as Utah urges. Utah, however, is **not** asking that the NRC find that its (the NRC's) general licensing authority has been implicitly repealed. Rather, Utah asks only that the Commission recognize this: the **implications** that can properly be drawn from the AEA's general grant of authority have been altered by the more specific and later-enacted NWPA. As the Supreme Court explained in the *Fausto* case: "[R]epeal by implication of an **express** statutory text is one thing; But repeal by implication of a legal disposition **implied** by a statutory text is something else." Where repeal of an express statutory text is involved, "it can be strongly presumed that Congress will specifically address language on the statute books that it wishes to change." But where the repeal of an **implication** drawn from the statutory language is involved, as is the case here, a different standard applies. In such a situation,

courts frequently find Congress to have [repealed an implication drawn from a statute] – whenever, in fact, they interpret a statutory text in the light of surrounding texts that happen to have been subsequently enacted. This classic judicial task of reconciling many laws enacted over time, and getting them to 'make sense' in combination, necessarily assumes that the implications of a statute may be altered by the implications of a later statute.

United States v. Fausto, 484 U.S. 439, 453 (1988) (emphasis added).

Utah is not asking the NRC to find that the NWPA implicitly repeals either any express language of the AEA or the general licensing authority granted to the NRC by the AEA. That general authority is an integral part of the framework established by the NWPA and its continued existence is essential to implementation of the NWPA. Instead, Utah is simply asking the NRC to find that NRC's general licensing authority (granted by the AEA, which does not refer to or address the issue of nuclear waste storage), when read in combination with the later-enacted, more specific NWPA (which comprehensively addresses the issue of nuclear waste storage), may not be used to license something the NWPA excludes – private, away-from-reactor storage facilities.

Granting Utah's Petition will not have the effect of deleting from the statute books either NRC's general licensing authority or any express language in the AEA. The NRC will still have the authority to issue licenses to “transfer, deliver, acquire, possess, own, receive possession of or title to, import, or export ... special nuclear material,” 42 U.S.C. §§ 2073(a), 2077, and there will still be a myriad of ways in which that authority may properly be exercised. The only thing that will have changed is that an implication drawn from that general grant of authority by the NRC in promulgating a regulation – at a time when there was **no** Congressionally enacted storage policy – will have been “altered by the implications of a later statute,” that is, the NWPA. Just as in *Fausto*, after Utah's Petition is granted, the AEA's grant of licensing authority will “not stand repealed, but [will remain] an operative part of the integrated statutory scheme set up by Congress” to govern the important and highly controversial issue of the storage of nuclear waste. *Id.* Even after Utah's Petition is granted, storage of nuclear waste in the manner

prescribed by the NWPA will still take place only pursuant to a license issued by the NRC under its general grant of licensing authority. 42 U.S.C. § 10168(c).

A recent and on-point United States Supreme Court decision clearly demonstrates how the Commission should apply these governing principles of statutory construction in resolving this Petition. In *Food and Drug Administration v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000), the tobacco industry challenged the FDA’s assertion of jurisdiction under the venerable (enacted 1938) Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301 *et seq.* (“FDCA”), to regulate tobacco as a “drug” and cigarettes and smokeless tobacco as “devices” that deliver nicotine to the body. The Supreme Court held that, even if the FDCA definitions of the terms “drug” and “devices” were broad enough to be properly construed to include tobacco products, the “FDA’s claim to jurisdiction contravenes the clear intent of Congress,” as expressed in the “distinct regulatory scheme” that Congress had created to address the “problem of tobacco.” *Id.* at 132, 144. Thus, the Court went on to hold that the FDA was precluded from regulating tobacco under the FDCA.

The Court based this holding on a number of key concepts, all relevant to an interpretation – in light of the later-enacted NWPA – of the scope of the NRC’s licensing authority granted by the AEA. The Court noted that Congress had created a “distinct regulatory scheme” through (in very large part) six pieces of “tobacco-specific legislation that Congress has enacted over the past 35 years.” *Id.* at 143-44. The Court found that the implications of the latter, tobacco-specific legislation controlled the construction of, and the proper implications to be drawn from, the earlier general language in the FDCA.

At the time a statute is enacted, it may have a range of plausible meanings. Over time, however, subsequent acts can shape or focus those meanings. The “classic judicial task of reconciling many laws enacted over time, and getting them to

‘make sense’ in combination, necessarily assumes that the implications of a statute may be altered by the implications of a later statute.” This is particularly so where the scope of the earlier statute is broad but the subsequent statutes more specifically address the topic at hand. As we recognized recently “a specific policy embodied in a later federal statute should control our construction of the [earlier] statute, even though it ha[s] not been expressly amended.”

Id. at 143 (citations omitted).

Further, the Court observed that the more controversial and important the issue, the more likely, as a matter of common sense, that Congress intended its specific, later-enacted solution to the problem to prevail over any agency action premised on an earlier and general grant of authority. Thus, after repeating the idea quoted above – that a subsequent, specific statute governs – the Court noted: “[W]e must be guided to a degree by common sense as to the manner in which Congress is likely to delegate a policy decision of such economic and political magnitude to an administrative agency.” *Id.* at 133. Against this background, the Court then held that “no matter how ‘important, conspicuous, and controversial’ the issue,” still “an administrative agency’s power to regulate in the public interest must always be grounded in a valid grant of authority from Congress.” *Id.* at 161. On this basis, the Court refused to extend the scope of the FDCA “beyond the point where Congress indicated it would stop.” *Id.*

The application of these rules of law to this case is straightforward. Just as the Supreme Court noted in *Brown & Williamson*, for SNF storage Congress has created a “distinct regulatory scheme”; Congress has done so through twenty years of work on the NWPA, beginning in 1982. The implications of that later, SNF storage-specific legislation must control the construction of, and the proper implications to be drawn from, the earlier general language in the AEA. Further, just as the Court observed in *Brown & Williamson*, so here: the more controversial and important the issue, the more likely, as a matter of common sense, that Congress intended its specific

solution to the problem to prevail over any agency action premised on an earlier and general grant of authority. To state the obvious: away-from-reactor, SNF storage is both a highly controversial and a highly important issue. Because of that importance and controversy, Congress has visited the issue on three occasions, in 1982, 1987 and 2000. Each time, Congress showed great sensitivity to the political implications of the siting of such a facility and to the need to make such a facility an integral part of the national system. It defies common sense and established canons of statutory construction to conclude, in light of Congress' comprehensive and detailed legislation on the issue, that Congress left private parties free to build and operate away-from-reactor storage facilities of whatever size, duration, and location, subject only to the pre-NWPA ISFSI regulations of the NRC.

In sum, in light of the NWPA, the NRC has no more authority under the AEA to license a privately owned, away-from-reactor, SNF storage facility than the FDA has under the FDCA to regulate tobacco.¹⁰

¹⁰ Even if the rule disfavoring repeals by implication did somehow apply here (it does not), this would nonetheless be an appropriate situation in which to find such a repeal. Repeals by implication may be found "where provisions in the two acts are in irreconcilable conflict." In such a situation, as is present here, "the later act to the extent of the conflict constitutes an implied repeal of the earlier one." *Yellowfish v. City of Stillwater*, 691 F.2d 926, 928 (10th Cir. 1982)). As explained above, there is no way to reconcile Congress' near-obsessive and numerous restrictions on away-from-reactor storage with the notion that Congress left private parties free of those restrictions, free to develop their own away-from-reactor storage facilities, at whatever sites they chose and with whatever storage capacities they wanted, subject only to the pre-NWPA ISFSI regulations of the NRC. Such a reconciliation would be possible only upon a showing that Congress had full confidence in the ability of private parties to site, build, and operate away-from-reactor storage facilities under NRC's pre-NWPA regulatory scheme but that Congress had no confidence whatsoever in the ability of the federal government to perform those tasks without a whole host of new restrictions and instructions. Nothing in the NWPA itself or in its legislative history supports such a view of Congressional intent. Indeed, just the opposite is true. By the nature and importance of the responsibilities entrusted by Congress to the federal government with respect to away-from-reactor storage, it is clear that Congress wanted the federal government – and only the federal government – to do the job. To the extent that the

V.

BECAUSE OF THE OVERWHELMING LIKELIHOOD THAT UTAH WILL PREVAIL ON ITS PETITION – THEREBY REMOVING ALL BASIS FOR THE PFS LICENSING PROCEEDING –, THE COMMISSION SHOULD NOW STAY THAT PROCEEDING.

A careful, good faith reading of the previous pages leads to the conviction that, without any reasonable doubt, Utah will ultimately prevail on its Petition. No plausible reason emerges as to why the Court of Appeals will not confirm Utah's position. That reality – the overwhelming likelihood of Utah's success – dictates that, under the governing standard, a stay of the PFS licensing proceeding should issue now.

The governing standard for a stay of a licensing proceeding entered in connection with a petition for rulemaking is this:

In order to obtain a stay, the petitioners must satisfy a four-fold test: (a) that they are likely to prevail on the merits; (b) that they will suffer irreparable harm without a stay; (c) that other interested parties would not be substantially harmed by a stay; and (d) that the public interest supports a stay.

In the Matter of Environmental Radiation Protection Standards for Nuclear Power Operations,
13 N.R.C. 298, 301 (1981).

Here, the overwhelming showing regarding the first test – Utah's likelihood of success on the merits – serves to answer and satisfy the second, third, and fourth tests. Few things can be more harmful than expending scarce human and financial resources contesting a proceeding with no lawful basis, contesting a proceeding that must inevitably come – as a legal and practical matter – to absolutely nothing. Moreover, for Utah and the general public (including the ratepayers who are the ultimate source of PFS's resources), the harm resulting from a refusal to

general licensing authority in the AEA could be fairly read prior to the NWPA to authorize licensing of privately owned, away-from-reactor storage facilities, it is clear that such an interpretation is now in violation of federal law.

stay is irreparable. Utah currently perceives no legal basis for recovering from PFS Utah's costs, expenses, and attorneys' fees resulting from a continuation of the PFS licensing proceeding. Moreover, Utah is certain that it has no practical way to recover those soon-to-be-lost resources. That is so exactly because PFS is a shell company. PFS's shareholders have kept (and will undoubtedly continue to keep) PFS on a strict pay-only-enough-into-it-as-you-go basis. That means that, as soon the legal baselessness of PFS's scheme is announced, PFS will be found to not have enough money to buy a cheap bus ticket out of Utah, let alone to reimburse Utah for the hundreds of thousands of taxpayer dollars that PFS – absent a stay now – will continue to cause Utah to expend opposing PFS's unlawful scheme. And, on the other side of the coin, PFS is not at all harmed by a stay precluding it from wasting ratepayer dollars to continue advancing an unlawful scheme destined for defeat.

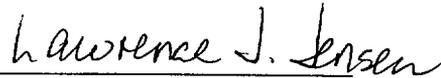
In sum, the standard governing issuance of a stay, coupled with the realities of Utah's petition, of the nature of the harm to Utah and the general public, and of the lack of harm to PFS, – all that taken together dictates issuance now of a stay of the PFS licensing proceeding.

**VI.
CONCLUSION**

For the reasons set forth above, Utah respectfully requests that the NRC amend its Part 72 regulations to make clear that privately owned, away-from-reactor ISFSIs are prohibited by federal law and may not be licensed by the NRC. In addition, Utah requests that the NRC stay now the PFS licensing proceeding pending final resolution of Utah's Petition.

Dated this 11th day of February, 2002

Respectfully submitted,



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Appendices 1, 2, and 3 attached.

1

*Managing the Nation's Commercial
High-Level Radioactive Waste*

March 1985

NTIS order #PB86-116852

Managing the Nation's
Commercial High-Level
Radioactive Waste

Appendix 1

HEALTH, SAFETY, AND ENVIRONMENTAL PROTECTION
ADMINISTRATION
WASHINGTON, D.C. 20460

Recommended Citation:

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Chapter 4

History of Waste Management: Setting the Stage



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History of Waste Management: Setting the Stage

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When the 97th Congress convened in 1981, almost four decades into the nuclear era, about 160 U.S. commercial nuclear plants had been built or approved for construction, and approximately 6,700 metric tons (tonnes) of commercial spent nuclear fuel containing radioactive waste had already been generated. Yet the United States still had not decided how radioactive waste should be dealt with from point of generation to point of final isolation. As a result, a host of problems had arisen that both complicated the task of developing a credible and comprehensive waste management program and cast a cloud of uncertainty over the future of nuclear power in the United States.

The passage of the Nuclear Waste Policy Act of 1982 (NWPA) in the final hours of the 97th Congress represented a major watershed in the evolution of radioactive waste management policy in the United States. The decisions made in NWPA about

how radioactive waste should be managed were influenced not only by technical and institutional capabilities but also by perceptions of those capabilities—perceptions formed by the historical experience of waste management. To understand how these perceptions affected the development of waste management policy and to avoid the pitfalls of the past in implementing that policy, it is necessary to examine the history and effects of past radioactive waste management policies and practices.¹ This chapter will provide that background. The provisions of NWPA will be described and analyzed in chapter 5.

¹This chapter draws on *Radioactive Waste Management Policy Making*, a more detailed analysis of the history of the U.S. waste management program by Daniel Metlay, included as app. A of this report. For brevity, references to that appendix are omitted (except for direct quotations), and only references to other sources are cited in this chapter.

DEVELOPMENT OF FEDERAL WASTE MANAGEMENT POLICY AND PROGRAMS

Early History (1945-75)

Sources of Radioactive Waste

High-level radioactive waste was first produced on a large scale in the wartime effort of the early 1940's to produce plutonium for atomic weapons. Spent fuel from defense reactors was routinely reprocessed to recover uranium and plutonium, and liquid high-level waste from reprocessing was stored in storage tanks at Federal facilities—first at Hanford, Wash., and later at Savannah River, S.C., and Idaho Falls, Idaho. It was assumed that disposal could take place later, possibly at these same sites.

In 1954 the Atomic Energy Act opened the nuclear power industry to private enterprise, and the

first contract for a commercial reactor was issued 2 years later. Unlike defense reactors, commercial reactors were designed primarily to produce electricity. Spent fuel discharged from commercial reactors was stored in water-filled basins at reactor sites, pending development of a commercial reprocessing facility.

Climate of Policymaking

Overseeing the burgeoning commercial nuclear industry was the Atomic Energy Commission (AEC), established by the Atomic Energy Act of 1946 to promote as well as regulate the nuclear industry's defense and commercial functions. AEC's five members were appointed by the President for 5-year terms. They in turn were overseen

by the congressional Joint Committee on Atomic Energy (JCAE).

During the 1950's and 1960's, waste management received relatively little attention from policymakers. Issues of waste management paled beside the exciting, pressing challenges of reactor development and research. In addition, the early regulators and developers of nuclear power viewed waste disposal primarily as a technical problem that could be solved when necessary by application of existing technology. This belief was buttressed by the 1957 report of the National Academy of Sciences (NAS), which concluded that high-level radioactive waste could be disposed of in a variety of ways and sites in the United States.² Testimony of Federal and civilian experts in the 1959 oversight hearings by JCAE further endorsed this view. Daniel Metlay describes the effect of such technical optimism:

An illusion of certainty was created where, in reality, none existed. Over the years, the sense of technological optimism embedded itself in the attitudes and thoughts of important agency policymakers. It became, in a sense, an official doctrine at AEC. There is no evidence that its validity was ever seriously questioned until the mid-1970's. This optimism facilitated fragmentation by lulling policymakers; agency personnel never fully recognized that they might create in a sequential, incremental fashion an elaborate technological structure (civilian nuclear power), only to find that the last pieces could not be made to fit. The difficulties of integrating the whole were systematically underestimated.³

As a result of these beliefs and attitudes, commitments of budget and personnel to the management of radioactive wastes were woefully inadequate, forcing key personnel to make stopgap decisions. Moreover, key officials tended to ignore signs that a technical approach was not working and to discount the nontechnical factors that impeded progress. Later, when it became apparent that more comprehensive action was needed to isolate waste, the organizational and technical structures were not prepared to respond rapidly enough. Although some decisions made during this time later proved to be unfortunate, at the time they were made,

²National Academy of Science/National Research Council, *The Disposal of Radioactive Waste on Land*, 1957.

³App. A, p. 203.

many appeared at least reasonable and, given constraints at work, the most appropriate possi-

Reprocessing and Storage

The country's first large-scale efforts in waste management were defense-related and involved reprocessing of spent fuel and the storage of liquid wastes from that reprocessing in carbon steel tanks designed to last 50 to 100 years. From 1957 to 1963, however, premature corrosion of the tanks resulted in a series of well-publicized leaks at Hanford and Savannah River. An attempt at Hanford to prevent further leaks by solidifying the wastes created a sludge that remains in the tanks today and may be very difficult, if not impossible, to remove for ultimate disposal.

In 1963, AEC authorized the construction of the first commercial reprocessing plant, the Nuclear Fuel Services (NFS) facility at West Valley, New York. During its 6 years of operation (1966-72), the NFS plant experienced several problems. For one, a lack of enough commercial spent fuel forced the plant to reprocess well below capacity, and to process defense fuel that it was not designed to handle, causing damage to equipment and other technical problems. In addition, the plant received negative publicity about its offsite leaks of radioactive waste and about radiation exposure to some of its workers.

In 1970, AEC proposed new regulations that committed the Government to develop repositories on Federal land and required that, for safety, liquid high-level waste be solidified within 5 years of generation and transported to the repository within 5 years after solidification. Partly to meet these new regulations, the NFS plant was closed in 1971 and underwent modifications. For financial reasons the plant never reopened, and the 612,000 gallons of liquid waste from its reprocessing operations remain in storage tanks at the site.

A second commercial reprocessing plant, built by General Electric at Morris, Ill., never operated because of technical and design problems. At that plant, the Allied General Nuclear Services (AGN) facility in Barnwell, S.C., was still under construction in April 1977, when commercial reprocessing was suspended indefinitely by the Carter administration. Since the operations ceased at West V.

ley, no reprocessing of commercial spent fuel has occurred in the United States.

Disposal

AEC first addressed the problem of waste disposal in 1955 when it asked NAS how to structure research to establish a scientific base for the waste management program. Under the assumption that the waste to be disposed of would be dissolved at relatively low concentrations in liquid, NAS stated in its 1957 report that disposal was technologically feasible and that stable salt formations appeared to be the most promising repository medium. Such formations would theoretically prevent transport of liquid and would become self-sealing in the event of a fracture. The commitment to salt became a cornerstone of waste disposal policy for the next 20 years.

In the 1960's, improved reprocessing techniques reduced the volume and increased the thermal and radiation content of reprocessed wastes. To test the effect of these new characteristics on salt, 14 spent fuel assemblies and several heaters to raise the temperature of the salt were emplaced from 1965 to 1967 in the abandoned Carey Salt Mine at Lyons, Kans. The experiment, called Project Salt Vault, was conducted in an atmosphere of goodwill among Federal, State, and local officials: State and local officials were consulted about various aspects of the experiment, public tours of the mine were given during the experiment, and the wastes were removed at the end of the experiment, as promised. The results of this experiment showed no measurable evidence of excessive chemical or structural effects on the salt, a fact which became important 2 years later when the need suddenly arose to find a disposal site quickly.

In 1969, a fire at the Federal weapons components facility in Rocky Flats, Colo., left a large volume of low-level, plutonium-contaminated transuranic waste. Following standard procedures, officials sent the wastes to the National Reactor Test Station in Idaho for storage. Concerned that their State had become a dumping ground for waste from Colorado, Idaho's political leaders appealed to AEC Chairman Glenn Seaborg, who pledged to remove the waste by 1980. That promise, as well as the commitment to disposal expressed in the AEC reg-

ulations mentioned above, spurred AEC to search for a geologic repository site. The Lyons site was selected because:

- some, albeit very little, information had been gathered about the site during Project Salt Vault;
- a favorable reception by the local citizenry seemed likely; and
- investigations needed to prove the acceptability of the other sites would have delayed repository development by 2 years.

AEC announced in 1970 that, pending confirmatory tests, the Lyons site had been selected for the first full-scale repository. Although the degree to which AEC had consulted with State and local officials before this announcement is in dispute, AEC's decision did not have full endorsement from these officials. Moreover, State and local political opposition to the Lyons site was intense, particularly when technical problems with the site became apparent. The Government abandoned plans for Lyons 2 years later because AEC was unable to convince critics that the many mining boreholes throughout the site could be plugged reliably and because no one could account for the disappearance of a large volume of water flushed into a nearby mine.

Left without a repository, AEC requested the U.S. Geological Survey (USGS) to search for additional repository sites for defense wastes. It also proposed building a series of aboveground structures, called retrievable surface storage facilities (RSSFs), to store commercial high-level wastes for a period of decades while geologic repositories were developed. The environmental impact statement issued by AEC in support of the RSSF concept drew intense criticism by the public and by the Environmental Protection Agency (EPA) because of concerns that the RSSFs would become low-budget permanent repository sites. As a result, AEC abandoned the RSSF concept in 1975.

Recent History

Climate of Policymaking

After the mid-1970's, significant changes occurred in waste management. EPA issued its first standards—those for the preparation of reactor fuel,

for reactor operations, and for reprocessing of spent fuel—and announced its intention to develop standards for the disposal of nuclear waste. The Energy Reorganization Act of 1974 abolished AEC and distributed its developmental functions to the new Energy Research and Development Agency (ERDA), later changed to the Department of Energy (DOE), and its regulatory functions to the new Nuclear Regulatory Commission (NRC). JCAE was disbanded and its role assumed by a variety of congressional committees. These events marked the change to a formal process of regulating the storage and disposal of high-level wastes. Thus, ERDA (later, DOE) would select a disposal site and design a facility to meet regulations promulgated by NRC in accordance with EPA standards.

By the late 1970's, the problem of waste isolation had captured the focus of the Federal Government, which began to allocate substantial personnel and funds to its solution. Although many decisionmakers still contended that managing high-level radioactive wastes was not technically difficult, they increasingly recognized the nontechnical aspects of the problem and worked to develop a firmer technical base from which to make decisions.

Disposal

DEFENSE WASTE

The abandonment of the Lyons site left the Government without a repository for the nuclear wastes from Rocky Flats. To fill that need, ERDA officials in 1974 selected a site near Carlsbad, N. Mex., for construction of the Waste Isolation Pilot Plant (WIPP), a pilot repository for defense transuranic waste. Initially, State and local officials supported WIPP because of its potential for boosting the economy of an area hard hit by the decline in the potash industry.

Then in 1977, the Government made the first of several dramatic changes in the scope and mission of WIPP: it considered the emplacement of defense high-level waste at the facility.⁴ To ensure repository safety, ERDA also promised the licensing of the repository by NRC. Angered by the

⁴This discussion of the history of WIPP is drawn from Jackie L. Braitman, *Nuclear Waste Disposal: Can Government Cope?* (Santa Monica, Calif.: The Rand Corp., December 1983), pp. 116-121.

changes in scope, the New Mexico House of Representatives came within three votes of passing constitutional amendment banning disposal of out-of-State nuclear waste. Under fire, DOE promised New Mexico officials veto rights over WIPP.

Relations were further strained in February 1978 when DOE recommended the emplacement of up to 1,000 commercial spent fuel assemblies at WIPP. Local opposition arose over the increased hazard promised by the inclusion of spent fuel; over the change in nature of the repository from pilot to permanent; and over the perception that New Mexico, which had no commercial reactors, would assume disproportionate responsibility for the Nation's commercial nuclear waste. Moreover, critics accused DOE of putting aside technical considerations to use WIPP to satisfy laws, passed by California and under consideration in other States requiring that a demonstrated high-level waste disposal technology approved by the Federal Government must exist before additional reactors could be constructed.

During 1978 and 1979, Congress rejected three proposals for NRC licensing and State veto power for WIPP. These actions weakened the credibility of DOE, which had promised those provisions to New Mexico. In 1980 President Carter proposed that WIPP be terminated but that the site (now called the Los Medanos site) be retained as a candidate for a future repository. Congress refused to terminate WIPP, reactivating it as an unlicensed defense facility primarily for disposal of transuranic waste from Rocky Flats and for defense high-level waste research. Site characterization activities at WIPP, including the construction of a large shaft and exploratory tunnels, are now underway.

COMMERCIAL WASTE

For disposal of commercial high-level waste, ERDA developed the National Waste Terminal Storage (NWTS) program in 1975. The program involved a multiple-site survey of underground geologic formations in 36 States and was designed to lead to the development of six pilot-scale repositories by the year 2000—the first in salt, the rest in other geologic media. This change from preoccupation with salt reflected new views about what constituted an effective repository. As formal

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expressed in 1978 in "Circular 779"⁵ by several USGS scientists and also in a study by the American Physical Society,⁶ the effectiveness, or integrity, of a repository could be considered dependent on the combination of the emplacement medium and its environment, rather than on the emplacement medium alone. With that view, salt, although still a strong contender, might not be the only choice for a geologic repository. Moreover, the staff of NRC contended that "it would be highly desirable to place major, if not primary, importance on the waste form itself, its packaging, and the local waste-rock interface."⁷

The responses of State officials to DOE's plans for the NWTS program varied. Some States excluded ERDA from even exploring potential repository locations. Others were reluctant to welcome ERDA until further studies were completed. Thus, what began as a fresh start in the area of waste management soon got mired down in the reluctance of State officials even to contemplate a facility on their soil.

Because of lower-than-requested funding and political opposition from the States, schedules slipped repeatedly as the Government was forced to cut the program drastically. By 1980, active site evaluation research was being undertaken only in Louisiana, Mississippi, Nevada, Texas, Utah, and Washington.

Recent Waste Management Policy

THE CARTER ADMINISTRATION

Partly to ease the utilities' growing burden of spent fuel storage, President Carter announced in his spent fuel policy in 1977 that title to spent fuel would be transferred to the Government and that the spent fuel would be transported at utility expense to a Government-approved away-from-reactor facility for storage until a repository became available. A one-time fee for Government storage and disposal would be charged to the utility. To

⁵J. D. Bredehoeft, A. W. England, D. B. Stewart, N. J. Trask, and I. J. Winograd, "Geologic Disposal of High-Level Radioactive Wastes—Earth Sciences Perspectives," Geological Survey Circular #779, U.S. Geological Survey, 1978.

⁶Report to the American Physical Society by the Study Group on Nuclear Fuel Cycles and Waste Management," *Reviews of Modern Physics*, vol. 50, No. 1, pt. II, January 1978.

⁷App. A, p. 219.

limit the availability of weapons-grade material, President Carter extended the moratorium on reprocessing, set in the Ford administration in 1976, by suspending indefinitely the reprocessing of commercial spent fuel in the United States. The policy also offered to provide limited storage and disposal of foreign spent fuel, if necessary to meet nonproliferation objectives, and committed substantial resources to development of mined geologic repositories.

To help develop his administration's policy on long-term nuclear waste management, President Carter established in 1977 the Interagency Review Group (IRG), composed of representatives from 14 Government agencies. IRG submitted its report in 1979, and in 1980 President Carter ratified the unanimous conclusions of IRG, recommending:

1. proceeding with the geologic disposal program;
2. increasing State and Indian tribe involvement in repository siting;
3. preparing a detailed National Plan for Nuclear Waste Management; and
4. developing better participation programs for the general public and the technical community.

In addition, he required characterization of more sites in a variety of media prior to submission of a license request to NRC, an issue on which IRG had been unable to reach a consensus.

To formalize the relationship between DOE and the States, IRG formulated the concept of "consultation and concurrence," first proposed by the National Governors' Association. Under this concept, a State would be consulted by the Government and given the opportunity to concur with each step in developing a repository. By not concurring, a State could effectively exercise a veto. To advise the Federal Government on key radioactive waste management issues, President Carter created the State Planning Council (SPC), a 14-member council of Governors, State legislators, an Indian tribal government representative, an observer from NRC, and representatives from DOE, the Department of Transportation, and EPA. SPC recommended that a State's nonconcurrence be overridden, or preempted, by the Federal Government only through a Presidential determination backed by both Houses of Congress.

96TH CONGRESS

Nearly 50 bills concerning waste management were introduced in the 96th Congress. The Senate passed a bill which emphasized development of long-term, monitored storage facilities that permitted the retrieval of the emplaced waste. The House passed a bill that focused on a timetable for development of mined repositories. However, no acceptable compromise could be reached between the two bills, largely because of disagreements about the power States should be given with respect to siting of defense waste repositories.⁸ As a result, the effort to pass comprehensive high-level radioactive waste management legislation during the 96th Congress failed.

THE REAGAN ADMINISTRATION

In 1981 the Reagan administration declared its support for nuclear power and declared an "intent to demonstrate the permanent storage of high-level radioactive waste as soon as possible."⁹ The administration lifted the ban on commercial reprocessing, and DOE adopted the assumption that the reference waste form for disposal would be solidified high-level waste rather than spent fuel. However, DOE efforts to encourage private investment in re-

⁸Both Houses agreed that the host State's objection would be sustained with regard to a repository for commercial high-level waste if either the House of Representatives or the Senate affirmatively concurred, but they were unable to agree to a procedure for dealing with a State's objection to a repository for defense high-level waste.

⁹This description of the waste management policy of the Reagan administration is drawn from the statement of Kenneth Davis, Deputy Secretary of Energy, before the Subcommittee on Energy and the Environment, Committee on Interior and Insular Affairs, U.S. House of Representatives, July 9, 1981.

processing have been unsuccessful. The Reagan administration also withdrew the Carter administration's offer to provide Federal storage facilities spent fuel and left utilities with the primary responsibility for storing spent fuel until reprocessing disposal facilities are developed.

With regard to repository siting, the Reagan administration reduced to three the number of sites that were to be examined prior to selecting a final site for licensing; the Carter administration had planned to evaluate four to five sites before making the selection. The three sites were expected to be in basalt formations at Hanford, in volcanic tuff at the Nevada Test Site, and in a salt formation at a site to be determined in 1983. Construction of exploratory shafts for in situ testing was planned to begin in 1983. After completion of the shafts in 1985, one of the three sites was to be selected for the development of an unlicensed test and evaluation facility for development of waste emplacement technology. This facility was planned to be ready to accommodate up to 200 to 300 packages of solidified high-level waste by 1989.

The first license application for a full-scale facility was expected to be submitted to NRC by 1987 or 1988. Review of the license application would be conducted by NRC in parallel with further development of the unlicensed test and evaluation facility. The first repository was expected to be constructed and licensed for operation between 1990 and 2001.¹⁰

¹⁰A similar schedule was ultimately incorporated in NWPA and discussed at greater length in chs. 5 and 6.

PROBLEMS FOR WASTE MANAGEMENT POLICY

Key Policy Issues

Two major related waste management issues faced the 97th Congress when it began to consider radioactive waste legislation in 1981:

1. What to do about final isolation of the highly radioactive waste produced by nuclear re-

- actors, which is contained for the present in the spent fuel discharged by those reactors.
2. What to do with the growing inventories of spent fuel now stored at the reactors given the uncertainties about when (or even whether) it would prove worthwhile to reprocess them, and when final isolation facilities would be available.

Final Isolation

The central issue that was to be resolved concerning final isolation was how strong a commitment to make to the development of a waste disposal technology that, unlike storage, would not require continued human control and maintenance to assure safe isolation.¹¹ Some argued that a disposal system should be developed with all deliberate speed. Others argued that a long period of interim storage (many decades) should be planned before developing a disposal system so that more options could be made available and uncertainties about the economic value of spent fuel could be resolved before selecting a disposal technology for development. Still others argued that storage itself is a satisfactory approach to final isolation, so no disposal system is needed. Although DOE made a formal decision to proceed with the development of mined geologic repositories, this decision had not yet been endorsed by Congress, and a bill passed by the Senate in the 96th Congress contemplated extended storage in monitored retrievable storage facilities as an alternative to rapid development of a disposal system. OTA's analysis indicated that until there was a clear resolution of this issue in law, continued instability in the direction of the waste management program was possible.¹²

There was considerable disagreement over the degree to which the future use of nuclear power should depend on the development of an acceptable program for final waste isolation. Some argued that the United States should make no significant new commitments to nuclear power—and hence to the generation of more waste—until the safe and final isolation of nuclear waste could be demonstrated. Others argued that the technology for safe, final isolation was available and that there was no technical justification for restricting waste generation. Nonetheless, they argued that a demonstration of final isolation was needed to allay public concerns that threatened the continued growth of nuclear power. From either point of view, it was seen as important to resolve the existing uncertainties about final isolation of radioactive waste.

¹¹ An extensive discussion of this subject is found in issue 1 of app. B. OTA testimony before the House Committee on Science and Technology, Subcommittee on Energy Research and Production, Oct. 5, 1988.

Even among those who agreed that developing the capability to dispose of—rather than store—radioactive waste was necessary to stop the issue from becoming an encumbrance on the use of nuclear power, there was substantial disagreement about how to demonstrate this capability and about the urgency of doing so. Some believed that the current basis of knowledge about mined geologic repositories was adequate to permit an acceptably safe repository to be sited and constructed quickly. They argued for rapid development of a repository (and perhaps an earlier unlicensed demonstration facility into which a small amount of waste would be emplaced) to allay what they perceived to be unfounded public concerns about waste disposal. Others believed that more time would be needed to develop sufficient confidence in a repository design and site. They contended that emplacement of waste in a demonstration facility would not by itself allay public concerns and feared that pressures for rapid action could lead to a premature commitment to an inadequate repository site or design or, at the very least, would lead to actions that would jeopardize the credibility of the Federal waste disposal program.

Some argued that resolving disagreements about the technical feasibility of waste disposal would not, in itself, be enough to remove disposal as an issue affecting the use of nuclear power. Demonstrating the Federal Government's *institutional* capacity to carry out the difficult effort required to build and operate a safe and reliable waste isolation system may be as important as demonstrating the *technical* capacity to dispose of waste.

Interim Spent Fuel Storage

The fact that neither reprocessing nor a Federal waste repository was likely to be available for a decade or longer meant that it would be necessary to provide interim storage for large quantities of spent fuel for at least the rest of the century. This posed two key problems for utilities, which led some to seek Federal assistance in providing that storage. First, reactors were running out of storage space, and it was clear that some might have to shut down by the mid-1990's unless more storage space were made available—even if existing basins were expanded as much as possible and if utilities were allowed to ship spent fuel to unfilled basins at other

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reactors.¹³ Some utilities would face serious problems by the late 1980's if such shipment were not allowed. Because of the relatively long leadtimes needed for the construction and licensing of new storage facilities, these utilities needed to know within a few years whether they would have to provide such facilities themselves.

Second, the fact that there was no firm schedule for either reprocessing or turning spent fuel over to the Federal Government left the utilities completely in the dark about how much additional storage capacity they would have to provide, when they would be able to end their liability for the growing inventories of spent fuel, and how much the total cost would be for storing and disposing of that fuel. There was increasing opposition to efforts to provide additional storage capacity because of fear that easy availability of interim storage would reduce the pressures for developing a Federal disposal system, thus turning interim storage facilities into permanent waste repositories. This opposition, in turn, had increased utilities' fears that they might not be able to gain approval for additional storage facilities quickly enough to prevent reactor shutdowns.

Concern about the utilities' capacity to provide additional interim storage quickly enough to prevent reactor shutdowns, especially in the face of the Government's failure to develop disposal facilities, led some to argue that the Federal Government should provide away-from-reactor storage facilities to give utilities one sure way to get rid of spent fuel once their existing basins were full.¹⁴ Others argued that the utilities should be responsible for interim storage, while the Federal Government concentrated on the disposal program. While the Carter administration proposed that the Federal Government acquire an away-from-reactor facility, the 96th Congress did not authorize it, and the Reagan administration focused, instead, on helping the utilities provide their own additional storage.

¹³Such shipment between reactor pools is referred to as "transshipment."

¹⁴An extensive discussion of this issue is found in issue 4, app. B.

Complicating Factors

Linkage to Broader Issues

Resolution of disagreements about commercial waste management policy has been complicated by linkages to broader issues: the use of nuclear power, the future of reprocessing, and the disposition of high-level waste from defense activities. OTA's review of the history of waste management showed that disagreement over these broader issues was a major reason for the past inability of the Federal Government to devise a stable policy for dealing with commercial wastes, and suggested that successful adoption and implementation of such a policy would be easier if the policy were neutral regarding the resolution of these broader issues.

THE USE OF NUCLEAR POWER

In the mid-1970's, the public began to challenge the wisdom of developing a nuclear power industry unconstrained by the status of waste management. As noted in a memorandum for a JCAE policy session:

... the uncertainties concerning the location of the repository are already adversely affecting public acceptance of nuclear power, and it is possible that this aspect of the overall nuclear program could become an unnecessarily important negative factor in the Nation's ability to consider its nuclear option to power generation.¹⁵

While there is strong disagreement about whether there should be any formal linkage in Federal law between progress in developing a final isolation program and the operation of nuclear reactors, there already is such a linkage in some State laws and in NRC policy. In 1976 California passed a law, upheld by the Supreme Court in 1983,¹⁶ that made the siting of reactors in that State contingent upon Federal Government assurance that the demonstrated technology or means for disposal of high-level waste existed. In addition, the Natural Re-

¹⁵App. A, p. 225.

¹⁶*Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission*, 1 U.S.L.W. 4449 (Apr. 20, 1983).

sources Defense Council petitioned NRC to conduct a rulemaking proceeding to determine if high-level waste could be disposed of without undue risk to the public health and safety and to refrain from licensing reactors until such a determination was made. In denying the petition, a position upheld in court, NRC stated that it "would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely."¹⁷ In 1981 NRC announced its intention to conduct a generic proceeding "to reassess its degree of confidence that radioactive waste produced by nuclear facilities will be safely disposed of, determine when any such disposal will be available, and whether such wastes can be safely stored until they are safely disposed of." As a result of this "Waste Confidence" proceeding, NRC concluded in 1984 that there is reasonable assurance: 1) that safe disposal of high-level waste and spent fuel in a geologic repository is technically feasible, and 2) that one or more mined geologic repositories would be available in the 2007-2009 time frame.¹⁸

An analysis of the merits of proposals to limit the use of nuclear power pending progress on waste disposal involves questions of energy policy that are beyond the scope of this OTA study.¹⁹ However, currently operating reactors, which have already discharged more than 10,000 tonnes of spent fuel, would generate around 55,000 tonnes by the end of their operating lives, even if no additional reactors were licensed for operation. The waste in this spent fuel must be isolated safely, regardless of the future of nuclear power. However, the nuclear waste problem is only one of a number of difficulties inhibiting the expanded use of nuclear power,²⁰ and resolution of that problem by itself may not be sufficient to sway decisions in favor of new reactor orders.²¹ Nonetheless, if the other difficulties are resolved, it appears likely that the degree of pro-

¹⁷App. A, p. 227.

¹⁸U.S. Nuclear Regulatory Commission, 10 CFR Parts 50 and 50. "Waste Confidence Decision." *Federal Register*, vol. 49, No. 171, Aug. 13, 1984, pp. 34658-34688.

¹⁹This issue was not addressed in the NWPA.

²⁰*Nuclear Power in an Age of Uncertainty* (Washington, D.C.: U.S. Congress, Office of Technology Assessment, OTA-E-216, February 1984). See also Graham Allison et al., "Governance of Nuclear Power" (Cambridge, Mass.: Energy and Environmental Policy Center, Harvard University, December 1981).

²¹Allison et al., op. cit., p. 43.

gress in the final isolation program in the next decade could affect decisions about the future use of nuclear power, whether or not there is a formal linkage between the two subjects. If a policy can be adopted, maintained, and implemented steadily and successfully over an extended period it can be expected to have a positive effect on attitudes about nuclear power. Continued delays and shifts of direction, or discovery of major unforeseen technical problems, could have a negative effect on the willingness of utilities to invest in new reactors.

REPROCESSING AND THE POTENTIAL ECONOMIC VALUE OF SPENT FUEL

In OTA's view, the uncertainty about when, if ever, it will become economical to reprocess spent fuel has unnecessarily complicated Federal decisions about interim spent fuel storage and about final waste isolation. Some have argued, for example, that because spent fuel is a potentially valuable resource, the capacity to dispose of spent fuel need not—and should not—be developed until a clear decision on reprocessing is made. Extended or permanent storage has been proposed instead of disposal as a means of ensuring that the potential economic value of spent fuel is indefinitely preserved. However, the development of a disposal capacity will take more than a decade, and even when it is developed, spent fuel does not have to be disposed of irretrievably. Thus, the major decisions facing the 97th Congress did not concern the advisability of disposing of spent fuel, since the capacity to do so did not yet exist; rather, they concerned when and at what rate the capacity to dispose of waste would be made available, and what provisions would be made for the storage of spent fuel and any reprocessed waste in the meantime.

If the economic value of spent fuel remains uncertain once a disposal capacity has been developed, the decision can be made at that time whether to continue storing spent fuel or to dispose of it. As discussed in chapter 3, storage could be accomplished at a repository site by using the repository's packaging and handling facilities to receive and prepare waste for storage on the surface. Developing the capacity to dispose of both spent fuel and reprocessed waste may, in fact, be the best way to ensure that the decision to reprocess or dispose of spent fuel is based mainly on the resource value

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of the spent fuel and not on the lack of a capacity to dispose of either spent fuel or high-level reprocessed waste.²²

The question of when it might be desirable to dispose of spent fuel irretrievably, therefore, is quite distinct from the question of when it will be desirable to have the technical capacity to do so, although the two are frequently confused in discussions of waste management policy. The only irreversible decisions that can be made now are those related to the availability of technical capacity for disposal, since the longer the development of disposal facilities is deferred, the longer future waste managers will have no choice but to continue storage.

DEFENSE WASTE POLICY

The defense and commercial high-level radioactive waste programs, merged under the Carter administration, were separated by the Reagan administration. Disagreements about whether the same procedures for siting commercial waste repositories should also apply to repositories for defense wastes were a major reason the legislation dealing with high-level radioactive waste did not pass in the 96th Congress.

In this regard, some people argued that no matter what is done with military waste, the Federal Government had an obligation to get on with the resolution of the commercial waste management problem. They pointed out that the Government had, by law, reserved for itself the responsibility and the authority to dispose of high-level waste²³ and, thus far, had failed to fulfill its responsibilities. They argued that efforts to deal with commercial wastes should not be impeded by disagreements about policies for managing defense waste, as occurred during the 96th Congress. They also contended that separating the commercial and defense programs could allow more rapid progress in commercial waste disposal, which would, in turn, make it easier to deal with defense wastes by providing usable technology and sites. They noted that there were no compelling public administration arguments to

have a single organization dealing with the two problems and cited precedents for separating military and civilian programs with similar technical requirements, such as assigning the civilian space program to the National Aeronautics and Space Administration. Moreover, some viewed a different institutional approach to siting repositories for defense waste as justified because they believed the balance of Federal authority should be greater in an activity associated with national defense.

Those who favored handling commercial and defense wastes in a unified program cited the similarities between their technical and environmental needs for long-term isolation. Such an integrated approach, they argued, would be necessary for gaining public acceptance of a national repository program and would discourage deferral of progress on disposal of defense wastes or the use of less stringent procedures in the defense program. Those who disagreed cited the fact that, since Federal law already provided that any repository for high-level waste, whether defense or commercial, would have to be licensed by NRC to meet the same environmental standards, separation of the programs would not necessarily lead to a less stringent approach with defense wastes.

Federal Credibility and Mutual Distrust

The most formidable problem that NWPA had to address was the intense level of mutual distrust among various concerned parties, a distrust that threatened to lock the waste disposal effort in a state of virtual and continual paralysis. The single most critical factor in that distrust was the severe erosion of public confidence in the ability of the Federal Government—on the basis of its past record—to create and carry out an effective waste management program.²⁴ The utilities and the nuclear industry doubted that the Federal Government would ever meet a schedule or stick to a policy. Environmentalists doubted that the Federal Government would deal adequately with safety concerns. States doubted that the Federal Government would deal openly and fairly with them.

²²This is discussed in issue 3, app. B.

²³William C. Metz, "Legal Constraints on Repository Siting," *Nuclear Waste: Socioeconomic Dimensions of Long-Term Storage*, Steve H. Murdock, F. Larry Leistritz, and Rita R. Hamm (eds.) (Boulder, Colo.: Westview Press, 1983).

²⁴National Research Council, *Social and Economic Aspects of Radioactive Waste Disposal: Considerations for Institutional Management* (Washington, D.C.: National Academy Press, 1984), p. 38.

To the degree that a Federal law alone can do so, NWPA went a long way toward meeting many of the specific concerns of the various parties and toward strengthening the credibility of the Federal effort. Below is a brief discussion of the main reasons why the credibility of the Federal program was so low before the passage of NWPA and of some of the remaining problems of mutual distrust that could complicate the effort to implement the Act.

POLICY INSTABILITY

The Federal waste management effort had been plagued by many major shifts of policy, making steady progress difficult and undermining public confidence in the effort.²⁵ A major cause of policy instability had been the failure of the Federal Government to consider a broad enough range of viewpoints, or to address adequately the legitimate technical and nontechnical concerns of major interest groups. This left some groups with a strong incentive to try to thwart or change the policies.

As a result, changes in administration had often meant abrupt changes in waste disposal policy. In 1976, for example, President Ford responded to concerns about the need to demonstrate progress in waste disposal by announcing a 1985 target date for the first repository, a policy that led to an almost exclusive focus on salt as a disposal medium and on sites that had already been studied or were regarded as easy to secure. The Carter administration, responding to the resulting concerns that an accelerated schedule could lead to premature commitment to a medium or site, adopted a new policy involving the review of four to five sites in two to three media and an anticipated repository target date of 1997 to 2006. The Reagan administration abandoned the Carter policy for one of examining three sites in two media, the minimum requirements of NRC, with earlier development of demonstration facilities. With respect to interim storage, the Carter administration proposed that the Government acquire an away-from-reactor facility and offered to accept spent fuel from utilities for interim storage prior to disposal. The Reagan administra-

²⁵The State Planning Council recommended that "national planning for radioactive waste management should avoid abrupt changes in direction to prevent further deterioration of program credibility and loss of time." State Planning Council on Radioactive Waste Management, *Recommendations on National Radioactive Waste Management Policies: Report to the President*, 1981, p. 29.

tion rescinded the offer and announced that utilities would be responsible for interim storage. In view of such shifts, some observers questioned whether any policy could be expected to outlast a change of administration.

FEDERAL CAPACITY TO IMPLEMENT A POLICY²⁶

The history of the waste management program raised questions about the institutional ability of the Federal Government to implement any waste management policy successfully, even if the policy could be stabilized for an extended period. There were several reasons for this concern.

First, until the mid-1970's, the waste management effort was starved for the stable and sufficient resources—both people and money—needed to ensure a successful waste management effort. Not until 1972 did waste management exist as a distinct bureaucratic entity with its own independent budget, and not until 1977 did the program receive substantial funding. Increases in the number and expertise of the staff that the waste program needed to meet its responsibilities did not keep pace with increases in funds. Moreover, history suggested that the normal Federal budget process may not assure the adequate and stable long-term funding needed to enable timely development of final isolation facilities. For example, inadequate funding of the Federal Government's geologic repository development program had limited the number of alternative technologies and sites that were investigated, increasing the likelihood that an acceptable system would not be developed in a timely manner and heightening concerns about the technical adequacy of the program.

Second, past problems in the final isolation program had raised questions about the capabilities of the DOE waste management program. These questions will burden its future efforts, even though the problems reflected not the competence of the people carrying out the program, but the low priority placed on the effort, the lack of resources, and the sharp and frequent shifts of policy. Although generally regarded as technically competent, the DOE program did not appear to have enough people with the skills needed to handle the social, political, and institutional issues that concern States.

²⁶These issues are discussed at greater length in ch. 7.

local communities, and groups outside of DOE or to handle the broad policy and strategic issues. The failure to go beyond the strictly technical questions and address these kinds of issues had undermined much of the credibility of the waste management program.

Finally, the development and implementation of a comprehensive waste management policy will require an unprecedented degree of coordination within both the executive branch and Congress. At present, no single Federal agency or congressional committee has the jurisdiction to deal with the wide range of activities required to manage radioactive waste safely. Six major executive agencies and about 12 congressional committees have jurisdiction over different aspects of waste management. Experience suggests that coordinating the activities of all these Government entities will be difficult. Also, agencies have consistently failed to meet deadlines to implement policies according to schedule, perhaps, in part, because waste disposal is only one of the many activities for which they are responsible. For example, NRC's draft technical regulations for high-level waste, scheduled for issue in 1977, were actually issued in 1981; EPA's overall standards for waste disposal, due since 1977, were not even published for discussion until the end of 1982. These delays have raised questions about the ability of the Federal Government to meet a long-term schedule requiring the coordinated actions of independent agencies.

PERCEPTIONS OF TRUSTWORTHINESS

Justified or not, States and others had developed strong doubts that the Federal Government could be counted on to keep its word on waste management matters and that, in general, it could be trusted. One example of the basis for this distrust is the series of policy reversals concerning WIPP discussed above.

State Concerns²⁷

To make technical progress in waste disposal, the Federal Government must have access to potential disposal sites in order to perform the detailed study and evaluation needed to determine site suitability. However, several States have sought to prevent

²⁷State issues are discussed at greater length in ch. 8.

DOE from conducting initial site investigation and 18 States have enacted restrictive legislation that bans high-level radioactive waste management activities within their borders without State approval.²⁸ Other States may feel obligated to adopt similar restrictions to make certain they do not, by default, end up with waste storage or disposal facilities.

In addition to general concerns about Federal trustworthiness, State opposition to Federal siting activities has two main sources:

- *The Inherent Costs and Risks Involved in Waste Disposal.*—The presence of an amount of radioactive waste and the various steps involved in storage and disposal pose potential radiological risks and have adverse social and economic impacts on States and localities. Although these impacts can be controlled or mitigated, there is no assurance that they can be eliminated. Even if States had no other concerns about waste disposal, they would probably be reluctant to take on such costs and impacts. In its extreme form, the desire not to bear the costs involved in waste disposal can lead to what has been called the "not in my backyard" or "anywhere but here" attitude, which may underlie at least some State opposition.
- *Fear of Unfairness in Siting Decisions.*—Many States fear that they could become a national dumping ground for waste—that they will be forced to take waste generated in other States or even from the entire Nation, thus bearing a disproportionate share of the waste disposal burden. Related to this fear is that of the "foot in the door"—the concern that if the Federal Government succeeds in siting any waste management facility, even a small research facility, it will try to save money and avoid fighting new siting battles by attempting to expand that facility, eventually creating a repository at that site. A related State fear is

²⁸Sarah Daneman, "State Legislation on High-Level Nuclear Waste Disposal (as of 9/15/82)," published in *The Radioactive Exchange*, vol. 1, Nos. 14 and 15, Part II, September/October 14, 1982, pp. 15-21. Some laws have banned activities involving waste from other States; others have required State approval prior to storage or disposal of all commercial high-level waste. DOE has so far not challenged the legality of these restrictions in court.

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that Federal siting decisions will be based too heavily on considerations other than technical safety criteria, such as a desire to site a repository quickly to remove waste disposal as an obstacle to the use of nuclear power or a desire to avoid the difficulties of dealing with restrictive State legislation.

Although restrictive State legislation may not stand up to Federal court challenges, the legal processes entailed in such challenges could delay siting efforts. DOE had been reluctant to contest State restrictions and had sought, instead, to conduct waste management activities at sites where it was likely to encounter the fewest obstacles—either in time, cost, or political opposition. That approach can be defended on the grounds that, if it speeds up the process, and if the site eventually selected is technically sound, then it matters little how the site is chosen. However, that approach may increase resistance to Federal siting activities for two reasons. First, no site selection process is likely to be perceived as equitable or technically credible if it chooses, or appears to choose, sites mainly because they are the easiest to obtain. Second, the approach feeds State fears that the Federal Government will increasingly follow a “path of least resistance” in seeking repository sites and thus strongly encourages those States that have not yet adopted restrictive or prohibitive measures to do so. No State wants to be last in the race to make certain that the path of least resistance does not lead straight into its borders.

Overall Impacts of History

NWPA is the first Federal law that sets out an explicit national policy and schedule for the disposal of high-level radioactive waste. It also contains a number of provisions aimed at overcoming some of the major concerns that have hampered the waste disposal effort in the past. But a law alone, no matter how well framed, cannot by itself wipe out the long legacy of problems and false starts and the deep distrust it has generated among the principal parties involved and concerned with waste disposal.

A law alone cannot demonstrate that the Federal Government has the capacity to deal fairly with the States in the selection and development of sites, to take the surest and safest route to waste disposal

instead of the most expedient, or to demonstrate to the satisfaction of the regulatory authorities and the concerned and affected parties that an adequate waste disposal technology exists. Nor can a law alone dispel, however much it may allay, the distrust that decades have built up among the various parties.

That distrust may, indeed, be the single most complicating factor in the effort to develop a waste disposal system that is acceptable technically, politically, and socially. For, if Federal credibility—its capacity to show the various parties that it can and will do the job competently, fairly, and on schedule—remains the most critical factor in a successful waste disposal effort, it is not Federal credibility alone that is in question. States, environmentalists, and others may, indeed, fear that the Federal Government and industry will cut corners just to be able to say that the problem is solved. But there is the correlative concern that not all State forces or environmentalists are acting in good faith: that, whatever their express concerns with safety or other matters, some environmentalists seek to block and stall waste disposal efforts solely because they are opposed to the use of nuclear power, and some in the States seek only to prevent any and all waste disposal activities from occurring within their borders.

In short, some believe that no matter how well the Federal Government does its job in carrying out the Act—no matter what pains it takes to remove any legitimate grounds for opposition—there are those in the States and elsewhere who will do everything possible to slow or stop its efforts. Whatever the basis for this belief, it only makes it all the more necessary for the Federal Government to remove the legitimate grounds for opposition by carrying out the Act in ways that address the honest concerns of States and others and that seek to avoid past mistakes.

The waste management program has improved substantially over time in resources, breadth of organizational commitment, and technical and institutional sophistication. It has laid a solid technical groundwork for the development of mined geologic repositories. Furthermore, resolution of the key policy issues regarding interim storage and final isolation through enactment of NWPA should provide stability to waste management policy that has

been lacking in the past. Nonetheless, the burden of past problems will complicate the task of developing an effective and acceptable waste disposal system. Moreover, after more than three decades of struggling with nuclear waste, there is only a limited

tolerance for failures. Any major failures—r perceived—could have grave consequences for the waste management program and the future of nuclear power.

2

AKAKA, and WATKINS, Mrs. SMITH of Nebraska, and Messrs. ROBINSON, MYERS, LEWIS, and CONTE.

NUCLEAR WASTE POLICY ACT OF 1982

Mr. UDALL. Mr. Speaker, I move that the House resolve itself into the Committees of the Whole House on the State of the Union for the further consideration of the bill (H.R. 3809) to provide for repositories for the disposal of high-level radioactive waste, transuranic waste, and spent nuclear fuel, to amend provisions of the Atomic Energy Act of 1954 relating to low-level waste, to modify the Price-Anderson provisions of the Atomic Energy Act of 1954 and certain other provisions pertaining to facility licensing and safety, and for other purposes.

The SPEAKER. The question is on the motion offered by the gentleman from Arizona (Mr. UDALL).

The motion was agreed to.

IN THE COMMITTEE OF THE WHOLE

Accordingly the House resolved itself into the Committee of the Whole House on the State of the Union for the further consideration of the bill, H.R. 3809, with Mr. PANETTA in the chair.

The Clerk read the title of the bill.

The CHAIRMAN. When the Committee of the Whole rose on Monday, November 29, 1982, the text of H.R. 7187 was considered as an original bill for the purpose of amendment.

Are there any further amendments which are made in order pursuant to the rule?

AMENDMENT OFFERED BY MR. LUNDINE

Mr. LUNDINE. Mr. Chairman, I offer an amendment.

The CHAIRMAN. Is the amendment in order under the rule?

Mr. LUNDINE. Yes, Mr. Chairman, it is.

The Clerk read as follows:

- Amendment offered by Mr. LUNDINE: On page 66, strike lines 11 through 18.
- On page 67, strike lines 1 through 10.
- Beginning on page 72, strike sections 135, 136, and 137.
- On page 94, strike lines 21 through 24.
- On page 117, strike section 218(c)(2).
- On page 118, strike section 218(e).
- On page 138, line 6, strike the words "under section 137(a)."
- Redesignate sections accordingly.

Mr. LUNDINE. Mr. Chairman, my amendment would strike from this bill the provisions mandating 2,000 metric tons of Federal interim storage for utility spent fuel. At the outset of the debate on this amendment, I want to make clear that I am a supporter of this legislation and my efforts are not designed to endanger its passage. Neither do I put forward this amendment as someone opposed to nuclear energy. I support nuclear energy and regard it as a necessary energy source for our future economic well-being.

At the same time, after many years of study of the nuclear waste issue, I have concluded that a direct Federal role in the interim storage of utility spent fuel is both unnecessary and ill advised.

The provisions providing for Federal interim spent fuel storage are unnecessary for two basic reasons. First, the technology for storing spent fuel on an interim basis is well known and the utilities to date have had an excellent safety record in this regard. Therefore, there is no overriding health and safety reason the Federal Government must assume this responsibility.

Second, a Federal role cannot be justified on the basis of need. Estimates by the DOE of projected shortfall in utility storage have continued to be revised downward since 1977. When a Federal interim storage program was first proposed in 1977, DOE estimates of the need for surplus storage capacity were greatly overestimated. In 1977, DOE told the Congress that this program was needed to address an anticipated shortfall in utility spent fuel storage by 1983 of 1,700 metric tons, 5,700 metric tons by 1986, and 14,400 metric tons by 1990. In 1978, DOE issued an updated estimate which stated that only 560 metric tons of additional storage would be needed by 1983 and only 6,940 by 1990. In 1980, DOE revised its estimates even further downward to claim a need for only 377 metric tons of storage by 1983, 1,047 by 1986, and 3,277 by 1990. In 1981, in testimony before the Nuclear Regulatory Commission during the waste confidence rulemaking, the Department of Energy testified that a Federal interim storage program for utility spent fuel was no longer necessary. The most recent update from the DOE shows that the earliest date when utilities will need additional storage capacity is in 1988 when they estimate there will be a shortfall of 8 metric tons. Now, DOE only projects a shortfall in 1990 of 400 metric tons.

It is clear from these figures that the critical time period for spent fuel storage will be between 1988 and 1990. What is important to focus on is the fact that DOE's own recent estimates of 8 metric tons up to 400 metric tons does not take into account the potential contribution that new technologies such as rod consolidation and dry storage can make to resolving this modest shortfall. A recently completed plant-by-plant survey by the Nuclear Regulatory Commission of the near-term utility spent fuel storage problems points out that each of these utilities has available to it options to solve its problem. Transshipment, reracking, rod consolidation, utilization of dry storage technologies, and construction and development of additional pools are available.

In addition, DOE, OTA, and NRC have all recognized the potential cost

advantage of rod consolidation and dry storage technologies over a centralized interim storage program. A recent report prepared for the DOE estimates that several different dry storage options could be available by 1986 and that they would cost less than centralized Federal storage.

The technology push aspect of this whole debate must not be overlooked. It is important that these new technologies be brought through the demonstration phase and to commercialization. For this reason, under my amendment the section of this bill which provides for an accelerated research and development program for these technologies is retained. It is also important to note that as part of this research and development program, the Federal Government would be permitted to take up to 300 metric tons of spent fuel from utilities for research purposes. Therefore, the research program itself provides a modest safety valve for a utility that might have a storage problem which cannot be resolved.

My amendment would also preserve provisions in the bill for expedited NRC licensing provisions for at reactor interim storage. These streamlined procedures at the NRC will insure timely action on licensing issues.

A recent memorandum from the Office of Technology Assessment which analyzed the pending legislation, I think summarizes my arguments very well.

DOE's most recent analysis of spent fuel storage needs indicates that the amount of emergency storage capacity needed could be quite small, provided that it is indeed limited to cases in which utilities are experiencing unavoidable delays in their good-faith efforts to provide their own storage and does not serve as a relatively low cost, more convenient substitute for such storage. Specifically, DOE estimates that if applications for reracking of existing basins and for transshipments to reactors that have additional storage capacity, are approved by the NRC in a timely manner, 400 metric tons of storage in new facilities would be needed through 1990 to ensure that every reactor maintains full core reserve. If this amount of storage in new facilities were made available, the 23 reactors expected to exhaust the maximum capacity of their existing basins by the end of 1990 would have time to construct and license a new water basin, a storage technology for which licensing should be quite easy. If the more flexible and less expensive dry storage technologies could be implemented sooner, which appears likely (particularly if DOE takes an active role in promoting their commercialization, as contemplated in these bills), this would further reduce—perhaps greatly—the need for any emergency backup storage capacity.

The OTA analysis goes on to make one other important point which I have not mentioned. They point out that the amount of spent fuel that the Department of Energy is going to need to acquire from utilities for test and

Appendix 2

evaluation activities connected to permanent repository development under the bill could be considerably greater than 400 metric tons. After making this point, OTA states:

Thus the establishment of such a T&E program could render moot the question of whether a special federal last resort AFR storage program is needed at all—at least at this time.

For all of the above reasons, I believe a direct Federal role in interim storage of utility spent fuel is unnecessary. But, as I remarked earlier, it is also, in my opinion, ill advised for the following reasons:

First, too great a Federal involvement in interim storage of utility spent fuel is likely to detract from efforts to development of a permanent repository program. Development of permanent repositories must be our foremost goal.

Second, reliance on centralized Federal storage of utility spent fuel will lead to increased transportation of radioactive materials over our highways.

Third, I believe if a direct Federal role in storage of utility spent fuel is begun under this bill, it will really represent just the nose of the camel under the tent. In future years, once the program is established, we will undoubtedly see requests to increase the metric ton allotment of Federal storage. Once this Federal program is begun the inclination on the part of the utilities will be to avoid taking initiative to solve their own problems because they will be able to count on the feds coming to their rescue.

I urge you to support my amendment. The direct Federal role contained in the bill before us today for storage of utility spent fuel offers the utilities a convenient bailout from their problems. The problems can be solved by them with application of new technology and innovative approaches. The choice is yours and mine to make. Let us choose to establish a clear policy that identifies whose responsibility the interim storage of spent fuel is, and then get on with the business of development of a permanent solution to disposal of our radioactive wastes.

The CHAIRMAN: The time of the gentleman from New York (Mr. LUNDINE) has expired.

(On request of Mr. CORCORAN and by unanimous consent, Mr. LUNDINE was allowed to proceed for 3 additional minutes.)

□ 1245

Mr. LUNDINE: Second, you are authorizing the transportation of this spent fuel all over the United States. If you keep it at the reactor site until it has to go to the permanent repository, you cut down on the amount of transportation. Third, it will inhibit the utilities from taking the initiative on their own to solve their own problems.

Mr. CORCORAN: Mr. Chairman, will the gentleman yield?

Mr. LUNDINE: I yield to the gentleman from Illinois.

Mr. CORCORAN: Mr. Chairman, I thank my good friend from New York for yielding, and I ask for this time in order to get some clarification with respect to his amendment. It is my understanding as I read the pending amendment that the effect of the amendment would be to delete section 135; is that correct?

Mr. LUNDINE: Yes.

Mr. CORCORAN: I wonder if the gentleman is aware of section 135, subsection (j), which applies to a concern I know that the gentleman has had with respect to his district. It is a concern that the gentleman from South Carolina (Mr. DERRICK) has had over the past several years with regard to his district, and of course, as the gentleman well knows, it is a concern that I have had for quite some time that also relates to my district.

The concern that I have with respect to section 135, subsection (j), is that—and I will quote for the benefit of my friend from New York and our colleagues the relative section here, because I think it goes to the heart of the problem that many of us have, that is, the concern about whether or not private away-from-reactor storage facilities would be vulnerable to a Federal takeover under this legislation. I quote:

(j). APPLICATION.—Notwithstanding any other provision of law, nothing in this Act shall be construed to encourage, authorize, or require the private or Federal use, purchase, lease, or other acquisition of any storage facility located away from the site of any civilian nuclear power reactor and not owned by the Federal Government on the date of the enactment of this Act.

The concern I have is that the amendment would delete that particular prohibition. I just wonder if the gentleman is aware of that consequence of his amendment?

Mr. LUNDINE: I am well aware of it. Now, let me explain to the gentleman and others in the Committee that this is not a parochial amendment. The gentleman has correctly pointed out that West Valley, Morris, Ill., and Barnwell, S.C., have effectively been eliminated by the subsection the gentleman mentions, but I would point out to the gentleman that what this amendment does is to set aside any AFR program at a federally owned site or at a privately owned site. So, the gentleman's concern I think is obliterated by the purpose of the amendment, which is not to authorize an AFR program at either site, and I think that subsection is unnecessary.

The CHAIRMAN: The time of the gentleman from New York has again expired.

(At the request of Mr. CORCORAN and by unanimous consent, Mr. LUNDINE

was allowed to proceed for 2 additional minutes.)

Mr. LUNDINE: So, I think there are two points to make. First, the situation the gentleman is concerned about has not been forgotten, and I have not forgotten West Valley in regard to this amendment, but to all the members of the Committee I want to assure them that there is nothing parochial about this. Second, I want to point out that I have an AFR in my district. I have been involved in the negotiations with utilities to take back some of their spent fuel, and if we go on and authorize an AFR, we might as well forget about the utilities taking any responsibility for it because they are going to try to get rid of as much as they can and then forget about it.

Mr. CORCORAN: I think the concern that some of us have is precisely this: If we do not have some sort of storage program for the accumulated spent fuel, then West Valley, Barnwell, and Morris, are more vulnerable than they otherwise would be not only to Federal takeover, but also to the prospect that they would be brought into the leasing arrangement, the acquisition arrangement, whereby under emergency circumstances not in the deliberation that we have enjoyed for the past several months—in fact, all of this particular Congress—in trying to construct a reasonable compromise to deal with the problem, but under emergency circumstances to preclude the shutdown of a powerplant because of a lack of storage that those particular sites in Morris, in West Valley, and Barnwell would be in fact the subject of emergency legislation to authorize a takeover by the Federal Government.

Mr. LUNDINE: Just to answer the gentleman, earlier in this debate the gentleman from Arizona said to somebody else, "Trust me." I am sure I would be asking the gentleman in this respect. I am well aware of the gentleman's concern. I share that concern, and I know the gentleman from South Carolina does also, but what we are doing here, and I think the gentleman can trust what we are doing, is we are eliminating congressional intent to establish an AFR program at any site, and I would point out to the gentleman that with Federal spent fuel research and development activities, and with the need for radioactive materials for the T&E facility, there will be plenty of capability to relieve an emergency.

The CHAIRMAN: The time of the gentleman from New York has again expired.

(At the request of Mr. CORCORAN and by unanimous consent, Mr. LUNDINE was allowed to proceed for 2 additional minutes.)

Mr. LUNDINE: As I pointed out in my original statement, there are 300

metric tons in here for spent fuel research and development purposes. There is a test and evaluation facility. If a utility, having exhausted every option at its disposal—transshipment, building a new dry storage capacity at its reactor, or building a new pool at the site of the reactor—if every other option is exhausted there is plenty of capacity within this bill for the Department of Energy to use its research means to meet that crisis situation.

Mr. CORCORAN. Will the gentleman yield further?

Mr. LUNDINE. Certainly.

Mr. CORCORAN. The gentleman asked the gentleman from Illinois, and the gentleman from South Carolina and the Members of the Committee of the Whole to trust him. I can understand why from his position it is easier than it might be for us to ask for trust. The point is, of course, that the West Valley site in no way would really be targeted because of the research project on solidifying high-level liquid waste that is taking place there. Therefore you could not combine an AFR program at the same site as that R&D project as a practical matter.

Mr. LUNDINE. I have to ask for my time back. I disagree with the gentleman. West Valley is there; there is a pool there. It is an AFR today. If we were looking for quick storage capacity in America today, it would not go to Barnwell; it would not go to Morris; it would go to West Valley. So, I think I am taking a greater risk than anybody in this House if the gentleman's fears should be the operative concern. But I am confident that that will not occur because I am confident that our interim storage needs will be and can be met at the sites of reactors, and with our research program.

I thank the gentleman for his interest and his concern. I urge the adoption of the amendment. I hope that all of the Members of the Committee will understand that this is not from a parochial point of view, but it is from the point of view of somebody who has lived with an AFR in his district and seen how these matters operate.

Mr. CHAIRMAN. The time of the gentleman from New York has again expired.

(At the request of Mr. WEISS and by unanimous consent, Mr. LUNDINE was allowed to proceed for 2 additional minutes.)

Mr. WEISS. Mr. Chairman, will the gentleman yield to me?

Mr. LUNDINE. I yield to the gentleman from New York.

Mr. WEISS. Mr. Chairman, I urge my colleagues to support Representative LUNDINE's amendment to eliminate provisions for away-from-reactor interim storage of spent nuclear fuel.

Many problems would be created by establishing interim storage sites, but perhaps the most dangerous is that it would encourage utilities to ship their

spent fuel to temporary facilities. In fact, according to some projections, there could be more than 6,000 truckloads of spent fuel shipped annually from nuclear plants to storage facilities by the year 2000.

The potential for disaster created by this increase in handling and transporting nuclear fuel is enormous. Millions of lives could be endangered should an accident occur in a densely populated area such as New York City. If the thought of shipping nuclear fuel through the streets of New York is unthinkable to anyone who has attempted to drive those streets, consider that the State of New York has already battled with the Federal Government over regulations that would allow hazardous shipments through the city.

From our experience in New York, we have learned that Federal legislation on nuclear waste disposal must include as a fundamental principle the protection of public health. The nuclear industry has been promoting a Federal AFR program so that they will be absolved of the responsibility of storing spent nuclear fuel. But it is their responsibility, not that of the taxpayers who should not have to bear the cost and the danger of time bombs rumbling through their neighborhoods.

We must speak for the local communities which will be responsible ultimately for the health and welfare of their citizens, should a transportation accident occur.

In a draft study, the National Academy of Sciences has characterized the Federal plan for regulating radioactive transport as primitive. The Academy predicts that serious impasses will occur between State and local officials if localities are not offered a stronger say in regulating fuel shipments through their areas.

Without a dramatic shift in the Federal policy toward transportation of hazardous wastes, the probability of serious accidents is bound to increase. That shift begins with the passage of the Lundine amendment.

Mr. LUNDINE. I thank the gentleman, and I think he raises a very good point. For those Members who are not that familiar with the situation, the question is: Are you going to keep the spent fuel rods at the end of the nuclear generating process at the site of the reactor, or are you going to ship them all over the country to various away-from-reactor storage sites, thereby incurring possible danger? I thank the gentleman for his contribution, and I urge the adoption of the amendment.

Mr. LUJAN. Mr. Chairman, I rise in opposition to the amendment.

Mr. Chairman, I think the thing we need to remember that we are providing for in the legislation is a last resort interim storage facility. I emphasize, the last resort facility, because none of

us want to get into the situation where because we do have interim storage facilities, that it would delay the construction of a repository site.

The reason that we put this in here is because we have all kinds of testimony and information about reactors that are getting full. The capacity for the spent fuel rods is being exhausted. We have information that by 1989 or 1990 that we will have some 39 reactors where they will not have the capacity at the sites.

Mr. FUQUA. Mr. Chairman, will the gentleman yield?

Mr. LUJAN. Certainly.

Mr. FUQUA. Mr. Chairman, I appreciate the gentleman yielding, and I wish to amplify on the gentleman's remarks. Many of the operating reactors now are approaching capacity for storage of spent fuel rods, and there is a need which is further exacerbated by the fact that we as a Congress and the Government have not moved forward with some type of permanent disposal for high-level waste. This is not the fault of the utilities; it is the fault of Congress and the fault of the Government. That is why this AFR is needed as an interim method.

Hopefully, we will not have to use it, but should there be some type of delay, legitimate or not, in construction of the permanent facility, at least we have some means whereby we can give relief to many of the reactors.

I know the gentleman pointed out that some 38 reactors are approaching capacity at this time, and that is why this amendment should be defeated.

Mr. LUJAN. That is exactly correct, and let me continue on.

What happens if the reactor site is full and we do not have the repository ready? The only alternative, of course, is either to ship it off to some other reactor site, which makes the problem even worse, or that we shut down the reactor completely. We have been very careful to specify that it would be only at existing Federal sites, so that any Member does not have to worry about whether or not a new interim storage facility is going to come into his district.

Mr. LUNDINE. Mr. Chairman, will the gentleman yield?

Mr. LUJAN. I will in a minute, because I want to make a point to the author of the amendment, that in his own home State of New York, for example, there are three reactors that are presently facing that problem. The Power Authority of the State of New York has one called the J. A. Fitzpatrick, Unit Three at Indian Point; and one at Rochester Gas & Electric has one, so even in his own State we face this same problem of having to shut down a reactor because we do not have any place to take the spent fuel rods.

If the final repository is not ready, I agree with the gentleman, we would

not want to delay the repository, but we have to be careful that we do have some contingency plan in the event that the repository slows down and there is not any room for the spent fuel rods.

Now, I yield to the gentleman from New York.

Mr. LUNDINE. I thank the gentleman. Strictly on the point of how much capacity is needed, does the gentleman accept the Department of Energy, June 1982, report that indicates that with transshipment there is only a need for 8 metric tons by 1986, and for 400 metric tons by 1990, and that we do not get up to the 1,700 metric tons here authorized until after the year 1993?

Mr. LUJAN. I will tell the gentleman that, as he knows, in drafting legislation one just comes up with some figures. I am not totally certain 1,900 metric tons is the answer to all the problems. I will just tell the gentleman that there were some who wanted more and there were some who wanted less and we just compromised at a figure of 1,900.

Mr. CORCORAN. Mr. Chairman, will the gentleman yield?

Mr. LUJAN. I yield.

Mr. CORCORAN. Mr. Chairman, I want to thank my friend from New Mexico for yielding. Of course, we can look at what the Department of Energy has to say on this question and interpret its recommendation as we want.

Mr. CORCORAN. However, Mr. Chairman, one of the other Federal agencies that has evaluated this problem of need, which is a crucial element in this whole debate, has been the agency with responsibility for the regulation of the nuclear industry and, particularly, of course, the utilities that are using nuclear power on a commercial basis, and that is the U.S. Nuclear Regulatory Commission. Perhaps it is coincidental, but their report is dated June 1982, and this is based on the assumption, which is I believe the compelling assumption that all the committees of the House have used, Mr. Chairman, in trying to determine just what the magnitude of the need is, and that is that the final repository will not be coming on line until sometime between 1998 and the year 2000, probably closer to the end of that timeframe.

Now, the gentleman from New York (Mr. LUNDINE) has already said that even the DOE report indicates that the problem becomes one of constipation, shall we say, in 1983. What we are dealing with here is a timeframe around the turn of the century.

If we look at the NRC report, what that shows is that the following utilities—and I will not take the time of the House to read the names of all these utilities—will be in trouble long

before 1998 and the year 2000—and I will read just a few of them—

Alabama Power & Light, 1992; Arkansas Power & Light, 1987; Boston Edison Co., 1994; Commonwealth Edison Co. of Chicago, 1989; and Florida Power & Light, 1987.

So what we are saying is that the need will arise long before the final repository becomes operational, and that is why section 135 ought to be protected as is and that is why the Lundine amendment ought to be rejected.

The CHAIRMAN. The time of the gentleman from New Mexico (Mr. LUJAN) has again expired.

(On request of Mr. CORCORAN and by unanimous consent, Mr. LUJAN was allowed to proceed for 2 additional minutes.)

Mr. LUJAN. Mr. Chairman, let me tell the gentleman that he is absolutely correct on the list of power companies that he read.

Mr. CORCORAN. Mr. Chairman, if the gentleman will yield, is this the gentleman from Illinois to whom he is making reference?

Mr. LUJAN. Yes, I am sorry.

Mr. Chairman, if we total those up, the NRC has suggested that by the year 1990—now, that is just 8 years away—by the year 1990 we will have a shortfall of roughly 2,800 metric tons storage capacity at reactor site, and we are only authorizing 1,900 metric tons as a very last resort.

Mr. LUNDINE. Mr. Chairman, will the gentleman yield?

Mr. LUJAN. I yield to the gentleman from New York.

Mr. LUNDINE. Mr. Chairman, let me ask the gentleman, is it not true that the NRC has also said that these figures assume no transshipment between pools owned by the same utility and they assume no dry storage technology, which the NRC is pushing itself to try to implement in developing these numbers?

Mr. LUJAN. Mr. Chairman, here is what I have found: Even allowing for construction of additional reactor site cooling ponds and for reracking of the spent fuel, shortfalls in reactor storage capacity are anticipated. This analysis shows a shortfall in spent fuel capacity of roughly 2,800 metric tons by 1990.

I have always found that anytime we get into a discussion of some kind and we want to quote figures, or anybody does—DOE or NRC or EPA or any governmental agency—we can always find some figure to justify what we are trying to sell. In this particular case—and I am being honest about it—we compromised at 1,900 because some wanted more and some wanted less, and, frankly, that is the only way we could come up with an acceptable figure.

I reiterate that this is simply a last resort interim storage facility, and

that we will need it. There is no question in my mind that such a facility would be needed, and we would be foolish in stripping this figure from the bill.

Mr. BROYHILL. Mr. Chairman, I move to strike the requisite number of words, and I rise in opposition to the amendment.

Mr. Chairman, as the debate on this amendment, which I oppose, moves on, I think we should not lose sight of the purposes of this bill, and I would like to make a very quick walk-through of what we are trying to do with respect to this bill and point out why this amendment does not make sense when we take a look at it in that way.

The major purpose of this bill is to come up with the selection of a final permanent repository, a resting place for spent nuclear fuel. Under the terms of the bill the timetable calls for a selection by 1987. There is a possibility of an extension for a year, but at the latest that selection would occur in 1988.

As has already been mentioned in this debate, the Department of Energy estimates that the completion of that final repository may take as much as 10 years or more so that the repository would not be available for the introduction of spent fuel until 1998 or later, and if it is like most things around here, it could be up into the year 2000 or beyond.

Now, what do we do to take care of the spent fuel problems that will occur and are occurring in nuclear generating plants all across the country between now and the year 2000?

Well, another purpose of the bill is this Section 131, starting on page 65, and continuing through sections 132, 133, and 134, provides for expedited consideration of applications for expansion of onsite storage of these spent fuels, and certainly there is a crying need for these expedited procedures. Generally speaking, I would say there is agreement that these expedited procedures for the licensing of these onsite facilities are needed, and if there is no final resting place by 1998, obviously there is going to have to be some consideration for the expansion of onsite storage.

Now, there are going to be certain delays. We have seen this happen in the past. There are going to be regulatory delays and other delays, and there are those of us who feel there should be a safety valve program written in here. That is why in section 135, on page 72, we provide for a very small amount of storage capability, the storage of 1,900 metric tons at present Federal facilities. We are not talking about the construction of new facilities; we are talking about the possibility of storage at present Federal facilities.

ties that are handling or storing defense waste.

Now, this 1,900 metric tons amounts to about 3 percent of the spent fuel that will be generated between now and the year 2000, and this ability or this storage capacity cannot be used unless there are certain findings that are made by the NRC, the Nuclear Regulatory Commission. On page 74, we see listed those findings that must be made by the NRC before a utility has access to these Federal facilities; and that is why they have to show that the storage capacity cannot be reasonably provided at their facilities, either onsite or at another nuclear facility that they own and that they have been pursuing and are diligently pursuing licensing alternatives. If they show to the satisfaction of the NRC that they have been diligently pursuing licensing alternatives and they show that they cannot reasonably provide that storage capacity in their own system, then they would have access to these Federal facilities, and only then.

So, as we can see, this is not an automatic right to these Federal facilities; it is only a safety valve in case it is needed.

Otherwise the particular generating plant would have to close down, and, of course, it is not in the public interest to cause that kind of dislocation that could occur.

Mr. Chairman, I urge defeat of the amendment.

Mr. Chairman, I do not have time now to enumerate all the various utilities around the country that are projected to lose their full-core reserve by the late 1980's or the 1990's. However, I think the Members should have this information, so I am including for the record the following table:

NRC STUDY—JUNE 1982, UTILITIES NEEDING AN "AFR" BY 1990

TABLE 2.—UTILITIES AND REACTORS WITH PROJECTED LOSS OF FULL-CORE RESERVE PRIOR TO 1990

Utility and reactor	Loss of on-site storage capacity	
	Year projected to lose FCR*	Year projected to lose discharge capability
Alabama Power Co. 1, Farley 1	1990	1992
Arkansas Power & Light Co.		
Arkansas Nuclear 1	1984	1987
Arkansas Nuclear 2	1985	1989
Arkansas Nuclear 3	1989	1994
Boston Edison Co. Pilgrim 1		
Carolina Power & Light Co.		
Brunswick 1	1983	1987
Brunswick 2	1983	1987
Robinson 2	1986	1989
Cincinnati Gas & Electric Co. Zimmer 1	1987	1991
Commonwealth Edison Co.		
LaSalle 1	1987	1989
LaSalle 2	1987	1989
Consumers Power Co. Palisades	1986	1989
Dairyland Power Co. LaCrosse	1989	1993
Duke Power Co.		
McGuire 1	1990	1993
McGuire 2	1990	1993
Doonee 1	1986	1988
Doonee 2	1986	1989
Doonee 3	1986	1988

NRC STUDY—JUNE 1982, UTILITIES NEEDING AN "AFR" BY 1990—Continued

Utility and reactor	Loss of on-site storage capacity	
	Year projected to lose FCR*	Year projected to lose discharge capability
Florida Power & Light Co.		
St. Lucie 1	1984	1987
St. Lucie 2	1989	1992
Turkey Point 3	1987	1989
Turkey Point 4	1987	1989
General Public Utilities Oyster Creek	1986	1990
Northeast Nuclear Energy Co.		
Milstone 1	1985	1989
Milstone 2	1984	1987
Northern States Power Co. Monticello	1989	1992
Omaha Public Power District Fort Calhoun	1985	1988
Power Authority of State of New York		
Indian Point 3	1988	1992
Indian Point 3	1990	1993
Philadelphia Electric Co.		
Peach Bottom 2	1987	1990
Peach Bottom 3	1987	1990
Portland General Electric Co. Trojan	1985	1988
Rochester Gas & Electric Co. R. E. Ginna	1988	1992
Sacramento Municipal Utility District Rancho Seco	1986	1989
Southern California Edison Co. San Onofre 1	1982	1984
Virginia Electric & Power Co.		
North Anna 1	1988	1989
North Anna 2	1988	1989
Surry 1	1984	1986
Surry 2	1984	1986
Vermont Yankee Nuclear Power Co. Vermont Yankee	1988	1991

* Projection made on basis that pending application of reworking is approved.

Reference: NUREG/CR-2704, June 1982.

Mr. UDALL. Mr. Chairman, we have 19 amendments pending, and I had hoped that we could move along toward the conclusion of this bill. Therefore, I ask unanimous consent that all debate on the pending amendment cease at 1:25 p.m.

The CHAIRMAN. Is there objection to the request of the gentleman from Arizona?

Mr. MARKEY. Mr. Chairman, I object.

The CHAIRMAN. Objection is heard.

Mrs. SCHNEIDER. Mr. Chairman, I move to strike the requisite number of words, and I rise in support of the amendment.

Mr. Chairman, I rise in support of the amendment offered by the gentleman from New York. I think most of us are united in favoring a comprehensive nuclear waste policy, and it is obvious that the leadership of the Commerce, Interior, and Science Committees have worked very hard to put together a compromise bill. The gentleman's amendment strengthens the legislation by concentrating Federal resources on our main purpose—the establishment of a deep, geological repository for the safe, permanent storage of nuclear waste. The temporary, away-from-reactor storage provided in the bill is an unnecessary distraction from the goal, and should be eliminated.

Members may want to keep three points in mind when considering this amendment. First, the Department of Energy's estimates as to the amount of away-from-reactor storage utilities will need has been continually revised downward over the past 5 years. It

now appears that improved storage methods at the site of existing reactors are a cheaper and more effective alternative than setting up separate, temporary facilities to hold spent fuel rods until a permanent repository can be established.

Second, the creation of AFR sites could double the hazards associated with transporting radioactive materials, as these would have to be moved first to temporary storage and then, theoretically at least, to their final resting place in a permanent repository. I think most of our constituents would prefer that we keep the circulation of nuclear waste on our Nation's highways and railroads to a minimum.

Third, the language in the bill charges the utilities a one-time fee to finance AFR's. That leaves the taxpayers responsible for footing the bill for any cost overruns. Given the Department of Energy's rather poor track record in managing similar contractual arrangements, it seems unwise to give DOE a blank check to cover costs that private industry ought to absorb. While the safe disposal of nuclear waste is a public problem, the responsibility for financing the solution must rest with private industry.

The nuclear waste bill that we enact should preserve an important principle—it should avoid halfway measures and move us directly toward our primary goal, which is to provide for the permanent, safe storage of nuclear waste. Temporary, away-from-reactor storage sites just do not measure up to this principle. I urge my colleagues to vote for this amendment.

Mr. WIRTH. Mr. Chairman, I move to strike the requisite number of words, and I rise in support of the amendment.

Mr. Chairman, first let me say that I want to associate myself with the remarks of the gentlewoman from Rhode Island. Mrs. SCHNEIDER, on the costs of this provision I think we ought to be aware that what we are assuming here involves significant further costs to the taxpayer. Through its long history, nuclear power in this country has been subsidized over and over and over again by the taxpayer, and this is another example.

Second, what we are doing with this provision is opening up the possibility for some very, very significant further involvement by the Federal Government.

Mr. CORCORAN. Mr. Chairman, will the gentleman yield?

Mr. WIRTH. Let me complete my statement, and then I will be happy to yield if I have time.

Mr. CORCORAN. Mr. Chairman, I thank the gentleman.

Mr. WIRTH. Mr. Chairman, as I was saying, the second issue we have here is opening up a large new area for Federal involvement with nuclear power,

in that away-from-reactor storage raises the possibility of the Federal Government taking all kinds of responsibilities that should be carried by the private sector. We have heard an enormous amount of discussion over the last 2 years about the private sector's assuming its responsibilities and limiting the responsibility of the Federal Government, and here we are, in a very bizarre fashion, doing precisely the opposite, opening up a very large box—away-from-reactor storage—into which the private sector is going to run with a series of problems that are created by nuclear power.

Third, I would point out to my colleagues the language on page 72 of H.R. 7187, from line 16 on. In developing away-from-reactor storage, what are we allowing to happen?

First, the away-from-reactor storage facilities—and this is lines 16 through 19—are exempt from the Nuclear Regulatory Commission's licensing procedure. Why is that? Why is there an exemption from the licensing procedure? What are we going to say in this language they are going to get away with?

According to line 20 through line 2 on page 73, no environmental impact statement is required in the development of away-from-reactor storage capability.

□ 1315

Why is that? Why is there no Nuclear Regulatory Commission licensing as there are for other facilities, and why no environmental impact statement? It does not make any sense.

Something is wrong when, one, we are saying the Federal Government is going to get into this new operation but is getting into it without the kind of licensing procedure and environmental impact statement that is required for every other major endeavor that is embarked upon by the public sector or the private sector.

To further compound the problem, if we get into section d on page 73, the bill authorizes the Department of Energy to construct storage capacity on any other site, at any other nuclear reactor site, again without an EIS, again without licensing. It just does not make any sense.

I think the gentleman from New York has offered an amendment that is rational that says in summary that clearly there is a problem in terms of storage. But as the gentleman has pointed out, let us push the technology, let us leave that responsibility in the private sector. Let us not have the taxpayer assume the burden, as the gentlewoman from Rhode Island was pointing out. Let us not develop a whole series of new responsibilities for the Federal Government, and let us maintain the process of licensing under the Nuclear Regulatory Commission and maintain the very, very important process of the environmen-

tal impact statement required under NEPA.

Mr. MARKEY. Mr. Chairman, I move to strike the requisite number of words and I rise in support of the amendment.

Mr. CORCORAN. Mr. Chairman, will the gentleman yield for purposes of clarification at this point?

Mr. MARKEY. Am I going to be doing the clarification, or the gentleman?

Mr. CORCORAN. I am going to try to clarify the financing issue discussed by Mr. WIRTH of Colorado.

Mr. MARKEY. I yield to the gentleman.

Mr. CORCORAN. I thank the gentleman very much for yielding. On the question of financing the interim storage fund, our good friend from Colorado (Mr. WIRTH) indicated that the taxpayers would have to finance it. As the gentleman from Massachusetts well knows, section 137 of the bill dealing with the interim storage fund makes it clear that the generators of the waste will have to finance the program.

Mr. MARKEY. I thank the gentleman for that clarification.

Of course the generators of the wastes will then dun their ratepayers and as far as the ratepayer is concerned it is very easy for him to take off his taxpayer hat and put on his ratepaying hat and in the wash sometimes it seems very difficult for him to differentiate between one hand or the other in the pocket.

The problem here is this: The utilities want an away-from-reactor storage program. That is priority No. 1. A permanent waste bill is something which is desirable, something that might take place in 1995 or the year 2005. But that is a secondary consideration.

We have all of this waste building up at our existing reactors and it is so critical for us to say to the utilities that we get away-from-reactor storage capacity.

Why is that? The problem is this: The utilities do not want to build any more storage capacity onsite. When a nuclear powerplant is licensed you have one building that has the reactor generating all of the electricity. The fuel rods in that building, when they wear out, when they cannot produce any more electricity, are put in a building right next door in a swimming pool, where they are going to be held until a permanent waste repository can be constructed in this country.

The waste will then be put on trucks and transported to the permanent repository.

What the utilities are saying is rather than having us, as our waste builds up onsite, build an additional swimming pool next to the existing one, we want it to be put in another place maybe 500 miles away or maybe

1,000 miles away. Put the nuclear waste on the highway and drive it to an away-from-reactor storage facility. Then in 15 or 20 years when the permanent nuclear repository is constructed, then take it from the AFR and put it in the permanent repository.

Here is the problem: We will never have a permanent repository if the utilities do not have a need for one. If we take the problem the utilities now have of getting their wastes off of their own premises, then the pressure which will be applied to deal with the problem of permanent waste disposal will be alleviated. As a result, all of the political consensus which wraps around this bill today will be somewhat mitigated since the key party to having a permanent repository will now have its problems somewhat pushed back in time into the indefinite future.

What we have to do is to say to the utilities: Why don't you make applications for additional storage capacity onsite; why don't you make application to go to dry cask technology of nuclear wastes onsite; why don't you make requests for transshipment between your own utilities in a very small local area and try to minimize the amount of travel of this nuclear waste?"

For every nuclear powerplant in this country, every 1,000 megawatts, it means about 40 to 60 truck shipments per year of nuclear waste on the highways heading toward this away-from-reactor facility.

We do not have any need for an away-from-reactor facility. We do not have any problem with telling the utilities to build additional storage capacity onsite.

Diablo Canyon, Pilgrim, Three-Mile Island, Seabrook, Florida Power & Light, North Carolina Power & Light, no matter where you come from we will help you expedite through the Department of Energy, through the Nuclear Regulatory Commission, a process that makes it possible for you to take care of your own problems.

It is not the job of the Federal Government to bail out the private sector. It is not our job to put together a program that ought to be put together by the private sector or the self-help program for a problem which the utilities have created and for which they have the facilities and the capacity to deal with themselves.

We are talking about the Federal Government injecting itself into an area of the private sector that it has no business being in until there is a permanent repository which is a legitimate Federal responsibility. There is no role for the Federal Government in bailing out the utilities for the short term.

The CHAIRMAN. The time of the gentleman from Massachusetts (Mr. MARKEY) has expired.

(At the request of Mr. MARRIOTT and by unanimous consent Mr. MARKEY was allowed to proceed for 2 additional minutes.)

Mr. MARRIOTT. Mr. Chairman, will the gentleman yield?

Mr. MARKEY. I am glad to yield.

Mr. MARRIOTT. My friend knows I share his concerns about getting a permanent repository and doing it properly.

Let me ask this question. The gentleman brings up the point that the existing reactors now have the capability of storing all of the spent fuel without going to AFR's. Does the gentleman believe that they would have little difficulty getting licensing, No. 1 from the NRC to do that and does he believe that the storing in these reactors, some of which are very close to large population areas, would be as safe in the long run as transferring them to some AFR?

Does the gentleman have reactors in his district? Would the gentleman's people sign off on increasing the storage capacity at the reactor? Do they feel no problems with that possibility?

Mr. MARKEY. This is a Republican administration. The Republican administration is in office on the pledge that it is going to try to cut redtape, reduce and minimize bureaucratic interference with private sectors activities. If between you and I, Nunzio Paladino, Don Hodel, and Ronald Reagan we cannot put together a program which expedites the construction of additional onsite capacity for our nuclear power facilities, then there is something terribly wrong.

Second, 30 percent of the electricity in New England, and in my district, is generated from nuclear power. My district would much prefer to keep the wastes onsite until there is a permanent repository and then once put it on the highways and take it through the district.

Let me tell the gentleman something else. We are all deluding ourselves if we believe this stuff is going to be put on the highways and we are not going to see the granola crowd and some ponytail crowd out there protesting. This is going to be like the nuclear freeze movement. There are going to be middle-class mothers and fathers out in the middle of the highway saying "What are you doing putting nuclear wastes on our highways when you do not have any reason to do so?"

I do not think we have any idea of the political volatility of this issue.

The CHAIRMAN. The time of the gentleman from Massachusetts (Mr. MARKEY) has again expired.

(At the request of Mr. MARRIOTT and by unanimous consent Mr. MARKEY was allowed to proceed for 2 additional minutes.)

Mr. LUNDINE. Mr. Chairman, will the gentleman yield?

Mr. MARKEY. I yield to the gentleman from New York briefly.

Mr. LUNDINE. I think the whole idea of the technology push that the gentleman has alluded to operates here, too.

It has been the Nuclear Regulatory Commission that has been encouraging the utilities to adopt dry storage on top.

TVA is proving this can be done. We are not talking about some technology that is in the far distant future, nor are we talking about a regulatory agency that in any way is hostile to what the gentleman has suggested should occur.

Mr. MARKEY. If I may reclaim my time, there has never been in the history of this country one utility that has asked for permission to expand its onsite capacity. Utilities have re-racked. They have tried to use to the best of their ability the space available in the existing water cooling area. But they have never asked to build additional facilities.

There is something wrong with that and what is wrong with it is clearly the need for the utility industry to come to big sugar daddy, to come to the big Federal Government and say "You build them for us, you figure out how to solve the problem because we do not want to do it. We promised you, we promised the people when we built these nuclear powerplants in their area that we would take care of the problem. But now Federal Government, you do it instead."

But now when push comes to shove they want you, big daddy, to pick up the bill, and I do not think we ought to do it.

Mr. LUJAN. Mr. Chairman, will the gentleman yield?

Mr. MARKEY. I yield to the gentleman from New Mexico.

Mr. LUJAN. I think the gentleman is mistaken in his statement. He continually says that the Federal Government is going to pay for all these things. The bill provides that the users, the utilities are the ones that are going to have to pay for it.

The gentleman says well, then, they will just pass it on to the ratepayers.

The alternative is that the Federal Government pick up the tab. I guess that is what the gentleman is advocating, that the Federal Government pick up the tab instead of the utilities picking up the tab. I really cannot understand what side the gentleman is on.

Mr. MARKEY. Let me reclaim my time.

The gentleman from New Mexico makes a mistake in leaving the impression on his listeners that the cost is the same whether you put it off site or you put it on site. In fact, it costs twice as much to put it offsite in an AFR as it does to put it onsite; that is, the tax-

payer/ratepayer, depending on the hat, gets stuck with the bill.

Mr. MARRIOTT. Mr. Chairman, I move to strike the requisite number of words.

Could I enter into a colloquy with the author of the amendment because I think it is an important issue to discuss. Does not the present bill require the utilities to try to expand onsite storage before they apply for AFR's?

Mr. LUNDINE. Will the gentleman yield?

Mr. MARRIOTT. I yield to the gentleman.

Mr. LUNDINE. Yes.

Mr. MARRIOTT. Then I do not understand what the problem is. If we have enough capacity to store 1,900 or 2,800 metric tons at the present reactor site then what is the controversy?

We have then only to go to AFR's if in fact it was necessary and the reactors could make that point.

No. 2, the State still has a veto on that, do they not, that requires a two-House congressional override?

So I do not understand if those two things are in place why we need this amendment.

Mr. LUNDINE. If the gentleman will yield, the problem is you are creating a presumption that there is a need for a Federal facility if this amendment is rejected and all you have is a regulatory proceeding to determine whether or not the utility is making the efforts that they can.

Third, you do not have to consider any new technology. We are just at a breakthrough point that if we relieve this and we provide that the answer to this is away-from-reactor storage pools, we will see the development of dry storage and other new technologies for at-reactor-site disposition or interim storage absolutely grind to a halt.

Believe me, I have seen it. I have seen it where they have it in a pool and as soon as you say you do not have any permanent right to keep it here, they say take us to court.

The push is not toward solving the problem where it is. The push will be to get rid of it and the gentleman is entirely correct; the only protection we have is that the NRC, as the gentleman from New Mexico correctly pointed out, does have these three criteria before they can authorize an AFR.

Mr. MARRIOTT. If I could make one other point, if in fact we put it at the reactor and we do not have an AFR, it seems to me that might expedite the permanent repository process.

Mr. LUNDINE. Exactly.

Mr. MARRIOTT. Which may not be good. That is, we may not be ready yet in the next year or year after to say how we are going to store this stuff on a permanent basis and you may well

be forcing us to make some decision we do not want to make.

Mr. LUNDINE. If the gentleman will yield on that point, I agree with the Reagan administration and with this Department of Energy that it is absolutely imperative that we accelerate the final repository, the final disposition. We have delayed in this country for 30 years the development of a repository. I think the gentleman's analysis is correct.

Mr. MARRIOTT. If I could reclaim my time, the point I want to make is when you go out to a western State where you have underground water table problems, salt problems, proximity to national parks, you do not make those decisions overnight. I do not want to be put in the position where they are going to ramrod something down our throat because we are forced to because we have no AFR's.

Mr. CORCORAN. Mr. Chairman, will the gentleman yield?

Mr. MARRIOTT. I am happy to yield to my friend.

Mr. CORCORAN. I thank my friend from Utah for yielding because one of the issues here is whether or not with the adoption of the Lundine amendment the pressure and the authority would be in the legislation to require the Nuclear Regulatory Commission to make certain that the utilities have exhausted all of the other remedies before going to the last resort.

□ 1330

One of the unfortunate consequences, Mr. Chairman, of the Lundine amendment is that it strikes out section 135, subsection (b), which requires that the NRC issue the guidelines and implement requirements so that the utilities in fact exhaust all of these other technologies, exhaust all of the other steps, to make certain that they solve their problems themselves.

Mr. MARRIOTT. Mr. Chairman, I would just like to say that I applaud what is trying to be done by removing the AFR's, but I think it causes more potential damage than it does good.

Mr. LUNDINE. Mr. Chairman, will the gentleman yield?

Mr. MARRIOTT. I yield to the gentleman from New York.

Mr. LUNDINE. Mr. Chairman, the whole point I have tried to make to the gentleman from Illinois is that this amendment eliminates the entire AFR section, and if there is no authorization for an AFR, then there is no reason to limit it to Federal sites and there is no reason to have NRC criteria. The purpose of this amendment is to try to solve the problem on site, not at away-from-reactor storage sites.

Mr. MARRIOTT. I would just simply conclude, if I have any time left, to say that I think the amendment is a bad one. The present bill provides reasonable stopgaps. I would urge that we support the bill.

Ms. FERRARO. Mr. Chairman, I move to strike the requisite number of words, and I rise in support of the amendment.

Mr. Chairman, the amendment before us really might be referred to as a prime purpose amendment. By that I mean that the amendment will help to preserve the prime purpose of the legislation before us.

It is generally understood that this bill is designed to move the nuclear power industry toward a permanent repository for spent fuel. Yet one provision of the bill would establish what the industry has referred to as a "last resort" option—a federally supplied interim storage facility with a capacity of 1,700 metric tons of spent fuel from civilian reactors.

As the gentleman from New York (Mr. LUNDINE) has made clear, such a facility is very likely to become one of first reliance for the industry rather than last resort. Given the alternatives of expanding their own onsite storage capacity or taking advantage of a ready-made Federal facility, utilities are sure to take the easiest and cheapest course.

The amendment before us would eliminate the requirement for a Federal interim storage capacity. At the same time, the amendment leaves in the bill the provisions which accelerate Federal research, development, and demonstration programs for cost-effective technologies for storing spent fuel onsite. It would also expedite NRC licensing of onsite storage capacity.

The proposed interim storage facility has been justified as necessary to avoid a crunch in existing storage space. The fact is, however, that estimates of needed storage capacity have steadily been revised downward in recent years. While the Department of Energy estimated in 1977 that 1,700 metric tons of interim storage would be required by 1983, the latest Department estimates are that utilities will not need any Federal capacity until at least 1988.

Another argument against building the interim storage facility is the increase in transportation and handling of spent nuclear fuel which would result. I have been actively involved in the Department of Transportation's efforts to draft new regulations governing the transportation of spent fuel. The DOT's first plan was widely criticized by city officials and environmental groups on grounds that it did not adequately provide for the safety of residents of metropolitan areas through which spent fuel would be shipped. Those concerns were underscored earlier this year when a Federal district court judge in New York struck down the proposed regulations.

The judge ruled that DOT had not given sufficient consideration to the possible use of alternative modes of

transportation to the highways, and that more emphasis must be placed on the problems surrounding shipments through densely populated urban areas.

The Department of Transportation has announced its intention to appeal the decision, but the status of Federal regulation of spent fuel shipments is very much in doubt. Given the likelihood that establishment of an interim storage facility would result in an additional 4,750 truck shipments of spent fuel, I believe it would be ill-advised to require such a facility be created before the transportation questions are resolved.

As I said earlier, this amendment serves only to reinforce the principal purpose of the Nuclear Waste Policy Act, which is to encourage new initiatives to develop permanent repositories for spent fuel. I urge adoption of the amendment.

Mr. UDALL. Mr. Chairman, I ask unanimous consent that all debate on the pending amendment cease in 10 minutes.

The CHAIRMAN. Is there objection to the request of the gentleman from Arizona?

There was no objection.

The CHAIRMAN. Members standing at the time the unanimous consent request was agreed to will be recognized for 1 minute each.

(By unanimous consent, Mr. WEISS and Mr. DAWNEY yielded their time to Mr. LUNDINE.)

The CHAIRMAN. The Chair recognizes the gentleman from New York (Mr. KEMP.)

Mr. KEMP. Mr. Chairman, I rise in support of the amendment offered by my colleague, the gentleman from New York (Mr. LUNDINE) to delete the interim storage provisions of H.R. 3809, the Nuclear Waste Disposal Act, and I congratulate him for his hard work.

First, let me say how much I appreciate the very hard work—and hard bargaining by everyone that went into this nuclear waste bill. Devising a plan for permanent nuclear waste storage has, I know, often been a thankless task. Members of both sides of the aisle who have worked long and hard on this legislation deserve our thanks, and also our congratulations for coming up with a fair and workable long-term solution.

I want to emphasize as well that my concern about the interim storage provisions of this bill does not stem from purely parochial interests. It is true that I strongly oppose allowing the West Valley site, in our community of western New York, to become a storage site. Congress is spending millions of dollars cleaning up the nuclear reprocessing plant at West Valley, precisely because the nuclear waste now stored there represents a real and very

significant threat to public health. West Valley is not and would not be an appropriate storage site, because of well-established geographical and geological factors.

I oppose interim storage for these reasons: First, I do not believe it is necessary; second, it increases the danger from transporting wastes; and third, it provides an opportunity and incentive for delaying action on a permanent repository site.

When the Department of Energy first proposed a Federal interim storage program in 1977, they estimated that by 1990 we would need storage space for 14,400 metric tons of spent fuel. In 1978 the Department revised that figure down to 6,940—a decrease of over 100 percent. And in 1980 they revised it once again, this time down to 3,277 metric tons. At the same time the estimates of waste needing storage have declined, the development of alternative storage technologies has proceeded apace. Fuel rod consolidation, and even more dry storage techniques, now offer onsite storage alternatives that are much cheaper than constructing an interim storage facility—and keep the Federal Government out of the business of providing short-term waste storage for the nuclear industry.

These alternative technologies also reduce the need to transport waste. Clearly the less we need to move this waste along the roads and railways the less we will endanger public health and safety. What is more, the transportation of nuclear waste will become one more area of conflict used to halt the development of nuclear energy, which I know is not the aim of the sponsors of this legislation.

My biggest fear, however, is that by permitting interim storage we will make it easier to put off those hard decisions about permanent storage. Interim storage facilities set up to meet the needs for just a few years might easily be strained beyond their capacities. The pressure on the Federal Government, the States, and the nuclear industry to reach a mutually acceptable solution would be eased. And we would have created one more Federal support program for industry—the kind of program that tends to acquire a long life of its own.

I support this legislation. The nuclear waste accumulating around the Nation, the nuclear waste now being prepared for solidification at the West Valley demonstration site, must find a safe and permanent home. We must reform the licensing procedures for waste management to allow promising new technologies to be used. I do not, however, believe that interim storage is necessary for resolving the nuclear waste problem. Instead, it may stand in the way of a true, long-term solution.

The CHAIRMAN. The Chair recognizes the gentlewoman from Tennessee (Mrs. BOUQUARD).

Mrs. BOUQUARD. Mr. Chairman, I rise in opposition to this amendment.

Mr. Chairman, I think it should be pointed out that the Government has had a rather ambivalent policy in regard to our nuclear plants. When they were originally built and for a long time afterwards, the concept of reprocessing was much agreed upon and encouraged by the Government. Then a recent administration banned reprocessing, and it left the industry without the facilities or the capacity to handle the spent fuels. I think, particularly because of that inconsistent energy policy that we have created this problem, and it is the responsibility of the Federal Government to provide for emergency storage with this so called last resort away-from-reactor spent fuel storage facility. I therefore urge rejection of the amendment.

The CHAIRMAN. The Chair recognizes the gentleman from Illinois (Mr. CORCORAN).

Mr. CORCORAN. Mr. Chairman, the contents of this legislation in the form of the pending amendment offered by our good friend from New York (Mr. LUNDINE) have been adequately discussed, and I think our colleagues know what is in it.

I would like to address one other facet of this matter in the time that I have remaining, and that is the impact of the Lundine amendment on the entire legislation.

Mr. Chairman, in the 96th Congress we came sputtering to the end and we came very close to passing a nuclear waste bill. It got tied up in conference over the military aspect of the program. Now we are coming again to this away-from-reactor storage question which, in my judgment, if the Lundine amendment, God forbid, is adopted, will cause the death of nuclear waste legislation in this Congress. There is no question about the fact that a lot of people, not the author of this amendment, but a lot of other people have already written to the Speaker of the House and the leadership of the various committees involved, who, by the way, are all opposed to this amendment—I do not know the position of the Speaker—and they have asked that the bill itself be pulled from the Calendar for this Congress. They do not want a good sensible nuclear waste bill. And that may be why they are supporting the Lundine amendment.

For this reason as well as many others which I have already discussed during the course of this debate, I urge the resounding rejection of this ill-advised amendment.

The CHAIRMAN. The Chair recognizes the gentleman from North Carolina (Mr. BROYHILL).

Mr. BROYHILL. Mr. Chairman, I would point out to the Members that the last resort interim storage program is limited to existing Federal facilities, and those facilities which have undergone a public health and safety review by NRC. And I would also say that we have special statutory language in section 135, which the gentleman from New York now would have us strike, that would exclude the use of private away-from-reactor facilities for the storage of spent fuel. We specifically put this language in here to take care of the problem that he and others have talked about; that is, the concerns that they have expressed as the possible use of privately owned facilities in their particular districts. And he now wants to strike the language that we put in the bill for the express purpose of saying that there will be no funds used for the private facilities.

The CHAIRMAN. The Chair recognizes the gentleman from New York (Mr. LUNDINE).

Mr. LUNDINE. Mr. Chairman, to address the last point to my good friend from North Carolina, I have tried to state, and I honestly believe, this is not a parochial amendment. The gentleman is entirely correct. I believe that the districts of the gentleman from Illinois, the gentleman from South Carolina, and myself are protected by the compromise language in this amendment.

The gentleman also knows that the other body has passed a bill that has no limitations whatever. We have no assurance that these limitations would in fact be in the final legislation that may be adopted at the very latest hour.

Mr. CORCORAN. Mr. Chairman, will the gentleman yield?

Mr. LUNDINE. I will yield to the gentleman if he will be brief.

Mr. CORCORAN. The point I would like to make is that if the House adopts the Lundine amendment and the Senate has already rejected similar legislation, the Senate in the conference between the two Houses will be able to insist on its language in authorizing the Federal takeover of private facilities such as at Morris, Ill., and that is what concerns me and many of my colleagues very, very much.

Mr. LUNDINE. I would like to address that point. I honestly am in favor of this legislation. I do not believe the gentleman's analysis is correct. I think if the House adopts the Lundine amendment, and the Senate has a provision in their bill, we will compromise somewhere in between, which will probably be something like the language in this bill. But if the Lundine amendment is rejected, I think the gentleman is at risk. I think this gentleman is at risk, and I think

everybody who cares about an unlimited AFR is at risk. And that is the reason I am going to insist on this amendment.

Mr. Chairman, it is very simple: An away-from-reactor storage facility would be more expensive and it would be more dangerous than the adoption of the Lundine amendment. There are new technologies coming on line which can solve this problem. We have the capacity with the research and development capability of the Federal Government, should there be an emergency, for up to 300 metric tons of space and fuel storage, and additional storage in the T&E facility beyond that. But the fundamental question here is: Is the Federal Government going to step in and undertake a new activity? Or is the basic responsibility going to be on those utilities whose users have had the benefit of the nuclear power up to this time?

I urge the adoption of this amendment.

The CHAIRMAN. The Chair recognizes the gentleman from New Mexico (Mr. LUJAN).

Mr. LUJAN. Mr. Chairman, we all would like to see the problem solved in the way that we would prefer it would be solved. And I believe it would be wonderful if we did not need an AFR, if we did not need an interim storage facility. But we live in the world that is, not in the world that ought to be.

So it is my feeling that, at some point, these reactor facilities are going to be filled up, and we have to have an alternative to closing those utilities.

We have considered this amendment in Interior. We have had long, long hours of debate on this, and it was the wisdom of the committee to turn it down at that time. I think that the last thing we ought to remember is that this is a last resort interim storage facility. Only after the utilities have done everything they possibly can to increase the storage capacity onsite would this facility be used.

So it is just a backstop so that if we ever find ourselves in the position where we have no capacity, the utilities will not be closed.

The CHAIRMAN. The Chair recognizes the gentleman from Arizona (Mr. UDALL) to conclude debate.

Mr. UDALL. Mr. Chairman, this amendment ought to be defeated. It is well intended, and the gentleman from New York is fighting very hard. He is not parochial; he has not been parochial around here, and I accept his statement in that regard.

We have retreated and retreated and retreated on AFR. Frankly, I have no great enthusiasm for a lot of AFR facility, and I do not think we are going to have any. This is a careful, limited, last-resort, last-ditch facility that we need, for two things: First, if there is an emergency, if the reactor finds that they have rods that they simply do

not have space for, they have run out of pools, we will have a Federal program which can accept those rods, and second, we have made a lot of international commitments over the years to nations urging them to use nuclear technology. We have a lot of international commitments that we will provide that space if needed.

So you have a highly limited, 2,000-metric-ton program. The utilities will have to show that they cannot provide storage space at reactor sites, utilities that will use this Federal space will pay for it, and they have to be able to get out as soon as new capacity can be reasonably constructed.

So we should not eliminate the AFR totally. This leaves a very small AFR program, and the amendment should be defeated.

The CHAIRMAN. The question is on the amendment offered by the gentleman from New York (Mr. LUNDINE).

The question was taken, and the Chairman announced that the noes appeared to have it.

RECORDED VOTE

Mr. LUNDINE. Mr. Chairman, I demand a recorded vote.

A recorded vote was ordered.

The vote was taken by electronic device, and there were—ayes 84, noes 308, not voting 41, as follows:

[Roll No. 398]

AYES—84

- | | | |
|-----------------|---------------|---------------|
| Addabbo | Gray | Paul |
| AuCoin | Gregg | Rangel |
| Bedell | Hartnett | Reuss |
| Bellenson | Heffel | Rodino |
| Blagoy | Howard | Roemer |
| Bingham | Huckaby | Rosenthal |
| Brodhead | Kastenmeier | Roybal |
| Burton, John | LaFalce | Savage |
| Burton, Phillip | Leland | Scheuer |
| Campbell | Lowry (WA) | Schneider |
| Clay | Lundine | Schroeder |
| Clinger | Markey | Schumer |
| Conyers | Martin (IL) | Shannon |
| Crockett | Martin (NY) | Simon |
| DeLoach | Mavroules | Solari |
| Dellums | McGrath | Spence |
| Derrick | McHugh | Stark |
| Downey | Minish | Stokes |
| Dymally | Mitchell (MD) | Studds |
| Eckart | Moakley | Vento |
| Edgar | Mollinari | Waxman |
| Edwards (CA) | Mottl | Weaver |
| Ferraro | Napier | Weber (MN) |
| Ford (TN) | Nowak | Weiss |
| Garcia | Oaks | Williams (MT) |
| Gelderson | Oberstar | Wirth |
| Gillman | Obey | Wolpe |
| Gore | Panetta | Wyden |

NOES—308

- | | | |
|-------------|------------|--------------|
| Alaka | Bennett | Burgener |
| Al'Sorta | Bereuter | Butler |
| Alexander | Bethune | Byron |
| Anderson | Bevill | Carman |
| Andrews | Bliley | Cartey |
| Annunzio | Boggs | Chappell |
| Applegate | Boland | Chapple |
| Archer | Boyer | Cheney |
| Aspin | Bonior | Clausen |
| Atkinson | Bouquard | Coats |
| Badham | Bowen | Coelho |
| Balfas | Brinkley | Coleman |
| Bailey (MO) | Brooks | Collins (IL) |
| Bailey (PA) | Broomfield | Collins (TX) |
| Barnard | Brown (CA) | Conable |
| Barnes | Brown (CO) | Conte |
| Beard | Brown (OH) | Corcoran |
| Benedict | Broyhill | Coughlin |

- | | | |
|----------------|---------------|---------------|
| Courter | Hightower | Petri |
| Coyne, James | Hiler | Peyster |
| Coyne, William | Hillis | Pickle |
| Craig | Holland | Pofter |
| Crane, Daniel | Holt | Price |
| Crane, Philip | Hopkins | Pritchard |
| D'Amours | Horton | Quillen |
| Daniel, Dan | Hoyer | Rahall |
| Daniel, R. W. | Huobard | Rallsback |
| Dannemeyer | Hughes | Ratcliff |
| Daschle | Hunter | Regula |
| Daub | Hutto | Rhodes |
| Davis | Hyde | Rinaldo |
| Derwinski | Ireland | Ritter |
| Dickinson | Jacobs | Roberts (KS) |
| Dicks | Jeffords | Roberts (SD) |
| Dingell | Jeffries | Robinson |
| Dixon | Jenkins | Roe |
| Donnelly | Johnston | Rogers |
| Dorgan | Jones (NC) | Rostenkowski |
| Dornan | Jones (OK) | Roth |
| Dougherty | Jones (TN) | Roukema |
| Dowdy | Kazen | Rudd |
| Dreier | Kennelly | Russo |
| Duncan | Kildee | Sabo |
| Dunn | Kogoysek | Santini |
| Dwyer | Kramer | Sawyer |
| Dyson | Lagomarsino | Schulze |
| Early | Latta | Sensenbrenner |
| Edwards (AL) | Leach | Shamansky |
| Edwards (OK) | Leath | Sharp |
| Emerson | Lent | Shaw |
| English | Lewis | Shelby |
| Erdahl | Livingston | Shumway |
| Erlenborn | Loeffler | Sijander |
| Ertel | Long (LA) | Skeen |
| Evans (DE) | Long (MD) | Skelton |
| Evans (IN) | Lott | Smith (AL) |
| Fary | Lowery (CA) | Smith (IA) |
| Fascell | Lujan | Smith (NE) |
| Fazio | Lukens | Smith (NJ) |
| Fenwick | Lungren | Smith (OR) |
| Fiedler | Madigan | Smith (PA) |
| Fields | Marlenee | Shoemaker |
| Findley | Marriott | Snyder |
| Fithian | Martin (NC) | Solomon |
| Floppo | Martinez | St. Germain |
| Florio | Matsul | Stangeland |
| Foglietta | Mattor | Stanton |
| Foley | MazZoli | Station |
| Ford (MI) | McClory | Stratton |
| Forsythe | McCloskey | Stump |
| Fountain | McColium | Swift |
| Frank | McCurdy | Synar |
| Frenzel | McDade | Tauke |
| Frost | McDonald | Tauzin |
| Fiquis | McEwen | Taylor |
| Gaydos | Mica | Thomas |
| Gephardt | Michel | Trible |
| Gibbons | Mikulski | Udall |
| Ginn | Miller (OH) | Vander Jagt |
| Glickman | Mineta | Volkmer |
| Goldwater | Mitchell (NY) | Walgren |
| Gonzalez | Montgomery | Walker |
| Goodling | Moore | Wampler |
| Gradison | Moorhead | Watkins |
| Gramm | Morrison | Weber (OH) |
| Green | Murphy | White |
| Grisham | Murtha | Whitehurst |
| Guarini | Myers | Whitley |
| Gunderson | Natcher | Whittaker |
| Hagedorn | Neal | Whitten |
| Hall (IN) | Nelligan | Williams (OH) |
| Hall (OH) | Nelson | Wilson |
| Hall, Ralph | Nichols | Winn |
| Hall, Sam | O'Brien | Wolf |
| Hamilton | Ottlinger | Wortley |
| Hammerschmidt | Oxley | Wright |
| Hance | Parris | Wylie |
| Hansen (ID) | Pashayan | Yatron |
| Hansen (UT) | Patman | Young (AK) |
| Harkin | Patterson | Young (FL) |
| Hatcher | Pease | Young (MO) |
| Hefner | Pepper | Zablocki |
| Hendon | Perkins | |

NOT VOTING—41

- | | | |
|-------------|------------|--------------|
| Anthony | DeNardis | Heckler |
| Aanbrook | Emery | Hertel |
| Blanchard | Evans (GA) | Hollenbeck |
| Bolling | Evans (IA) | Kemp |
| Bonker | Fish | Kindness |
| Breaux | Fowler | Lantos |
| Chisholm | Gingrich | LeBoutillier |
| de la Garza | Hawkins | Lee |

Lehman
Levitas
Marls
McKinney
Miller (CA)
Moffett

Mollohan
Pursell
Rose
Rousselot
Seiberling
Shuster

Stenholm
Traxler
Washington
Yates
Zerfetti

□ 1400

The Clerk announced the following pair:

On this vote:

Mr. Washington for, with Mr. Mollohan against.

Mr. STANGELAND and Mr. RINALDO changed their votes from "aye" to "no."

Mr. WAXMAN and Mr. LELAND changed their votes from "no" to "aye."

So the amendment was rejected.

The result of the vote was announced as above recorded.

AMENDMENT OFFERED BY MR. SWIFT

Mr. SWIFT. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. SWIFT. At page 141, line 24, strike all after "repositories" through the end of line 3 on page 142 and insert in lieu thereof the following: "and (B) the Secretary may not commence construction or excavation of any Test and Evaluation Facility prior to issuance by the Commission of a construction authorization for a repository at the site involved."

Mr. SWIFT (during the reading). Mr. Chairman, I ask unanimous consent that the amendment be considered as read and printed in the RECORD.

The CHAIRMAN. Is there objection to the request of the gentleman from Washington?

There was no objection.

Mr. SWIFT. Mr. Chairman, the purpose of this legislation, among other things, is to assure an objective and a technical decision as to where a repository should be located. It is, therefore, also true that one of the purposes of this legislation must be to avoid prejudicing the decision as to where the permanent repository will be located by spending huge sums of money on it prior to that decision being made, so that we have the camel's nose under the tent syndrome taking place, saying, "We must locate it here. We have already spent so much money on this location."

The amendment that I am offering takes care of a problem that I see in the bill as written. There is a major ambiguity in the bill which my amendment seeks to clarify. The bill, as I read it, says that the test and evaluation facility located at a candidate or repository site may not commence construction of a surface facility until the Nuclear Regulatory Commission gives a construction authorization. Notice that it says a surface facility.

You go back to page 9 where the definitions are and look at the definition of a test and evaluation facility, it says that that means an at-depth underground cavity with subsurface lat-

eral excavations extending from a central shaft, and so forth.

It seems to me there is a clear ambiguity as to what section 308 means if, in fact, it refers to a test and evaluation facility and then uses only the words "surface facility."

When you consider that such a T&E facility can cost anywhere between a quarter and one billion dollars, should this be located at a candidate site for a permanent repository?

Clearly, the argument is going to arise, "We have spent this quarter of a billion dollars or this billion dollars here. Now we might as well put the site there."

In other words, the objectivity of the decision as to where the site will be, it would seem to me, could be harmed by the ambiguity in the act as it presently exists. It will certainly skew the decision as to where the ultimate site for the permanent repository will go.

Now, you can make a number of arguments about T&E facilities themselves. The Senate bill, for example, does not even allow integration of T&E facilities with a candidate site. T&E itself is a very controversial concept at best. There are activities similar to T&E going on already in a number of places, so that you have a whole question as to whether a test and evaluation facility is something that we need at all, but that is not basically my point.

My point is that the bill as currently written is very unclear as to whether or not it would permit excavation to be done on a T&E facility at a candidate site prior to that site receiving its construction authorization from the Nuclear Regulatory Commission, thereby giving that site an edge in the competition, or to put it around another way, a greater chance of being selected than another site in which there was not a T&E facility. I really believe this ambiguity in the bill must be clarified so that that kind of event could not occur.

Mr. FUQUA. Mr. Chairman, will the gentleman yield?

Mr. SWIFT. I am happy to yield to the gentleman from Florida.

Mr. FUQUA. I appreciate the gentleman yielding.

I certainly understand the concern that the gentleman is expressing to the committee; but let me point out to the gentleman that on page 141, that the gentleman referred to, in section 308(b), this language was worked out in cooperation with Chairman UDALL, Chairman DINGELL, the minority members, the gentleman from North Carolina (Mr. BROYHILL), the gentleman from New Mexico (Mr. LUJAN), and also the gentleman from New York (Mr. OTTINGER), who chairs the subcommittee of the Energy and Commerce Committee. It was with their agreement, and this was the compromise language. It says:

(b) PROCEDURES.—(1) If the test and evaluation facility is to be located at any candidate site or repository site (A) site selection and development of such facility shall be conducted in accordance with the procedures and requirements established in title I—

Now, title I is all the procedures for the permanent repository—

with respect to the site selection and development of repositories;

And it goes on to say, and this is the language that the gentleman is changing:

and (B) the Secretary may not commence construction of any surface facility . . .

The subsurface facility, the shaft, is part of the test procedure to see if this is a site. Now, if the Secretary determines that this should be the site of a repository as well as a test facility, then he must go through and comply with the procedures as outlined in title I.

So I appreciate the concern that the gentleman is addressing himself to, but I think it has been taken care of in the bill, because we were very careful in drafting the language to take care of exactly the problem that the gentleman is expressing.

Mr. SWIFT. Well, if I could regain my time, then I have elucidated here what my concern is. The gentleman feels that my concern is unfounded because the language in this bill would preclude this.

The CHAIRMAN. The time of the gentleman from Washington has expired.

(At the request of Mr. OTTINGER, and by unanimous consent, Mr. SWIFT was allowed to proceed for 3 additional minutes.)

Mr. SWIFT. So that the gentleman feels that my concern is unfounded, that they could not go ahead and put in a T&E facility and do expensive excavation and therefore, give priority, if you will, in selecting that site for a permanent storage facility. Is that correct, that could not occur?

Mr. FUQUA. Well, let me say that the gentleman is perfectly within his rights to express his concern and those concerns were expressed by many other people. That is why we have this language; but to collocate a test and evaluation facility and then later put a repository there would not be possible under the language that is currently in the bill, because the Secretary of Energy must comply with title I if he thinks that this T&E site might be a suitable site for a repository. Then he must comply with title I.

Now, as far as the shaft is concerned, that is part of the test procedure. They may have several shafts in places to determine the geographic formations, whether they are suitable, and they must go down and do core drillings and other types of drillings in

3

AWAY-FROM-REACTOR STORAGE FACILITIES ("AFRSF")

**NUCLEAR WASTE POLICY ACT
REQUIREMENTS**

**NRC REGULATORY
REQUIREMENTS**

DOE AS LICENSEE

PRIVATE PARTY AS LICENSEE

I. STUDY OF AFRSFs

DOE required to study and report to Congress on the need for and feasibility of the construction of one or more AFRSFs. Report to include

- recommendations for the establishment of a Federal program for the siting, development, construction and operation of AFRSFs capable of storing SNF
- plan for the funding of the construction and operation of AFRSFs, which shall require that generators of SNF pay storage costs in AFRSFs
- site-specific designs for AFRSFs sufficient to solicit bids and support congressional authorization
- plan for integrating AFRSFs with other storage and disposal facilities authorized by NWPA
- plan to include three alternative sites for an AFRSF

Congressionally-appointed Commission to study and report to Congress on the need for an AFRSF as a part of the national nuclear waste management system. Report to include

- review of adequacy of DOE's study
- data on AFRSFs from States containing potentially acceptable sites
- technical evaluation of utility of MRSF
- recommendation as to whether such a facility should be included in the nuclear waste management system
- comparison of MRSF to of at-reactor storage, taking into account impact of each on repository design and construction; waste package design; waste preparation; and waste transportation systems

I. STUDY OF AFRSFs

No study or report to Congress required on need for AFRSF or role it is to play in national nuclear waste management system

II. AUTHORIZATION OF AFRSFs

No AFRSF may be built without Congressional authorization

DOE authorized to build only one AFRSF

III. SITING OF AFRSFs

DOE required to conduct survey of potentially available sites and consider extent to which each site would

- enhance reliability and flexibility of NWPA disposal system
- minimize impacts of transportation and handling
- provide for public confidence in system
- impose minimal adverse effects on the local community and environment
- DOE may not select a site until President approves permanent repository site
- DOE must notify affected State or Indian Tribe 6 months in advance of intent to select a site

Selection not effective if affected State or Indian Tribe disapproves and Congress fails to pass resolution approving site within 90 days

Once selection is made, affected State or Tribe is eligible to enter into benefits agreement with federal government providing money to minimize impact

No AFRSF may be constructed in Nevada

IV. LICENSING OF AFRSFs

NRC may not consider in the licensing process the need for an AFRSF or any alternative to the design criteria established by NWPA

Construction on AFRSF may not begin until NRC has issued a license for the construction of a permanent repository

AFRSF may not store more than 10,000 metric tons of SNF until permanent repository begins to accept waste, nor more than 15,000 tons ever

II. AUTHORIZATION OF AFRSFs

No Congressional authorization required

No limit on number built

III. SITING OF AFRSFs

No such siting requirements

No State or Indian Tribe protections

IV. LICENSING OF AFRSFs

No such licensing conditions or storage limitations