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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

IN THE MATTER OF	)	
	)	
PRIVATE FUEL STORAGE L.L.C.	)	DOCKET NO. 72-22
	)	
(PRIVATE FUEL STORAGE FACILITY)	)	ASLBP NO. 97-732-02-ISFSI

APPLICANT'S RESPONSE TO STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED CONTENTION UTAH UU

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Applicant Private Fuel Storage L.L.C. ("Applicant" or "PFS") hereby responds to the "State of Utah's Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE's Refusal to Accept Fuel in Welded Canisters from the PFS Site) or in the Alternative Petition for Rulemaking," filed November 12, 2004. ("State Req."). On November 16, 2004, the Atomic Safety and Licensing Board ("Board") ordered the State to supplement its request by addressing (1) the possible impact of 10 C.F.R. § 2.734 on the admission of the contention, and (2), if admitted, whether the merits of the contention should be addressed directly by the Board rather than initially by a Staff supplement to the Final Environmental Impact Statement ("FEIS").[1] The Board's Order also directed PFS and the Staff to address these issues in their responses to the State's Request. The State filed its supplement on November 29, 2004.[2] PFS hereby files its response to the State's Request and the State's Supplement.

Because the evidentiary record for the proceeding has been closed, the State must satisfy the requirements of 10 C.F.R. § 2.734 for reopening the record as well as those for late-filed contentions under 10 C.F.R. § 2.714. The State meets neither, and thus Utah UU must be rejected.[3]

[1] Order (Addressing Applicant's Request for Extension and Related Matters) (Nov. 16, 2004).

[2] State of Utah's Supplement to Contention Utah UU Pursuant to Board Order Dated November 16, 2004" (Nov. 29, 2004) ("State Supp.")

[3] The State requests Utah UU to be treated as a petition for rulemaking should it be determined to challenge NRC regulations. State Req. at 9-10. PFS does not argue herein that Utah UU challenges NRC regulations. In any event, treating Utah UU as a petition for rulemaking is not a function of the Board. See 10 C.F.R. Part 2, Subpart 4.

I. AFTER THE RECORD IS CLOSED, A LATE-FILED CONTENTION OFFERING NEW EVIDENCE MUST SATISFY THE REQUIREMENTS OF § 2.734

Section 2.734 of the NRC's regulations governs the reopening of closed evidentiary records in NRC licensing proceedings in order to offer new evidence into the record. Subsection 2.734(d) provides:

> A motion to reopen which relates to a contention not previously in controversy among the parties must also satisfy the requirements for non-timely contentions in § 2.714(a)(1) (i) through (v).

As the Board noted in its November 16, 2004 Order, the inclusion of the word "also" in subsection (d) regarding contentions not previously in controversy seems to require a motion to reopen the record not only for issues previously litigated but also to offer evidence underpinning a new contention. Otherwise there would be no purpose for including subsection (d) in the regulation. What this reading of the regulation provides by necessary implication, the Statement of Consideration ("SOC") issued with the promulgation of 10 C.F.R. § 2.734 stated directly:

> A motion to reopen must be filed whenever a proponent seeks to add new information to a closed record, whether the information concerns a new contention or one which has already been heard.

51 Fed. Reg. 19,535, 19,538-39 (May 30, 1986). The Commission went on to say:

> The purpose of this rule is not to foreclose the raising of important safety issues, but to ensure that, once a record has been closed and all timely-raised issues have been resolved, finality will attach to the hearing process. Otherwise, it is doubtful whether a proceeding could ever be completed.

Id. at 19,539.

NRC precedent both prior and subsequent to the promulgation of §2.734 further demonstrates that after closing of the evidentiary record, a request to admit a new contention which offers new evidence as part of its basis, must meet the criteria for motions to reopen as well as the criteria for late-filed contentions. For example, in Palo Verde, the licensing board addressed a petition for late intervention based on a purported discovery of substantial new information subsequent to the closing of the evidentiary record but prior to the board's issuance of its initial decision.[4] After weighing the late-intervention criteria of § 2.714, the board determined that the petitioner had met the "additional burden of proving that its motion to reopen the record to admit new testimony should be granted." Id. at 2031. Since promulgating §2.734, the Commission has similarly ruled that new contentions filed during a pending appeal or remand of an initial decision must similarly satisfy both the requirements for reopening the record under §2.734 as well as the late filing requirements of §2.714.[5]

The State baldly asserts – without any legal support – that requiring it to meet the criteria under § 2.734 for reopening the record would offend due process. State Supp. at 2. Requiring Contention UU to meet the § 2.734 criteria can hardly be said to offend due process. As set forth in the SOC quoted above, the rule serves important competing purposes of allowing the raising of significant safety issues balanced against achieving finality of the hearing process. Given the duration of this proceeding, such a balancing is particularly appropriate here.

II. APPLICABLE LEGAL STANDARDS

A. Standard for Reopening a Closed Evidentiary Record

Under 10 C.F.R. § 2.734, a motion to reopen a closed record to consider additional evidence will not be granted unless the following criteria are satisfied:

> (a) (1) The motion must be timely . . .
>
> (2) The motion must address a significant safety or environmental issue.
>
> (3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.
>
> (b) The motion must be accompanied by one or more affidavits which set forth the factual and/or technical bases for [each of] the movant's claim[s] that the criteria of paragraph (a) of this section have been satisfied . . . .

10 C.F.R. § 2.734.

[4] Arizona Public Service Company (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-82-117B, 16 NRC 2024, 2025, 31-32 (1982). The Commission approvingly cited this decision in its SOC. 51 Fed. Reg. at 19,535.

[5] See, e.g., Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), CLI-89-1, 29 NRC 89 (1989); Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-90-6, 31 NRC 483 (1990).

On the matter of reopening the record, the Commission has held that:

> The burden of satisfying the reopening requirements is a heavy one. Bare allegations or simple submissions of new contentions are not enough to meet these standards.
>
> At a minimum, the new material in support of a motion to reopen must set forth with a degree of particularity in excess of the basis and specificity requirements contained in 10 C.F.R. § 2.714(b) for admissible contentions. Such supporting information must be more than mere allegations; it must be tantamount to evidence and possess the attributes set forth in 10 C.F.R. § 2.743(c) defining admissible evidence for adjudicatory proceedings. Specifically, the new evidence supporting the motion must be relevant, material, and reliable.

Louisiana Power & Light Co. (Waterford Steam Electric Station), CLI-86-1, 23 NRC 1, 5 (1986) (citations and quotations omitted).

In addition to satisfying evidentiary requirements, "it must be established that 'a different result would have been reached initially had [the material submitted in support of the motion] been considered.'"[6] The focus is on the outcome of the proceeding; the record should not be reopened merely because new information has been proffered, even if it is relevant.[7]

Finally, a decision to reopen must consider the proffered evidence in light of the responses to the motion:

> [E]ven though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact, i.e., if the undisputed facts establish that the apparently significant safety issue does not exist, has been resolved, or for some other reason will have no effect upon the outcome of the licensing proceeding.

Vermont Yankee Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973); see also Public Service Company of New Hampshire, (Seabrook Station, Units 1 and 2), CLI-90-10, 32 NRC 218, 222-23 (1990).[8]

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[6] Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC 1340, 1344 (1983) (bracketed wording in original), quoting Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear-1), ALAB-227, 8 AEC 416, 418 (1974).

[7] See Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978).

[8] The applicant and staff responses may include affidavits, letters, and other materials in support of their response filings. See Vermont Yankee, ALAB-138, 6 AEC at 523-524.

B. Standards for the Admissions of Contentions

The Board has previously set out at length the standards for the admission of contentions. See, e.g., Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 178-81 (1998). Relevant here are the requirements for (1) "factual information or expert opinion" that provide an adequate factual basis for claims that are (2) "material to the grant or denial of the license application." Id. at 179-80. As set forth below, Utah UU meets neither of these requirements.[9]

III. UTAH UU DOES NOT MEET REQUIREMENTS FOR ADMITTING CONTENTIONS UNDER § 2.714 OR REOPENING THE RECORD UNDER § 2.734

A. The Factual Bases for Utah UU Do Not Meet the Requirements for Admitting Contentions Under § 2.714 or for Reopening the Record under § 2.734

Proposed Contention Utah UU is premised on reported statements by Gary Lanthrum, the Director of the National Transportation Program of DOE's Office of Civilian Radioactive Waste Management ("OCRWM"), "recently announc[ing] that DOE was only obligated to accept bare fuel or fuel packaged in bolted canisters." State Req. at 1. According to the State, "DOE's latest announcement" means that "fuel stored at PFS in welded canisters will not be accepted at the permanent repository unless repacked in bolted canisters." Id. at 3. Hence, the State claims that the PFS FEIS and PFS's financial qualifications need to be revisited "to address the certainty that fuel will not be shipped directly from the PFS site to Yucca Mountain" and that rather "it will have to be shipped back to the reactor site (if available) for repackaging and reshipment." Id. at 12 (emphasis added); see also id. at 3-6, 8-9. The State further asserts that by licensing the Private Fuel Storage Facility ("PFSF"), the NRC would be creating a "a dysfunctional national waste management system" by "either pre-determining waste packaging for Yucca Mountain and thereby preempting DOE's statutory authority, or alternatively creating a disruption and added expense to the national waste management and disposal system." Id. at 2, 6 (emphasis added).[10]

[9] PFS is not challenging the timeliness of the contention, and therefore it is not necessary to consider here the late-filed factors in 10 C.F.R. § 2.714(a)(1).

[10] These broadly worded policy claims are clearly beyond the scope of this licensing proceeding. Moreover, they plainly lack merit. See Section III. A.1., infra.

Although the State repeatedly refers to Mr. Lanthrum's "announcement" as if it were a formal DOE pronouncement, it is not. Although Mr. Lanthrum testified before the Nuclear Waste Technical Review Board (NWTRB"), the State cites no transcript for his remarks. Instead, the State relies on a declaration by Dr. Diane Nielson, a State official, which states that she attended the October 14, 2004 NTRWB meeting in Salt Lake City, and "[d]uring part of that meeting" she "had occasion to talk with [Mr.] Lanthrum." State Exh. 1, ¶ 4. "During the conversation," Mr. Lanthrum reportedly stated that "under the DOE standard contract with the nuclear industry, DOE was only required to accept bare fuel" and that, "[a]s such," "DOE would not accept spent nuclear fuel in welded canisters" and "had no obligation to pickup fuel" sealed in canisters at the PFSF. Id. at ¶ 4. In addition to Dr. Nielson's declaration, the State refers to a Salt Lake City Tribune article attributing similar statements to Mr. Lanthrum (State Exh. 2) and an excerpt from the NWTRB transcript of a representative from the State of Nevada Nuclear Waste Project Office referencing off-the-record statements made by Mr. Lanthrum (State Exh. 9).[11]

Since the State's filing does not include any transcript of Mr. Lanthrum's remarks, the Board can fairly infer (as confirmed by our review of the entire transcript), that no support for the State's argument can be found in Mr. Lanthrum's on-the-record statements. DOE's obligations under the Standard Contract[12] was not a topic covered by Mr. Lanthrum in his presentation to the NTRWB. Indeed, Mr. Lanthrum as the OCRWM Director of the National Transportation Program is responsible for transportation issues, and not for waste acceptance or interpretation of the Standard Contract. See Att. 1 at 3.

Reports of Mr. Lanthrum's informal, off-the-record comments are insufficient either to form the basis for an admissible contention or to support reopening the record.[13] In Utah UU the

[11] The transcript of the statement by the Nevada representative simply does not say what the State claims that it says. The representative did not say that "DOE would not accept spent fuel in welded canisters from the PFS site," State Req. at 11, but only that the "standard contracts" would need to be "renegotiated" prior to such acceptance. State Exh. 9 at 435-36.

[12] Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 C.F.R. § 961.11) ("Standard Contract").

[13] Indeed, the State's suggestion that the Board use its subpoena power "to obtain information under oath from the Department of Energy," State Supp. at 8, recognizes the underlying weakness of its proffered evidence. This sug-

State asserts as a "certainty that fuel will not be shipped directly from the PFS site to Yucca Mountain" and also claims that, by licensing the PFSF, the NRC would be "preempting" DOE's authority "to set the policy and standards of shipments to Yucca Mountain" or to establish "the design" for Yucca Mountain. State Req. at 6, 12. The remarks attributed to Mr. Lanthrum did not address DOE transportation policy or Yucca Mountain's design. Nor did those remarks address the potential for amending the Standard Contract in order to accept canistered fuel at Yucca Mountain. Thus, Mr. Lanthrum's remarks provide no basis for the State's claims in Utah UU.

Moreover, as discussed below, the implications drawn by the State from Mr. Lanthrum's reported remarks are clearly erroneous. Contrary to the State's claims, Yucca Mountain is being designed to accept both bare and canistered spent nuclear fuel. Further, by statute, case law and contract, DOE is required to accept all spent fuel from the utilities. DOE has acknowledged this obligation and has repeatedly represented to Congress and to Federal, State and utility officials that any necessary changes would be made to the Standard Contract in order to accept spent fuel stored in NRC-licensed canisters.

1. Yucca Mountain Will be Designed to Accept Canistered Fuel

The State's claims that Yucca Mountain would only accept "bare fuel" and that NRC's licensing the PFSF would thus preempt DOE's authority to establish Yucca Mountain's "design" or to set "standards" for shipping fuel to Yucca Mountain (State Req. at 6-8, 11-12) are baseless. DOE documents show that Yucca Mountain will be fully designed and capable of accepting canistered fuel. Among many other references, this is clearly set forth in both the Civilian Radioactive Waste Management System ("CRWMS") Requirements Document – which "specifies the top-level requirements" for DOE's waste disposal activities[14] – and the Yucca Mountain FEIS.[15] The State cites no documents to the contrary; nor are we aware of any.

gestion is simply an ill-disguised attempt to engage in impermissible discovery: "[a] movant in seeking to meet the heavy burden required to justify reopening a closed record 'is not entitled to engage in discovery in order to support [the] motion." Waterford, CLI-86-1, 23 NRC at 6 (quoting Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-85-7, 21 NRC 1104, 1106 (1985) (emphasis added).

[14] "Civilian Radioactive Waste Management System Requirements Document," U. S. Dept. of Energy, Office of Civilian Radioactive Waste Management, DOE/RW-0406, Revision 6 (Sept. 2004), at 1 (excerpts attached as Att. 1).

The CRWMS Requirements Document "establishes requirements for the design, development and operation" of the various elements of the CRWM System, which are "Waste Acceptance, Transportation" and the Geologic Repository, the latter being Yucca Mountain. Att. 1 at 1-3. The most recent revision of the Requirements Document – issued September 2004 – spells out the "Overall System Performance" requirements for these elements of DOE's waste program to accommodate both bare and canistered spent nuclear fuel ("SNF") as follows:

> E. CRWMS elements and facilities shall be capable of accommodating a range of storage and transportation technologies, including multipurpose, dual-purpose, and single-purpose canisters, as well as bare SNF assemblies.
>
> F. CRWMS facilities shall be capable of opening sealed storage/transportable commercial canisters, handling the SNF, and managing associated site generated waste streams.

Id. at 9 (emphasis added). Further, the revision history for the CRWMS Requirements Document states in pertinent part:

> Provides notice to users on MPC Policy Change, i.e., The CRWMS will accept and accommodate a variety of cask/canister systems for commercial SNF which are currently available or are being developed. These may be individual spent fuel assemblies; or single, dual or triple purpose cask or canister systems.

Id. at vii (emphasis added).

The FEIS for Yucca Mountain similarly makes clear that Yucca Mountain will be technically capable of handling both bare and canistered fuel. Examples of such statements from the FEIS (attached as Attachment 2) include the following:

- Section S.3.1.1 of the Summary of the FEIS (on Repository and Waste Package Design) states that "DOE would receive materials at the repository in one of three configurations: uncanistered fuel (spent nuclear fuel placed directly in a shipping cask), dual-purpose canisters (containers designed to store and transport commercial spent nuclear fuel), or disposable canisters (canisters for spent nuclear fuel or high-level radioactive waste with multiple specialized overpacks to enable their storage, transportation, and emplacement in a repository)." FEIS at S-12 (emphasis added).

[15] "Final Environmental Impact Statement for a Geologic Repository for Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, U. S. Dept. of Energy, Office of Civilian Radioactive Waste Management, DOE/EIS-0250, (Feb. 2004) (excerpts attached as Att. 2).

- Section S.3..1.1 goes on to state that "[c]ommercial spent nuclear fuel would be received in any of the three packaging configurations. DOE cannot predict the particular combination of uncanistered fuel, dual-purpose canisters, or disposable canisters it would receive at a repository because the managers of the commercial sites would determine the canister type, if any, they will use." FEIS at S-13 (emphasis added).[16]
- Discussing the waste handling facilities, the FEIS declares that "[c]asks that contain commercial spent nuclear fuel in dual-purpose canisters ... would go to the assembly transfer system." FEIS at 2-21.
- The discussion of the waste handling facilities goes on to state that "[i]f the cask contained dual-purpose canisters, they would be removed and placed in an overpack, where the top of the canister would be cut off." Id. (emphasis added).[17]

In short, Yucca Mountain is being designed to accept commercial SNF in sealed canisters. Thus, licensing of the PFSF will not disrupt the national waste management system.

2. DOE is Obligated to Accept All Commercial Spent Nuclear Fuel

The State's assertion in Utah UU that DOE will accept only bare, *i.e.*, uncanistered, fuel is inconsistent with DOE's statutory and judicially-recognized responsibility to accept all SNF for disposal and the terms of the Standard Contract implementing DOE's obligation. Moreover, it ignores DOE's acknowledgement of its obligation and its repeated representations that DOE will accept spent fuel stored in NRC-licensed canisters.

a. The NWPA and Judicial Interpretations Require DOE to Accept all Commercial SNF

Section 111 of the Nuclear Waste Policy Act ("NWPA") establishes that "the Federal Government has the responsibility to provide for the permanent disposal of . . . spent nuclear fuel . . . ." 42 U.S.C. § 10131(a)(4). That responsibility has been confirmed by numerous U.S. Courts of Appeals decisions. See, e.g., Indiana Michigan Power Co. v. DOE, 88 F.3d 1272, 1277 (D.C. Cir 1996) ("section 302(a)(5)(B) creates an obligation in DOE, reciprocal to the utilities' obligation to pay, to start disposing of the SNF no later than January 31, 1998"); Northern States Power Co. v. DOE, 128 F.3d 754, 758-59 (D.C. Cir. 1997) ("DOE's duty to act could

[16] The body of the FEIS, Section 2.1.1.1 Packaging Scenarios, similarly states that "[c]ommercial spent nuclear fuel could be received either uncanistered or in disposable or dual-purpose canisters." FEIS at 2-7 (emphasis added).

[17] See also FEIS at 2-23 ("Commercial spent nuclear fuel would arrive as either individual fuel assemblies placed directly into transportation casks, or in dual-purpose canisters in transportations cask that would have to be opened to remove the fuel assemblies.") (emphasis added).

hardly be more clear....The contractual obligations created consistently with the statutory contemplation leave no room for DOE to argue that it does not have a clear duty to take the SNF from the owners and generators...."); see also Alabama Power Co. v. DOE, 307 F.3d 1300, 1302 (11th Cir. 2002) (under NWPA "the U.S. Government would take responsibility for disposing of the [nuclear] waste"); Roedler v. United States, 255 F.3d 1347, 1350 (Fed. Cir. 2001) (NWPA "enacted to establish Federal responsibility and a definite Federal policy, for the disposal of such [high-level radioactive] waste and spent fuel"; Standard Contract provides that "DOE will dispose of their accumulated and future nuclear waste."); Maine Yankee Atomic Power Co. v. United States, 225 F.3d 1336-38 (Fed. Cir. 2000)(Federal Government responsible to provide for permanent disposal of spent fuel).

b. The Standard Contract Obligates DOE to Accept All Commercial SNF

Pursuant to the NWPA, DOE has entered into Standard Contracts with all nuclear utilities which provide for DOE's obligation to take the utilities' spent fuel. As summarized in the DOE regulation setting forth the Standard Contract,

> Under the contract set forth in § 961.11 of this part, DOE will take title to, transport, and dispose of spent nuclear fuel and/or high-level radioactive waste delivered to DOE by those owners or generators of such fuel or waste who execute the contract.

10 C.F.R. § 961.1. The Contract itself provides the numerous statements attesting to DOE's obligation to take the utilities' spent nuclear fuel. See generally 10 C.F.R. § 961.11. The Whereas clauses of the Contract state DOE's obligations broadly as included:

> DOE has the responsibility for the disposal of spent nuclear fuel and high-level radioactive waste of domestic origin from civilian nuclear power reactors . . . ;
>
> DOE has the responsibility, following commencement of operation of a repository, to take title to the spent nuclear fuel or high-level radioactive waste involved as expeditiously as practicable upon the request of the generator or owner of such waste or spent nuclear fuel;

Article IV.B.1 broadly sets forth DOE's responsibilities as follows:

> B. DOE Responsibilities

> 1. DOE shall accept title to all SNF and/or HLW, of domestic origin, generated by the civilian nuclear power reactor(s) specified in Appendix A, provide subsequent transportation for such material to the DOE facility, and dispose of such material in accordance with the terms of this contract.

Under the Standard Contract, the utilities are free to designate facilities other than the reactor (such as the PFS facility) as the location from which DOE shall arrange transportation of their spent nuclear fuel. Article I (15) ("Purchaser may designate" the location at which DOE takes the utility's SNF.)

Moreover, the Standard Contract makes clear that "DOE's obligation for disposing SNF under [the] contract also extends to other than standard fuel." Article VI.A.2 (b). Thus, even if the State argues that canistered SNF, as opposed to bare SNF, is not "standard fuel," DOE remains contractually obligated to take it. Indeed, the Standard Contract specifically provides that "previously encapsulated [fuel] assemblies" are categorized as "other than standard fuel." See App. E, Section B.6.b.[18] While under Article VI.A.2 (b), DOE may "advise" on schedule adjustments necessary for "other than standard fuel" based on "technical feasibility" considerations, DOE's obligation to take and dispose of the fuel remains unaltered.[19] In this respect, however, as discussed above, there is no question about the technical capability of Yucca Mountain to handle canistered fuel, as the facility is being designed to handle dual purpose canisters and to provide for their unsealing at the Yucca Mountain repository.

In short, DOE is obligated under the Standard Contract to take and dispose of all SNF irregardless of whether the SNF is bare or contained in dual purpose canisters.

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[18] See also Article IV.B.2 (a) of the Standard Contract which provides that DOE is to provide "specifications on Purchaser-furnished cannisters [sic] for containment of failed fuel."

[19] Article VI.A.2(b) provides as follows:

> DOE's obligations for disposing of SNF under this contract also extends to other than standard fuel; however, for any SNF which has been designated by the Purchaser as other than standard fuel, as that term is defined in appendix E, the Purchaser shall obtain delivery and procedure confirmation from DOE prior to delivery. DOE shall advise purchaser within sixty (60) days after receipt of such confirmation request as to the technical feasibility of disposing such fuel on the currently agreed to schedule and any schedule adjustment for such services.

(Emphasis added.)

c. **DOE's Acknowledgement of its Obligation to Accept All Commercial SNF**

The head of DOE's spent fuel program – the Director of OCRWM – has formally recognized DOE's obligation to accept all SNF under the Standard Contract. Furthermore, DOE has repeatedly assured Congressional and Federal, State and utility officials that DOE would take all appropriate actions necessary to accept SNF stored in NRC-certified canisters.

For example, prior to the NRC certifying the dual purpose spent fuel canister system planned for use at the Maine Yankee facility, the Governor of Maine requested the NRC to obtain "binding assurances" from DOE that DOE would accept spent fuel stored using that system. In a May 3, 2000 letter, DOE's Director of OCRWM responded directly to the Governor and represented that the Standard Contract with DOE already provided assurances that DOE would accept Maine Yankee's SNF in an NRC-approved, dual purpose canisters:

> Your letter . . . requests that the Commission, as a pre-requisite to approval of the proposed rule [approving Maine Yankee's canister system], acquire binding assurances from the Department of Energy that the Department will accept spent fuel for transport and disposal that has been stored in accordance with NRC approved procedures. It is my belief that there is no need for the Commission to obtain such assurances from the Department, as they already exist under the terms of the contract for disposal that the Department has with Maine Yankee Atomic Power Company. The contract covers the acceptance, transport and disposal of all spent nuclear fuel from the Maine Yankee reactor, regardless of the condition of the spent nuclear fuel.

Att. 3 (emphasis added).[20] The Commission expressly relied upon the OCRWM Director's letter to the Governor – specifically pointing to the Director's assurance that DOE would accept "all spent nuclear fuel from the Maine Yankee reactor, regardless of [its] condition" – in its Statement of Considerations certifying the canisters to be used at Maine Yankee. 65 Fed. Reg. 62,581, 62,595 (2000) (emphasis added).[21] These formal and official statements made the head of OCRWM – expressly relied upon by the NRC in performance of its official functions – are far

[20] The letter went on to note that "while the condition of the fuel does not impact the Department's ultimate responsibility for disposal under the contract, it may require" an adjustment of schedule, as already discussed above.

[21] See also Att. 4, November 9, 2000 letter from the NRC Director of the Office of Nuclear Material Safety and Safeguards ("NMSS") to the counsel for the State of Maine in which the Director of NMSS relied upon the May 3, 2000 letter from the DOE OCRWM Director as addressing the State's concerns of whether DOE would accept Maine Yankee canistered fuel.

more probative than the informal off-the-record comments of a person not responsible for waste acceptance or the Standard Contract relied upon by the State.

Similarly, in other instances DOE has provided assurances that canistered spent fuel would be an acceptable waste form under the Standard Contract for canister systems licensed by the NRC. For example:

- In a letter dated September 2, 1993, the then Acting Director of OCRWM assured the Sacramento Municipal Utility District ("SMUD") that DOE "would be willing to initiate the appropriate actions to include [SMUD's dual purpose canister system] as an acceptable waste form . . . " under the terms of the Standard Contract "[o]nce the Nuclear Regulatory Commission has certified" the system. Att. 5.[22]
- In the same time frame, in a letter dated October 4, 1993, DOE responded to an inquiry from Congressman Dick regarding DOE acceptances SNF from SMUD in which DOE reiterated its assurances that SMUD's dual-purpose canisters system – if licensed by NRC – would be made an acceptable waste form. Att. 6.
- In a letter dated August 20, 1996, DOE similarly assured Yankee Atomic that once the NRC "has certified the NAC storage-transport system, the Department would be willing to initiate appropriate actions to include such a system as an acceptable waste form under the terms of the standard contract." Att. 7.
- In an April 6, 2001 letter, David Zabransky, then OCRWM's "Team Leader for Waste Acceptance and Transportation," acknowledged the previous "commitment" DOE had made to SMUD and reaffirmed that DOE "will initiate action to include storage systems certified by the Commission for both transportation and storage (dual-purpose systems) as acceptable waste forms under the disposal contract with SMUD." Att. 8.[23]

In short, DOE has repeatedly represented to Federal, State and utility officials that either (1) the Standard Contract provides assurances that commercial SNF in canisters will be accepted; and (2) DOE is willing to undertake whatever actions might be necessary to make dual-purpose canisters acceptable waste forms under the Standard Contract upon their being licensed by the NRC. Thus, there can be no reasonable doubt that DOE will accept SNF sealed in dual purpose

[22] The Acting Director went on to note that after NRC certification, DOE "would be in a better position to evaluate its acceptability as either a standard or nonstandard waste form." Id.

[23] Mr. Zabransky further stated DOE's expectation that the canisters, if they needed to be opened, would be opened at the repository: "It is our current expectation that after receipt at the repository, dual purpose systems will be opened and the spent nuclear fuel removed for placement in a waste disposal package unless the internal canister can be demonstrated, and Nuclear Regulatory Commission licensed, as part of the final waste disposal package assembly." Att. 8 at 2.

canisters, certified by the NRC, such as those designated for use at the PFSF. Indeed their acceptance is clearly mandated by the Standard Contract and the numerous appellate decisions confirming DOE's statutory obligations under the Contract to accept and dispose of all SNF, regardless of condition.

* * * * * * * * * * * *

In sum, the State has (1) supplied an insufficient factual basis to admit Utah UU under § 2.714, and has (2) failed to provide sufficient evidentiary or legal basis to establish a significant safety or environmental issue for which the evidentiary record should be reopened under § 2.734.

B. The State's Asserted New Information is Immaterial

As demonstrated above, the State's asserted bases for admitting Utah UU and reopening the record are both factually and legally erroneous. Moreover, as demonstrated below, even accepting the State's faulty premises, the State has failed to show any material effect on the outcome of this licensing proceeding. For this reason also, the State fails to meet the requirements for admitting contentions under § 2.714 or for reopening the record under § 2.734.

1. Lack of Material Impact on the PFS FEIS NEPA Analysis

The State argues that a materially different result would ensue had the alleged revelation regarding DOE's asserted lack of willingness to accept fuel in welded canisters been before the NRC Staff because the PFS FEIS lacks any discussion of the "cost and benefit evaluations" demanded under NEPA taking into account the asserted inability to ship canistered fuel to Yucca Mountain. State Supp. at 3-4. This inability would assertedly "undermine[] the cost-benefit analysis" in the PFS FEIS. State Req. at 3. To the contrary, such information would not have changed any cost-benefit calculus in the FEIS, nor would a materially different NEPA analysis have ensued based on any such asserted information. The PFS FEIS enumerates a wide range of benefits flowing from the PFS facility – unaffected by any asserted inability to ship spent fuel directly from PFS to a permanent repository – and expressly considers the potential need to ship spent fuel back to the utilities should a permanent repository be unavailable at the end of PFS's licensing term.

As both the Board and the Commission have already ruled, the FEIS demonstrates that the PFS project will have minimal environmental impact. CLI-04-22, slip. op. at 22.[24] Indeed, the Commission noted that Board had observed that a "cost-benefit analysis might not even be required for the project because the environmental harms are slight" Id. Further, where the environmental consequences are relatively insignificant, the project's overall benefits do not have to be great to allow the project to go forward. Id. Thus, as "aptly observed" by the Board "the cost-benefit analysis [is] not be 'central' to the ultimate decision" under NEPA here. Id.

The State asserts, however, that the "real benefit of the project" (referred to by the Board in ruling on Utah SS) to act as an "insurance policy" in the event a permanent repository suffers additional delays "evaporates if sites must maintain their spent fuel pools." State Req. at 4. The State, however, supplies no evidence or affidavit to support its claim that a materially different result would ensure, only mere allegation. To the contrary, the overall benefits of the PFS project identified in the FEIS as outweighing its disadvantages would remain intact even assuming the fuel would have to be shipped back to the original reactor site, or some other location, to transfer the fuel from a sealed canister. See CLI-04-22, slip op. at 24-25.[25] The State has failed to demonstrate that a materially different result would ensue, i.e., a decision not to allow the project to go forward because its proffered scenario allegedly eliminates any and all potential societal benefit.

Integral to the State's argument on the environmental cost side of the NEPA analysis is its claim that under the alleged DOE non-acceptance scenario spent fuel would have to be

[24] Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC __, slip op. at 24 (August 17, 2004).

[25] As set forth there by the Commission, the PFS FEIS at 9-16 concludes that the "overall benefits of the proposed PFSF outweigh the disadvantages and costs based on a consideration" of (1) "the need for an alternative to at-reactor SNF storage . . . ;" (2) "the minimal radiological impacts and risks from transporting, transferring and storing the proposed quantities of SNF canisters and casks;" (3) "the economic benefits that would accrue to the Skull Valley Band . . .;" and (4) "the absence of significant conflicts with existing resource management plans and land use plans within Skull Valley."

shipped back to the utility fuel owners, rather than directly shipped to a central repository. Even if State's scenario were true, it is not clear how this fact alters the NEPA analysis with respect to the transportation of the fuel. As stated, the transportation of the canisters and casks is expected to have "minimal impact" on the environment. FEIS at 9-16. The State fails to provide any basis for concluding that the result of additional analysis will be materially different and only argues that more analysis should be performed in this regard. State Req. at 6. The State has provided neither affidavit nor evidence to conclude that multiple shipments will result in anything other than "minimal impact."

Furthermore, a situation where spent fuel might not proceed directly to a national repository was in fact already considered in the FEIS (a fact the State concedes, State Req. at 8). A review of the FEIS thus demonstrates that, now, even if the Board were to accept DOE's allegedly new stance regarding its lack of obligation to accept PFS fuel, the NEPA analysis would not change. The PFS FEIS states:

> Service agreements (i.e. contracts) between PFS and Companies storing SNF at the proposed PFSF will require that these companies remove all SNF from the proposed PFSF by the time the PFS license is terminated and PFS had completed its licensing or regulatory obligations under the NRC license. The service agreement requirement to remove the SNF from the proposed PFSF is not dependent upon the availability of a permanent geological repository. <u>Therefore, if the PFS license is terminated prior to the availability of a permanent geological repository, the reactor licensees storing SNF at PFSF would continue to retain responsibility for the fuel and must remove it from the proposed PFSF site before termination of the PFS license.</u>

FEIS at 1-6 (emphasis added). This statement shows that the environmental impacts of the PFS site in case a permanent repository were unavailable – a scenario whose impact on licensees would be exactly the same as that in the scenario put forth by the State, where DOE simply refuses to accept fuel – was fully considered in the FEIS. Further, contrary to the State's claim that "now, in each in every case..." spent fuel will have to be shipped back to its owner, State Req. at 8, the FEIS statement is in no way limited by the amount of spent fuel that might have to be removed from the PFS site and transferred back to its owner. If a repository is unavailable at the end of the PFS license term, or, in the State's scenario, if DOE refuses to accept the fuel, the licensee responsible for the fuel will remove all of it from the PFS site, only to be shipped again once a permanent repository becomes available.

The State also claims that the purported need to open the welded canister and repackage the fuel poses significant environmental cost and an unanalyzed risk because of the potential for worker exposure to radiation. State Req. at 5. Again, the State has failed in its burden to demonstrate that a materially different result would ensue based on consideration of this information. First, that the canisters might have to be opened and the spent fuel repackaged is already contemplated for fuel that is shipped to the Yucca facility. See Yucca Mountain FEIS quotations above. Under the State's scenario, radiological impacts to workers will occur at different locations, i.e., the utilities' reactor sites. However, the State has failed to prove, or even allege, that the overall impact to workers, will be materially different from that already expected. Moreover, NRC regulations preclude any worker from receiving an annual radiation does in excess of 5 rems and require that licensees make every reasonable effort to maintain radiation exposures as far below the dose limits as possible. 10 C.F.R. § 20.1003 (definitions for "annual limit on intake" and "ALARA"). The State has neither asserted nor proved evidence that compliance with these regulations will be materially different should utilities need to repackage spent nuclear fuel.

In sum, the State's NEPA allegations fail to meet the burden imposed by § 2.734. A materially different result regarding economic, societal, or environmental impacts will not ensue from the new information put forward by the State.

2. Lack of Material Impact on PFS's Financial Qualifications

The State asserts that:

> [A]bsent a condition that fuel will only be accepted at PFS's Skull Valley site if it can be shipped directly from PFS to a permanent repository, PFS must provide reasonable assurance that each and every fuel owner will accept fuel back for repackaging, and PFS or the fuel owner will place, up front in an escrow account, sufficient funds to cover the cost of fuel shipment back to the reactor or other facility for repackaging.

State Req. at 2. In support of this part of the contention, the State asserts that "[t]he reasonable assurance the Commission found that PFS provided in its financial plan did not involve an evaluation of operating revenue required to ensure that all casks will be shipped back to the fuel owner." State Req. at 8. In its supplement, the State further claims that because each and every cask to be shipped from the PFS site will not, as anticipated, be paid for by DOE, there is a general unresolved issue of fact as to the lack of financial assurance in the operation of the 4,000 cask storage facility. State Supp. at 4.

The State's assertions, however, are baseless. They totally ignore the previous litigation in this proceeding on PFS's financial qualifications to construct and operate the PFS facility in Contention Utah E/Confederated Tribes B ("Utah E"). This litigation clearly established that PFS's utility customers are responsible for removing the spent fuel from the PFS site at their own expense. Thus, the cost of transporting spent fuel from the PFS site is not a PFS expense regardless of its destination.

Specifically, in the Board's initial granting of summary disposition on basis 5 of Utah E, (concerning allocation of financial responsibility among the owners of the spent fuel and PFS), the Board relied on commitments that PFS would require "that each customer retain title to its [spent] fuel throughout the storage period" and would include "in each customer service agreement an assignment of legal financial responsibility among the customers as the owners of the spent fuel and PFS." Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation) LBP-00-06, 51 NRC 101, 126 (2000). Therefore, in granting summary disposition, the Board required PFS to include in each service agreement provisions that would provided for

> An assignment of legal and financial responsibility between the customers, as the owner of the spent fuel, and PFS including an acknowledgement that each customer must retain title to its fuel throughout the storage period.

Id. at 137. In its review of the Board's decision, the Commission required that this commitment (and others made by PFS and relied upon by the Board) be made conditions to any license issued for the PFS facility. It further issued a remand that required PFS to develop a Model Service

Agreement ("MSA") incorporating these conditions and that provided the State an opportunity to challenge the adequacy of the MSA's implementation of the license conditions.

In accordance with the Commission remand, PFS developed a MSA which included an assignment of legal and financial responsibility between PFS and the customers (as owners of the spent fuel) for spent fuel to be stored at the PFS site. As part of the remand, the Board revisited the appropriateness of its previous summary disposition rulings in light of the MSA. With respect to basis 5 of Utah E, the Board reviewed the relevant provisions of the MSA and found that summary disposition "on this subpart of Contention Utah E is again appropriate." Memorandum and Order (Rulings on Summary Disposition Motion and other Filings Relating to Remand from CLI-00-13) (May 27, 2003) ("MSA M&O") at 67. Among the provisions of the MSA found acceptable by the Board in renewing its grant for summary disposition of basis 5 was Section 24.4 of the MSA which makes each "customer/owner responsible for removing its SNF from the site at the end of the agreement at its own expense." Id. at 66 (emphasis added).

In short, the issue of financial responsibility for removal of the casks at the site at the end of the term has been litigated and resolved. The State raises no new issues that would materially alter this outcome.[26]

IV. SHOULD UTAH UU BE ADMITTED, THE BOARD SHOULD EXERCISE ITS PRO-TANTO AUTHORITY AND APPROPRIATELY AMEND THE FEIS

As set forth above, we respectfully submit that admitting Utah UU would be inappropriate and improper. However, should Contention UU be admitted to the proceeding, the Board should address the issue in the first instance, rather than have the Staff prepare a supplement to the FEIS. 10 C.F.R. § 51.102 provides that the initial decision of the presiding officer or the licensing board "will constitute the record of decision" on an action for which an FEIS is required

[26] The State claims that in order to ensure that an owner will not "abandon" its fuel at the PFS site, an escrow account should be established with "sufficient funds to cover the cost of fuel shipment back to the reactor or other facility for repackaging." State Req. at 8-9, 10. Both Commission and the Board have previously rejected analogous arguments by the State that PFS's customers would simply ignore their contractual obligations and have furthermore found that the remedy mechanisms in Section 15 of the MSA provide sufficient protection to PFS to assure customer fulfillment of their obligations under the MSA. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-10, 59 NRC __, slip op. at 10 (March 24, 2004); MSA M&O at 61, 71-72

and for which a hearing is held under Part 2, Subpart G. If a licensing board reaches a conclusion different from that set forth in the FEIS, the statement "is simply deemed amended pro tanto." Allied-General Nuclear Services (Barnwell Nuclear Fuel Plant Separations Facility), ALAB-296, 2 NRC 671, 680 (1975); accord Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985). The board's conclusion is ordinarily based on evidence presented by the parties. Id. Therefore, in assessing Contention UU, the Board can consider all of the evidence and information put forward by the parties in their respective pleadings.[27]

V. CONCLUSION

For the foregoing reasons, the Board should reject proposed Contention Utah UU.

Respectfully submitted,

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December 6, 2004

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[27] The circumstances present here differ markedly from those present with respect to SUWA B referred to by the Board in its November Order. There, the Board denied the Applicant's summary disposition motion because the Staff had not formally evaluated the rail-line alternatives at issue, and the FEIS containing such an evaluation was then soon expected. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 468 (2003). Here, the Staff's evaluation is complete and the FEIS available. Any material disputes of fact or law regarding the sufficiency of the Staff's evaluation can be aired by the parties' pleadings and submissions, and then ruled on by the Board.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
PRIVATE FUEL STORAGE L.L.C.	)	Docket No. 72-22
	)	
(Private Fuel Storage Facility)	)	ASLBP No. 97-732-02-ISFSI

CERTIFICATE OF SERVICE

I hereby certify that copies of Applicant's Response to State of Utah's Request for Admission of Late-Filed Contention Utah UU were served on the persons listed below (unless otherwise noted) by e-mail with conforming copies by U.S. Mail, first class, postage prepaid, this 6th day of December, 2004.

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DI: DOE/RW-0406 REV 06
WBS: 9
QA: QA

Civilian Radioactive Waste Management System Requirements Document

Revision 06

September 2004

Prepared by:
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Having determined completion of technical review under procedure AP-6.28Q and compliance with requirements in accordance with the Program Change Control procedure LP-PMC-009, the change to the baseline document is approved for release.

SIGNATURE ON FILE

Margaret S. Y. Chu, Ph. D
Director
Office of Civilian Radioactive Waste Management

9/15/04
Date

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT PROGRAM
BASELINE CHANGE CONTROL BOARD
REVISION/CHANGE RECORD

Document Number: DOE/RW-0406/A00000000-00811-1708-0003
Document Title: Civilian Radioactive Waste Management System Requirements Document

Rev/DCN Number & Date	BCP Number	Revision/Change Description	Pages Affected
Rev. 01 March 1994	BCP-00-94-0001	Incorporates the Multi-Purpose Canister (MPC) concept into the CRWMS technical baseline.	All
Rev. 01, DCN 01 May 1995	BCP-00-94-0005	Resolves issues needed for the procurement of the MPC system. Also incorporates the collocation of the Cask Maintenance Facility at the MGDS. Additional changes were made to address CAR HQ-93-031.	Misc.
Rev. 02 December 1995	BCP-00-94-0005	General revision to incorporate the Program Approach.	All
Rev. 02, DCN 01 June 1996	BCP-00-96-0002	Provides notice to users on MPC Policy Change, i.e., The CRWMS will accept and accommodate a variety of cask/canister systems for commercial SNF which are currently available or are being developed. These may be individual spent fuel assemblies; or single, dual or triple purpose cask or canister systems. The existing MPC design, if deployed, will be in accordance with the MPC procurement specification. Until specific canister or cask systems are developed, certified and licensed, interface requirements affecting the designs of CRWMS structures, systems and components must be adequately documented and controlled in accordance with the OCRWM QARD (DOE/RW-0333). Some items may be identified as To Be Verified or To Be Determined.	Misc.
Rev. 03 November 1996	BCP-00-96-0009	Streamlines the CRD to include only Program-level requirements. The Waste Acceptance System Requirements Document (SRD), Storage SRD and Transportation SRD are transferred to the WAST Project (the Mined Geologic Disposal System Requirements Document was previously transferred to YMSCO by BCP-01-96-0047). Custodian requirements (e.g., DOE SNF) will be transferred from the WASRD to the CRD in the next revision of the CRD.	All
Rev. 04 May 1998	BCP-00-98-0004	Incorporates Producer/Custodian (DOE SNF, HLW, Navy SNF) requirements and the Hanford 15 ft. canister.	Misc.
Rev. 05 January 1999	BCP-00-99-0001	Incorporates Immobilized Plutonium Waste Form (IPWF) and mixed oxide SNF into the HLW requirements. Incorporates the signed MOA for Acceptance of DOE SNF and HLW as well as naval SNF. Incorporates for planning purposes expanded repository capacities. Defines the Level 0 Scope Baseline. Incorporates the repository closure policy. Incorporates DOE SNF in Government-managed Nuclear Material.	Misc.

1. INTRODUCTION

1.1 IDENTIFICATION

This document specifies the top-level requirements for the Civilian Radioactive Waste Management System (CRWMS). The document is referred to herein as the CRD, for CRWMS Requirements Document.

1.2 PURPOSE

The CRD addresses the requirements of DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets,* by providing the Secretarial Acquisition Executive (Level 0) scope baseline and the Program-level (Level 1) technical baseline. The Secretarial Acquisition Executive approves all of OCRWM's critical decisions and changes against the Level 0 baseline; the OCRWM Director approves changes against the Level 1 baseline. These baselines establish the top-level technical scope of the CRMWS and its three projects, as described in section 1.3.2. In turn, organizations responsible for design, development, and operation of system elements described in this document will prepare subordinate project-level documents that are consistent with the CRD. Changes to requirements will be managed in accordance with established change control procedures.

The CRD establishes requirements for the design, development, and operation of the CRWMS. It specifically addresses the top-level governing laws and regulations (e.g., *Nuclear Waste Policy Act* (NWPA), 10 CFR Part 63, 10 CFR Part 71, etc.) along with specific policy, performance requirements, interface requirements, and system architecture. The CRD shall be used as a vehicle to incorporate specific changes in technical scope or performance requirements that may have significant program implications. Such may include changes to the program mission, changes to operational capability, and high visibility stakeholder issues.

The CRD uses a systems approach to: 1) identify key functions that the CRWMS must perform, 2) allocate top-level requirements derived from statutory, regulatory, and programmatic sources, and 3) define the basic elements of the system architecture and operational concept. Project-level documents address CRD requirements by further defining system element functions, decomposing requirements into significantly greater detail, and developing designs of system components, facilities, and equipment.

The CRD addresses the identification and control of functional, physical, and operational boundaries between and within CRWMS elements. The CRD establishes requirements regarding key interfaces between the CRWMS and elements external to the CRWMS. Project elements define interfaces between CRWMS program elements.

The Program has developed a change management process consistent with DOE Order 413.3. Changes to the Secretarial Acquisition Executive and Program-level baselines must be approved by a Program Baseline Change Control Board. Specific thresholds have been established for identifying technical, cost, and schedule changes that require approval.

The CRWMS continually evaluates system design and operational concepts to optimize performance and/or cost. The Program has developed systems analysis tools to assess potential enhancements to the physical system and to determine the impacts from cost saving initiatives, scientific and technological improvements, and engineering developments. The results of systems analyses, if appropriate, are factored into revisions to the CRD as revised Programmatic Requirements.

1.3 SYSTEM OVERVIEW

The mission and waste management concept of the system and system elements are described in this section.

1.3.1 CRWMS Mission

The NWPA assigned the U.S. Department of Energy (DOE) the mission to develop and operate an integrated waste management system for acceptance, transportation, and disposal of Spent Nuclear Fuel (SNF) and High-Level Radioactive Waste (HLW). The NWPA also established the Office of Civilian Radioactive Waste Management (RW) to carry out that mission. RW, in turn, is developing the CRWMS as the operational and physical system capable of performing the integrated management system functions. The mission of the CRWMS is to manage and dispose of SNF and HLW in a manner that protects the health, safety and the environment; enhances national and energy security; and merits public confidence.

The CRWMS is developing a monitored geologic repository (MGR) at Yucca Mountain, Nevada – a site recommended by the President and approved by Congress in July 2002. The MGR is being licensed to dispose of 70,000 metric tons of SNF and HLW, as authorized by the NWPA, Section 114(d). Projections of SNF and HLW that are expected to be generated indicate that significantly more than 70,000 metric tons will require geologic disposal.

Although RW has analyzed the impacts of disposal of more than 70,000 metric tons in a single repository, RW will request a license from the Nuclear Regulatory Commission for emplacement of only 70,000 metric tons. In accordance with the Nuclear Waste Policy Act, the Secretary of Energy will report to Congress on the need for a second repository between January 1, 2007, and January 1, 2010. The report will consider the total projected future inventory of SNF and HLW, the physical capacity of the first repository site at Yucca Mountain, and the capabilities of existing and future waste form development technologies.

1.3.2 Waste Management System Concept

The mission of the CRWMS is accomplished by three system elements: Waste Acceptance, Transportation, and Monitored Geologic Repository. These system elements work in conjunction with each other to fulfill a variety of functional and performance requirements intended to make the transportation and disposal of SNF and HLW in a geologic medium safe, environmentally acceptable, and cost effective. The CRWMS will provide appropriately documented conformance verification, accountability, and traceability of the SNF and HLW from initial acceptance to final closure of the MGR.

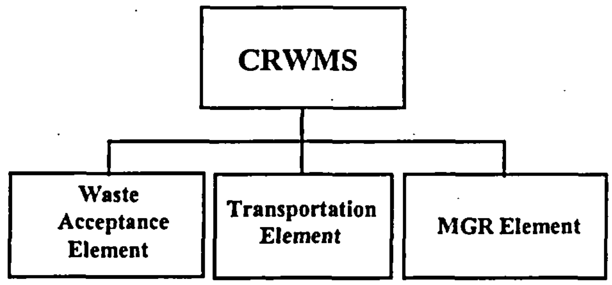

Figure 1. CRWMS Architecture

The responsibilities of each element are summarized below:

- The Waste Acceptance element is the primary interface with Purchasers (non-Federal entities who have entered into a contractual agreement with DOE), Custodians (government entities possessing SNF considered candidate for disposal), and Producers (generators of HLW). The element establishes the waste acceptance and waste form requirements; manages the contract/agreement process; accepts title to the waste; and maintains records of CRWMS capacity, SNF/HLW quantities, location and characteristics.

- The Transportation element is responsible for designing, acquiring, constructing, operating, and maintaining the infrastructure necessary to transport SNF and HLW from Purchaser/Custodian/Producer sites to the Monitored Geologic Repository. This element is also responsible for establishing the institutional relations with industry, States, tribes, and local governments needed to support the Transportation mission.

- The Monitored Geologic Repository element is responsible for designing, licensing, constructing, operating, and permanently closing the geologic repository at the Yucca Mountain site to emplace and isolate 70,000 metric tons of SNF and HLW.

The CRWMS architecture is influenced by supporting elements that ensure a systems approach is utilized in the development, evolution, and acquisition of the system elements. These supporting elements ensure that continued, ongoing enhancements are factored into all Program activities, including:

- Systems Analysis and Strategy Development supporting element implements technical management approaches at the Program-level and provides policy guidance to system elements. These approaches include top-level design and operations concept system analyses and analyses of total system life cycle costs of the CRWMS.

- Science and Technology and International supporting element evaluates alternative, cutting-edge technologies and improved scientific methodologies, and recommends initiatives for implementation to system elements for further development. This supporting element also monitors international approaches to waste management and incorporates beneficial plans, policies, and techniques into the CRWMS.

3.2 OVERALL SYSTEM-LEVEL REQUIREMENTS

3.2.1 Overall System Performance

A. The CRWMS shall be designed to accept, transport, and dispose of commercial SNF, DOE SNF, vitrified defense HLW, and vitrified commercial HLW, in accordance with the NWPA and implementing regulations.

B. The CRWMS shall be capable of receiving SNF and HLW at the annual receipt rates are specified in Table 1.

Table 1. CRWMS Receipt Rates[1,2,3] (in MTHM or Equivalent/Year (nominal))

Year	Commercial SNF and HLW	Government-managed Nuclear Materials
	Received Annually at Repository	Received Annually at Repository
2010	400	Naval SNF - 3 canisters DOE SNF and DHLW[4]
2011	600	Naval SNF -3 canisters DOE SNF and DHLW[4]
2012	1,200	Naval SNF -6 canisters DOE SNF and DHLW[4]
2013	2,000	Naval SNF -6 canisters DOE SNF and DHLW[4]
2014	3,000	Naval SNF – 12 canisters DOE SNF and DHLW[4]
2015-2032	3,000	[Balance of naval SNF, DOE SNF, and DHLW within planning allocation]
2033	1,800	
TOTAL	63,000	7,000

[1] The actual operational load is a function of the numbers, types and sizes of casks and canisters in which the SNF and HLW are accepted from the points of origin. Since these specific numbers will not be determined until Purchaser/Producer/Custodian agreements are reached and schedules are established, the receipt rates are estimated in terms of desired systems-level MTHM acceptance rates.

[2] The receipt schedule of Government-managed nuclear materials will be provided by the DOE Office of Environmental Management (EM) and the Naval Nuclear Propulsion Program (NNPP), in accordance with memoranda of agreement (MOA), 5 years prior to acceptance. For planning purposes, naval SNF is to be included among the earliest shipments to the repository.

[3] The rates in this schedule are targets only and do not create any binding legal obligation on the Department of Energy.

[4] Target receipt rates for these wastes will be further defined in the Integrated Acceptance Schedule developed in accordance with the RW/NNPP and RW/EM MOAs.

C. The CRWMS shall accept 70,000 MTHM or equivalent of SNF/HLW for disposal in the first repository as authorized by the NWPA, Section 114(d). The allocation, by waste type, is specified in Table 2.

Table 2. Amount of SNF/HLW To Be Accepted in First Repository (in MTHM or Equivalent)

Type	Amount
Commercial SNF and HLW	63,000
Defense HLW	4,667
DOE and naval SNF	2,333
Total	70,000

D. The CRWMS shall only accept, transport, and dispose of SNF or HLW that is not subject to regulation as hazardous waste under the Resource Conservation and Recovery Act of 1976 (RCRA) Subtitle C in the first geologic repository licensed by NRC under the NWPA.

E. CRWMS elements and facilities shall be capable of accommodating a range of storage and transportation technologies, including multipurpose, dual-purpose, and single-purpose canisters, as well as bare SNF assemblies.

F. CRWMS facilities shall be capable of opening sealed storage/transportable commercial canisters, handling the SNF, and managing associated site generated waste streams.

G. The CRWMS design shall comply with the agreements established under the Integrated Interface Control Document (DOE/RW-0511) to ensure:

1. compatibility of DOE-owned SNF and HLW waste forms with MGR surface facility interfaces, including canister handling interfaces, and
2. compatibility between transportation equipment (e.g., transporters) and transported items (e.g., casks and canisters) with mechanical and envelop interfaces.

H. The CRWMS is responsible for the transport of DOE SNF and HLW in casks certified by the NRC. NNPP is responsible for canistering and transporting naval SNF to the repository.

I. CRWMS facilities shall manage hazardous, nonhazardous, and mixed radioactive wastes in a cost effective manner that meets or exceeds compliance with applicable regulations and protects the health and safety of the public, workers, and the environment consistent with DOE Order O 450.1, *Environmental Protection Program*.

J. All CRWMS element structures, systems, and components shall be designed and fabricated in accordance with appropriate industry codes, standards, and engineering principles and practices with particular attention to those which incorporate system safety, human factors, reliability, availability, maintainability, habitability standards, and environmental protection.

Final

Environmental Impact Statement
for a
Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada

Readers Guide
and
Summary

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

DOE/EIS-0250

February 2002

issued the Supplement to the Draft EIS that evaluated the repository design described in the *Yucca Mountain Science and Engineering Report: Technical Information Supporting Site Recommendation Consideration,* which it issued in May 2001. The flexible design analyzed in the Supplement includes an improved understanding of the interactions of potential repository features with the natural environment, the addition of design features for enhanced waste containment and isolation, and evolving regulatory requirements. Rather than analyzing the three thermal load scenarios (high, intermediate, and low thermal loads) as in the Draft EIS, the Final EIS analyzes a range of operating modes (higher- to lower-temperature) for the flexible design. Because (1) thermal load is no longer the descriptive parameter for specifying thermal management scenarios for the proposed repository, and (2) an effort was made in the Final EIS to avoid confusion and to clarify the impacts of the Proposed Action, DOE has not carried the earlier thermal load scenarios through to the Final EIS. (A comparison between the thermal load scenarios and the repository operating modes for the flexible design is provided in the Supplement to the Draft EIS.)

FLEXIBLE DESIGN

The flexible design includes the ability to operate the proposed repository in a range of operating modes that are characterized by higher and lower temperatures and associated humidity conditions. *Higher-temperature* means that at least a portion of the emplacement drift rock wall would have a maximum temperature above the boiling point of water at the elevation of the repository. The ranges analyzed for the *lower-temperature* operating mode include conditions under which the drift rock wall temperatures would be below the boiling point of water, and under which the surface temperature of the waste package would not exceed 85°C (185°F).

Modifications from the repository design introduced in the Draft EIS and analyzed in the Supplement to the Draft EIS include:

- The ability to blend hotter and cooler commercial spent nuclear fuel assemblies (the assemblies produce most of the heat generated by waste materials in a geologic repository) to control the heat generation of waste packages
- The flexibility to include a facility on the surface for aging (that is, cooling) of hotter commercial spent nuclear fuel to control the heat of waste packages
- Increased ventilation (forced and natural) to enable a cooler repository
- Increased spacing between emplacement drifts to allow a moisture pathway between drifts
- The operational flexibility to vary the spacing between the waste packages in a drift to manage the heat load
- Modified waste packages and the addition of titanium drip shields to improve overall performance and divert moisture

The purpose of the flexible design is to improve the long-term performance of the proposed repository, and reduce associated uncertainties.

DOE would receive materials at the repository in one of three configurations: uncanistered fuel (spent nuclear fuel placed directly in a shipping cask), dual-purpose canisters (containers designed to store and transport commercial spent nuclear fuel), or disposable canisters (canisters for spent nuclear fuel or high-level radioactive waste with multiple specialized overpacks to enable their storage, transportation, and emplacement in a repository). All DOE materials (spent nuclear fuel and high-level radioactive waste) would be received in disposable canisters. Commercial spent nuclear fuel would be received in any of the three packaging configurations. DOE cannot predict the particular combination of uncanistered fuel, dual-purpose canisters, or disposable canisters it would receive at a repository because the managers of the commercial sites would determine the canister type, if any, they will use. For that reason, in the Draft EIS the Department analyzed two fuel packaging scenarios [mostly uncanistered and mostly canistered (including dual-purpose canisters and disposable canisters)] that cover the possible range of repository and transportation impacts to human health and the environment. DOE's analysis shows that the mostly uncanistered fuel packaging scenario would result in the highest short-term impacts, with the exception of (1) the empty dual-purpose canisters that some commercial sites could use that would require disposal or recycling, and (2) some attributes of offsite manufacturing of disposable canisters. To simplify the presentation in this Final EIS, the impacts throughout this document include those associated with the mostly uncanistered fuel packaging scenario, plus the impacts of the waste management and offsite manufacturing impacts, which are also included to represent potential impacts associated with the canistered scenario. This approach ensures that the impacts presented in this Final EIS would bound the impacts of any packaging scenario ultimately selected.

DEFINITIONS OF PACKAGING TERMS

Shipping cask: A vessel that meets applicable regulatory requirements for shipping spent nuclear fuel or high-level radioactive waste.

Dual-purpose canister: A metal vessel suitable for storing (in a storage facility) and shipping (in a shipping cask) commercial spent nuclear fuel assemblies. At the repository, dual-purpose canisters would be removed from the shipping cask and opened. The spent nuclear fuel assemblies would be removed from the canister and placed in a disposal container or in the fuel pool to accommodate blending. The opened canister would be recycled or disposed of offsite as low-level radioactive waste.

Disposable canister: A metal vessel for commercial or DOE spent nuclear fuel assemblies or solidified high-level radioactive waste suitable for storage, shipping, and disposal. At the repository, the disposable canister would be removed from the shipping cask and placed directly in a disposal container. The disposable canister is sometimes referred to as a multi-purpose canister in discussions of repository design.

Uncanistered spent nuclear fuel: Commercial spent nuclear fuel placed directly into shipping casks. At the repository, spent nuclear fuel assemblies would be removed from the shipping cask and placed in a disposal container or in the fuel pool to accommodate blending.

Disposal container: A container for spent nuclear fuel and high-level radioactive waste consisting of the barrier materials and internal components. The filled, sealed, and tested disposal container is referred to as the *waste package*, which would be emplaced in the repository.

Waste package: The filled, sealed, and tested disposal container that would be emplaced in the repository.

Material received at the repository would be unloaded from the shipping casks and placed in disposal containers called *waste packages*. To control the heat generation of the waste packages, the flexible design includes thermal blending of commercial spent nuclear fuel assemblies. Remote-controlled transporters would place the waste packages in emplacement drifts.

DOE considered waste packages containing two layers—a corrosion-resistant Alloy-22 shell on the outside and a stainless-steel inner shell to provide structural support. The highly corrosion-resistant outer

Final

Environmental Impact Statement

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Volume I - Impact Analyses
Chapters 1 through 15

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

DOE/EIS-0250

February 2002

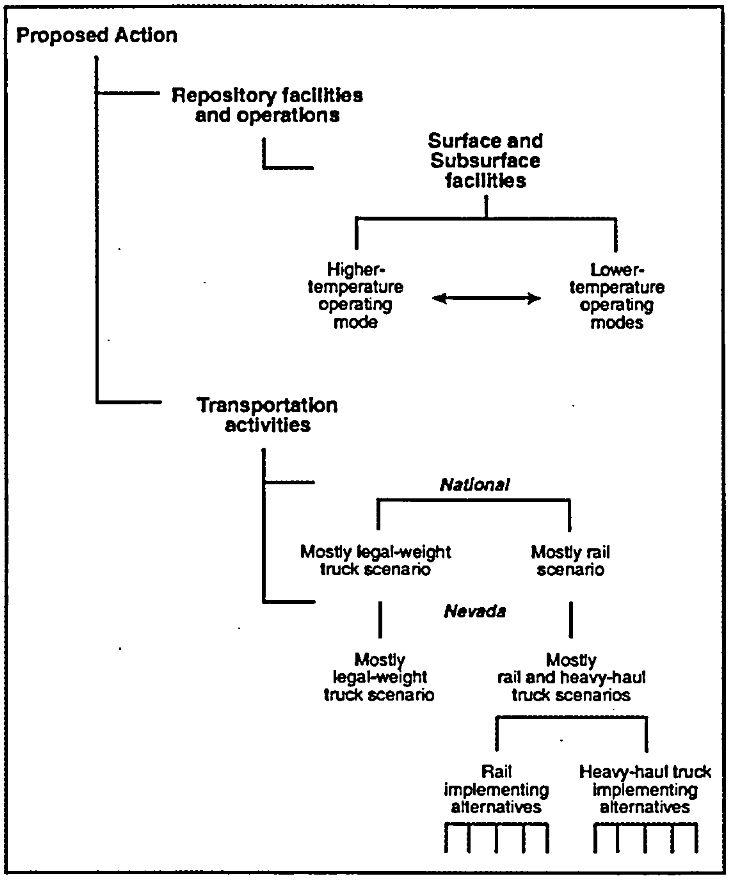

Figure 2-5. Analytical scenarios and implementing alternatives associated with the Proposed Action.

2.1.1.1 Packaging Scenarios

DOE operations at repository surface facilities would differ depending on how the spent nuclear fuel in shipping casks was packaged. Commercial spent nuclear fuel could be received either uncanistered or in disposable or dual-purpose canisters.

The EIS assumes that DOE spent nuclear fuel and high-level radioactive waste would be shipped to the repository in *disposable canisters*. In addition, it evaluates the following packaging scenarios for commercial spent nuclear fuel to cover the potential range of environmental impacts from repository surface facility construction and operation:

- A mostly uncanistered fuel scenario
- A mostly canistered fuel scenario

For this Final EIS, DOE simplified the presentation of the packaging scenarios that were analyzed in the Draft EIS by analyzing only one bounding packaging scenario (the Draft EIS considered both mostly canistered and uncanistered scenarios). DOE was able to simplify the presentation of impacts in the Final EIS because the Draft EIS analysis demonstrated that the mostly uncanistered fuel packaging scenario bounded the analysis in all cases with the exception of (1) the empty dual-purpose canisters that some commercial sites could use that would require disposal or recycling, and (2) some attributes of offsite manufacturing of the disposable canister. The presentation of potential impacts in Chapter 4 of this Final principal facilities in the Radiologically Controlled Area for handling spent nuclear fuel and high-level radioactive waste would be the Carrier Preparation Building and the Waste Handling Building. If DOE uses aging to achieve lower-temperature operation, the commercial nuclear fuel aging area would also be included within the Radiologically Controlled Area. Other support facilities in the North Portal Operations Area would include basic facilities for personnel support, warehousing, security, parking and visitors center, and transportation (motor pool). A concrete plant for fabricating and curing precast components and supplying concrete for *in-situ* placement would be near the North Portal Operations Area.

2.1.2.1.1.1 Waste Handling. When a legal-weight or heavy-haul truck or a railcar (depending on the transportation mode) hauling a *cask* containing spent nuclear fuel or high-level radioactive waste arrived at the repository site, it would move through the security check into the Radiologically Controlled Area parking area or to the Carrier Preparation Building. Operations in the Carrier Preparation Building would include performing inspections of the vehicle and cask, removing barriers from the vehicle that protected personnel during shipment, and removing *impact limiters* from the cask. The vehicle would then move to the Waste Handling Building for unloading.

At the Waste Handling Building carrier bay, the carrier/cask handling system would lift the transportation cask to a vertical position and place it on a cask transfer cart. Depending on the cask's contents, the cart would move to one of two transfer systems. Casks that contain disposable canisters (for example, DOE canisters that would not be opened but transferred, as is, directly into a *disposal container*) would go to the canister transfer system. Casks that contain commercial spent nuclear fuel in dual-purpose canisters or individual *fuel assemblies* would go to the assembly transfer system. Figure 2-11 is a flow diagram of Waste Handling Building operations.

The Waste Handling Building would have one canister transfer line that moves the disposable canisters through the building to prepare the waste for emplacement in the repository. The system would move arriving casks through an *air lock* on a transfer cart into a cask preparation area. Once a cask arrived inside the cask preparation area, workers would use remotely operated equipment to vent and sample gases from the cask, remove the lid bolts, and open the cask. An overhead crane would move the cask to a transfer cart, which would take the cask to a shielded transfer area. Inside the transfer area, machines would remove the canister from the cask. The canister could go directly into a disposal container for repository emplacement, or to a holding rack for later placement in a disposal container. Another transfer cart would move loaded disposal containers to the disposal container handling system. A transfer cart would move the empty transportation casks back to the cask *decontamination* area, where they would be surveyed and decontaminated, if required, before return shipment. From the decontamination area, casks would be moved to the carrier/cask handling system, which would place them back on a transporter. The empty cask and cask transporter would return to the Carrier Preparation Building to be readied for offsite shipment.

The Waste Handling Building would also have two assembly transfer lines. Each line would operate independently to handle waste throughput and support maintenance operations. The assembly transfer process would begin by moving the cask on a transfer cart through the air lock into the cask preparation area. Once inside the cask preparation area, workers would use remotely operated equipment to inspect, vent, and cool the cask and remove the cask lid bolts. A large overhead crane would lift the casks and place them in a cask unloading pool, where fuel-handling machines would open the casks and unload the fuel assemblies. If the cask contained dual-purpose canisters, they would be removed and placed in an overpack, where the top of the canister would be cut off. The system would move the empty casks and dual-purpose containers back out through the cask decontamination area. The fuel-handling machines would transfer the fuel assemblies, one at a time, to a holding pool, where they would be placed in assembly baskets. A transfer cart would move the baskets containing the fuel assemblies underwater from the assembly holding pool through a transfer canal to a fuel-blending inventory pool. (See

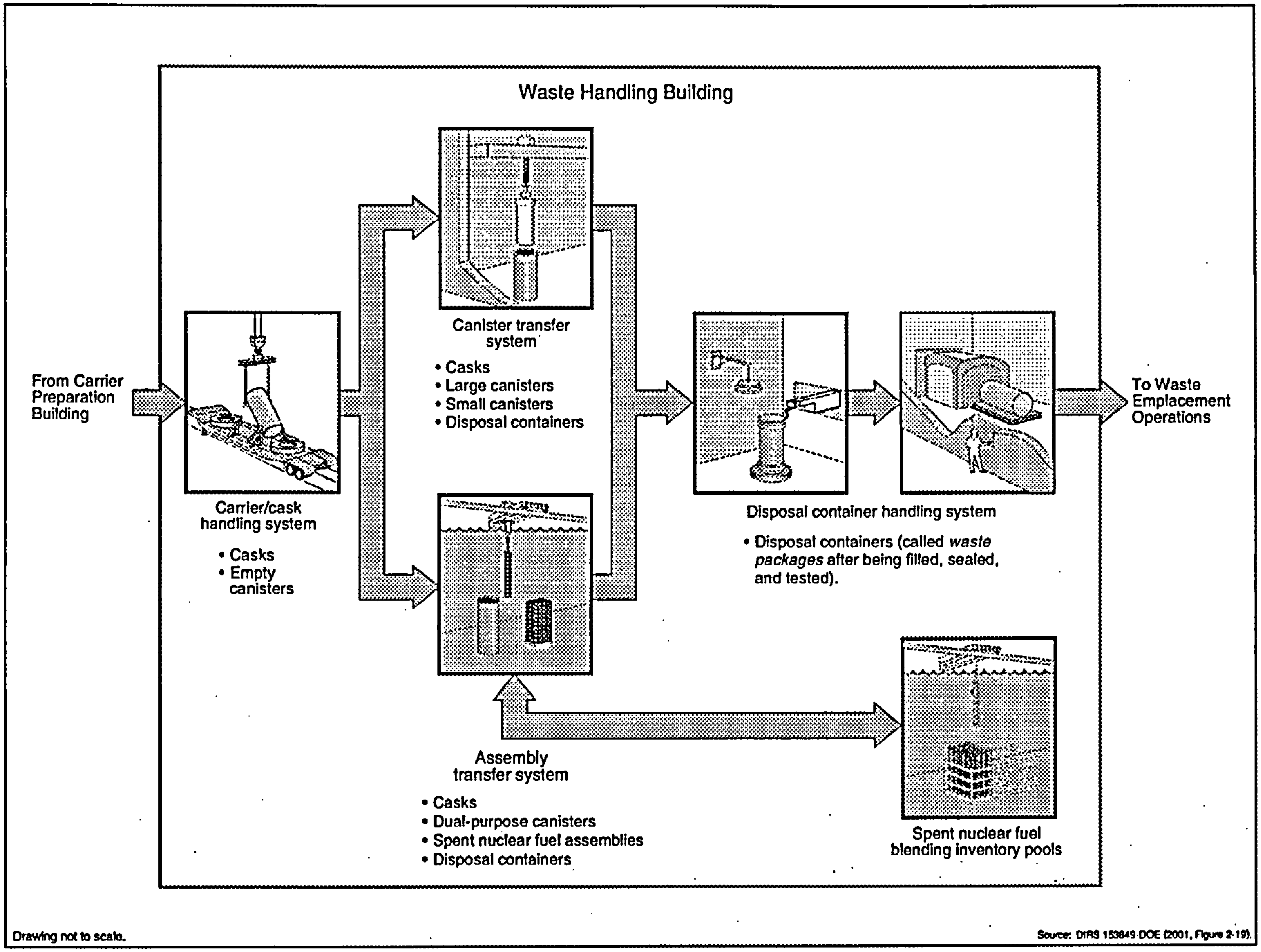

Figure 2-11. Key components of Waste Handling Building operations.

Section 2.1.2.1.1.2 for further information on the processes for blending, use of small waste packages, and aging to meet the flexible design linear thermal load criteria.) When a fuel assembly was selected from the fuel inventory pool for packaging, a transfer cart would move it underwater back through the fuel blending pool to an inclined transfer canal and onto a cart that connects to the assembly drying area.

After fuel assemblies arrived at the assembly drying area, a fuel-handling machine would transfer them into one of two drying vessels. After drying, the system would retrieve the assemblies and transfer them, one at a time, to a disposal container. The empty assembly baskets would be returned to the pool area for reuse. After installation of the sealing device and the inner lid, the system would then evacuate the disposal container internal cavity and fill it with nitrogen gas to exclude oxygen and prevent corrosion from the inside of the waste package. Finally, the transfer cart would transfer the container to the lid welding and inspection area.

The disposal container handling system would receive loaded disposal containers from both the canister transfer system and the assembly transfer system. Each disposal container would again be evacuated and filled with helium, after which the container's lids would be welded and the welds inspected. If the welds meet inspection criteria, the sealed disposal container would be reclassified as a waste package. A crane would transfer the waste package to the transporter loading area, where it would be decontaminated and placed on a pallet, then on a transporter for emplacement in the subsurface repository.

For more details on waste handling, see Section 2.2.4.2 of the Science and Engineering Report (DIRS 153849-DOE 2001).

2.1.2.1.1.2 Approach to Fuel Blending. Spent nuclear fuel and high-level radioactive waste arriving at the repository would be in solid form, but in a variety of types and sizes. Hence, the materials would arrive in a variety of transportation casks, all certified for use by the Nuclear Regulatory Commission. Commercial spent nuclear fuel would arrive as either individual fuel assemblies placed directly into transportation casks, or in dual-purpose canisters in transportation casks that would have to be opened to remove the fuel assemblies. DOE spent nuclear fuel and high-level radioactive waste would arrive in disposable canisters (that is, canisters that would not be opened, but would be transferred directly into a disposal container). Because of the variety of waste forms to be disposed of, about 10 different designs for disposal containers (called waste packages after being loaded, sealed, and certified) would be needed (DIRS 153849-DOE 2001, Section 2.2.1).

The radioactive decay process generates heat. The concentrations of particular isotopes would vary among the different waste forms, and among different fuel assembles in the same type of waste form, so different waste packages would generate different amounts of heat. Because the repository would have established temperature limits, DOE would establish a maximum heat output for all waste packages. For the repository, the maximum heat output would be 11.8 kilowatts per waste package (DIRS 153849-DOE 2001, Section 2.2.1).

The limit on heat output from individual waste packages would impose special considerations for operations and costs. The DOE strategy for controlling heat output would be to load waste packages that mixed low-heat-output spent nuclear fuel with high-heat-output spent nuclear fuel to balance total waste package heat output. This process, called *fuel blending* (DIRS 153849-DOE 2001, Section 2.2.1), would apply only to commercial spent nuclear fuel, which generates much more heat than DOE spent nuclear fuel or high-level radioactive waste (see Appendix A).

To manage heat output, DOE would hold some fuel assemblies in the fuel blending pool in the Waste Handling Building inventory until they generated less heat from radioactive decay or until additional low-heat-output fuel assemblies arrived for blending. The repository would be designed with a fuel blending inventory capacity of approximately 5,000 MTHM, or 12,000 spent nuclear fuel assemblies. By

Department of Energy
Washington, DC 20585

May 3, 2000

The Honorable Angus S. King, Jr.
Governor of Maine
1 State House Station
Augusta, Maine 04333-0001

Dear ~~Governor King~~ Angus:

Secretary Richardson has received your letter of April 4, 2000 to Nuclear Regulatory Commission Chairman Meserve and has requested that I respond on behalf of the Department of Energy. Your letter provided Chairman Meserve with comments on behalf of the State of Maine on the Commission's proposed rule, 65 Fed. Reg. 3397, which amends 10 CFR Part 72.214 to approve the NAC-UMS Universal Storage System for spent nuclear fuel.

The Department of Energy shares your view that the spent fuel at Maine Yankee must be stored in a manner that ensures the protection of the public health and safety. The Nuclear Regulatory Commission has the responsibility to ensure that storage casks are designed, fabricated and operated in a manner that ensures this objective is met. I am sure that Chairman Meserve will address adequately the technical concerns raised in your letter.

Your letter also requests that the Commission, as a pre-requisite to approval of the proposed rule, acquire binding assurances from the Department of Energy that the Department will accept spent fuel for transport and disposal that has been stored in accordance with NRC approved procedures. It is my belief that there is no need for the Commission to obtain such assurances from the Department, as they already exist under the terms of the contract for disposal that the Department has with Maine Yankee Atomic Power Company. The contract covers the acceptance, transport, and disposal of all spent nuclear fuel from the Maine Yankee reactor, regardless of the condition of the spent nuclear fuel. However, while the condition of the fuel does not impact the Department's ultimate responsibility for disposal under the contract, it may require an adjustment in our schedule to allow us to address any technical issues that may be related to the fuel's safe handling and disposal. The Department will meet all applicable Commission requirements for the safe transportation and disposal of spent nuclear fuel.

I assure you that while we may be currently delayed in our ability to begin disposal of the Nation's commercial spent nuclear fuel, we have every intention of fulfilling our contractual obligations to Maine Yankee and our other utility customers. If you have any further questions or concerns, please feel free to contact me at (202) 586-6842.

Sincerely,

Ivan Itkin

Ivan Itkin, Director
Office of Civilian Radioactive
Waste Management

cc: Bill Kane, Nuclear Regulatory Commission

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 9, 2000

Mr. Randall Speck
Kaye, Scholer, Fierman, Hays & Handler, LLP
The McPherson building
901 Fifteenth Street, N.W., Suite 1100
Washington, D.C. 20005-2327

SUBJECT: REQUEST TO STAY THE EFFECTIVENESS OF AMENDMENT TO 10 CFR § 72.214

Dear Mr. Speck:

This is in response to your letter of November 1, 2000, requesting, on behalf of the State of Maine (the State), that the Nuclear Regulatory Commission (NRC) stay the effective date of its amendment to 10 CFR § 72.214 adding the NAC Universal Storage System (NAC-UMS) cask system to the list of approved spent fuel storage casks (65 FR 62581 (October 19, 2000)). The State makes this request "[I]n order to obtain a timely review of the Commission's rule" preparatory to deciding whether to file a petition for judicial review. In particular, you are concerned that the NRC did not agree to the State's request, made in its April 4, 2000 comment letter on the proposed rule, that "the NRC acquire binding assurances from the [Department of Energy] that DOE will accept spent fuel for transport and disposal that has been stored in accordance with NRC-approved procedures."

We believe that NRC's response addressed the State's comment by citing DOE's response to the comment letter. See 65 FR 62595. In DOE's response, Dr. Ivan Itkin, Director of DOE's Office of Civilian Radioactive Waste Management, confirmed, in a letter dated May 3, 2000, to the Governor of Maine, that DOE's contract for disposal with Maine Yankee "covers the **acceptance, transport,** and disposal of **all** spent nuclear fuel from the Maine Yankee reactor, **regardless of the condition of the spent nuclear fuel**" (emphasis added). Dr. Itkin further assured the State that DOE has "every intention of fulfilling our contractual obligations with Maine Yankee and our other utility customers." Id.

Your letter expresses the State's additional concern that unless DOE agrees now that the NAC-UMS canisters will preserve the spent fuel intact and in an acceptable condition for transport and disposal for the decades of storage that may be necessary before DOE finally removes it, the canisters may have to be unsealed and inspected before any fuel can move. Because Dr. Itkin's letter of May 3, 2000 provides assurance that DOE will accept the spent fuel for transport and disposal, regardless of its condition, opening the canisters for inspection may not be necessary prior to DOE's ultimate acceptance of the spent fuel. Dr. Itkin's letter does indicate that DOE's scheduling of transport and acceptance may be affected by the condition of the fuel. If inspection of the spent fuel is required for any unanticipated reason, opening of the canisters will be conducted in accordance with established procedures that reasonably assure the safety of all persons involved in the operation. As we said in reply to the State's comments on the proposed rule, the NRC staff has reasonable assurance that the spent fuel is adequately protected against degradation that might otherwise lead to gross rupture during storage. The NRC requirements for the design of the NAC-UMS cask system are such that periodic verification of cladding conditions during storage and prior to transportation, i.e., unsealing and inspection of the cask system, is not warranted.

We note that the Maine Yankee schedule does not call for the loading of spent fuel into the NAC-UMS casks until April 2001, at the earliest. Therefore, no harm will befall the State if the rule placing the NAC-UMS cask on the approved list is allowed to take effect on the scheduled date of November 20, 2000. For that reason and because the safety issues raised with respect to this cask design were addressed in the final rule, we decline to stay the effective date of the rule. Nevertheless, in recognition of the State's concerns, if the State believes a meeting will be helpful, we will initiative planning for such a meeting. Please feel free to call me at 301-415-7800.

Sincerely,

William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards

cc: Michael Meisner, Maine Yankee
Lake Barrett, DOE

Department of Energy
Washington, DC 20585
September 2, 1993

Mr. James R. Shetler
Deputy Assistant General Manager
Sacramento Municipal Utility District
6201 S. Street
Sacramento, California 95852-1830

Dear Mr. Shetler:

Thank you for your letter dated June 22, 1993, concerning the Department of Energy's acceptance of spent nuclear fuel from the Sacramento Municipal Utility District's Rancho Seco plant.

In a letter dated June 15, 1993, to Mr. S. David Freeman, General Manager of the Sacramento Municipal Utility District, I discussed the Secretary's meeting with Congressman Fazio and Dicks and addressed the issue of acceptability of Sacramento Municipal Utility District spent nuclear fuel in a canistered system certified for storage and transportation offsite to a Federal facility. I have enclosed a copy of this correspondence for your information. Once the Nuclear Regulatory Commission has certified Sacramento Municipal Utility District's transport-storage system, the Department would be willing to initiate the appropriate actions to include such a system as an acceptable waste form under the terms of the Standard Contract for the Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 CFR Part 961). At that time, the Department would be in a better position to evaluate its acceptability as either a standard or nonstandard waste form. While we share mutual goals of minimizing spent fuel handling and repackaging, until the Nuclear Regulatory Commission completes its certification, it is premature, as I explained in my letter, for the Department to commit to accept such canistered fuel, either as a matter of policy or under the terms of the Standard Contract.

I have also considered your request to refocus the proposed Sacramento Municipal Utility District, Department of Energy, and Electric Power Research Institute cooperative demonstration program to provide maximum benefits to the Department's multi-purpose canister activities. As proposed, this program to demonstrate a transportable storage system and a dry spent fuel transfer system will address several important issues relating to the multi-purpose canister system. These issues include: the resolution of licensing and operational issues related to canister transport and storage; the development of a dry cask-to-cask spent fuel transfer system to maximize the use of the canister system at all utilities; and burn-up meter validation tests. Therefore, because of the proposed important contributions of this demonstration program to the multi-purpose canister system, a refocusing of the program does not appear warranted.

I appreciate your continued interest and involvement in the Department's efforts to design a multi-purpose canister system that considers utility experience with at-reactor storage systems.

Sincerely,

Lake H. Barrett, Acting Director
Office of Civilian Radioactive
Waste Management

Enclosure

Department of Energy
Washington, DC 20585

October 4, 1993

The Honorable Norman Dicks
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Dicks:

Secretary O'Leary has asked me to respond to your letter of August 26, 1993, regarding the Department of Energy's acceptance of spent nuclear fuel from the Sacramento Municipal Utility District's Rancho Seco plant.

In a letter dated September 2, 1993, to Mr. James R. Shetler, Deputy Assistant Manager of the Sacramento Municipal Utility District, I provided the assurances you requested concerning the acceptability of the Rancho Seco spent nuclear fuel in a canistered system certified for storage and transportation offsite to a Federal facility. Specifically, I assured Mr. Shetler that:

> "Once the Nuclear Regulatory Commission has certified Sacramento Municipal Utility District's transport-storage system, the Department would be willing to initiate the appropriate actions to include such a system as an acceptable waste form under the terms of the Standard Contract for the Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 CFR Part 961)"

I have enclosed a copy of this correspondence for your information.

I have also considered the Sacramento Municipal Utility District's request to refocus the proposed cooperative demonstration project with the Department of Energy and the Electric Power Research Institute. As indicated in my September 2, 1993, letter to Mr. Shetler, the cooperative demonstration project, as presently planned, will address a number of important issues relating to the development of the multi-purpose canister system. Therefore, a refocusing of the project does not appear warranted.

The Department of Energy, in concert with the National Academy of Sciences, the Edison Electric Institute and others, identified the need for the development, demonstration, and licensing of a system to facilitate the dry transfer of spent nuclear fuel assemblies between storage casks and/or storage canisters. This system could facilitate earlier operation of a Monitored Retrievable Storage facility. It would also allow those utilities with small capacity cranes to use the multi-purpose canister system and result in reduced handlings of spent fuel and lower cost for the utilities and the Federal government. The Sacramento Municipal Utility District's proposal to refocus the demonstration project would eliminate full scale testing and licensing of the dry spent fuel transfer system because it is not needed to support the decommissioning of Rancho Seco. The development of the dry transfer system was the basis for involvement by the Department of Energy and Electric Power Research Institute in the demonstration project.

The Department of Energy and the Sacramento Municipal Utility District have begun negotiations on the cooperative agreement. While a number of issues remain to be resolved, I believe agreement can be reached in these areas and the demonstration project can proceed in a manner which satisfies the intent of the Congress, as specifically set forth in the House Appropriations Committee Report 101-536.

Thank you for taking the time to share your views with the Department of Energy. I appreciate your continued interest and involvement in the Department's efforts to address the challenges facing the nuclear utility industry in managing their spent nuclear fuel.

Sincerely,

Luke H. Barrett

Luke H. Barrett, Acting Director
Office of Civilian Radioactive
Waste Management

Enclosure

Department of Energy
Washington, DC 20585
August 20, 1996

Mr. R. M. Grube
Director, Fuel Management Department
Yankee Atomic Electric Company
580 Main Street
Bolton, MA 01740-1398

Dear Mr. Grube:

Thank you for your letter of August 6, 1996, informing us that Yankee Atomic has chosen Nuclear Assurance Corporation International (NAC) to design a transportation and storage system for Yankee spent nuclear fuel.

Regarding the acceptability of the Yankee transportation and storage system, the Standard Contract for the Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste (10 CFR Part 961) signed by the Department and each utility is the key instrument guiding the specific terms and conditions for spent nuclear fuel acceptance. At the time this contract was developed through the public rulemaking process, the issue of accepting large multiple spent fuel element containers was not contemplated by the Department or utilities. Therefore, these containers are currently not identified as an acceptable waste form under the contract. However, consistent with the goals concerning minimizing spent nuclear fuel handlings, once the Nuclear Regulatory Commission (NRC) has certified the NAC transport-storage system, the Department would be willing to initiate the appropriate actions to include such a system as an acceptable waste form under the terms of the standard contract. Any transportation and storage system designed to the Multi-Purpose Canister (MPC) specification should be able to receive an NRC certification for transportation and storage.

As you may be aware, the Department is moving forward in the area of contingency planning with regard to interim storage of spent nuclear fuel so that if and when the administration and Congress agree on a site for such a facility, the Department will be in a position to move quickly toward accelerated waste acceptance. To that end, the Department is presently conducting non-site-specific design and engineering analysis for an interim storage facility that could be sited at virtually any location in the contiguous 48 states. This is being accomplished by determining conservative design and environmental parameters. These, in turn, will be incorporated into a topical safety analysis report (TSAR), describing the facility and its operations, and submitted to the NRC staff for review and acceptance prior to any site designation.

The Department has quantified on a predecisional basis a number of design and environmental parameters and will be meeting with the NRC staff in the near future to discuss their acceptability. Subsequent to this, the Department plans to make the values selected for these design and environmental parameters available to interested parties by the end of 1996.

It is important to note that the MPC specification was written with one objective being to provide systems for at-reactor storage. The environmental parameters of the TSAR will be broader than those of the MPC specification. Any system that is designed to the environmental parameters of the MPC specification would require an evaluation to determine whether it meets the conditions of any off-site storage site if off-site storage would be required prior to disposal.

Until the system is certified by the NRC and it is determined what the environmental parameters may be for any required off-site storage, it is premature to evaluate a system for its acceptability as either a standard or non-standard waste form. With regard to the acceptability of any canistered fuel system as a standard waste form, we believe that any NRC-approved storage and transport system that meets the parameters approved by the NRC staff in our TSAR can be defined to be a standard waste form under the terms of the Standard Contract for the Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (10 CFR Part 961).

Should you wish to discuss any aspect of the information contained in this letter you may contact Mr. Sam Rousso at (202) 586-6046. Mr. Rousso will be pleased to arrange for the appropriate Office of Civilian Radioactive Waste Management staff to meet with you to discuss your storage plans.

Sincerely,

Lake H. Barrett

Lake H. Barrett, Deputy Director
Office of Civilian Radioactive
Waste Management

Department of Energy
Washington, DC 20585
APR 0 6 2001

Mr. Steve Redeker
Manager, Plant Closure and Decommissioning
Sacramento Municipal Utility District
P.O. Box 15830
Sacramento, CA 95852-1830

Dear Mr. Redeker:

The Department has received your letter of January 22, 2001, providing notice of your plans to begin the loading activities at the Rancho Seco Independent Spent Fuel Storage Installation in spring 2001. The Department has no current plans to observe these operations.

Your letter also raises several other questions related to the Department's acceptance of Nuclear Regulatory Commission (Commission) certified dual-purpose storage/transport systems under the disposal contract between SMUD and the Department. As you have indicated, the Department has previously stated its willingness to initiate the appropriate actions to include such dual-purpose storage/transport systems as acceptable waste forms under the terms of the disposal contract.

As requested in your letter, and in accordance with the commitment made in our previous correspondence, the Department will initiate actions to include storage systems certified by the Commission for both transportation and storage (dual-purpose systems) as acceptable waste forms under the disposal contract with SMUD. We are in the process of identifying the extent of and methods for effecting such contract modifications, including the development of specifications that may be placed on "Standard" dual-purpose systems, where "Standard" refers to canistered spent nuclear fuel that could be accepted as if it were standard spent nuclear fuel under the contract.

While the Department continues to believe in the overall benefits that may accrue to a multi-purpose storage/transport/disposal system, we are unable at this time to complete final design and acceptance criteria for the disposability aspects of such a system for commercial spent nuclear fuel. However, since there may be some benefit during disposal attributable to the integrity of zirconium-based cladding, the Department would prefer that reasonable efforts be made to preclude further degradation of the cladding during storage or transport.

It is our current expectation that after receipt at the repository, dual-purpose systems will be opened and the spent nuclear fuel removed for placement in a waste disposal package unless the internal canister can be demonstrated, and Nuclear Regulatory Commission licensed, as part of the final waste disposal package assembly. Therefore, in order for a dual-purpose system to be classified as "Standard," we anticipate that, at a minimum, it must provide that the spent nuclear fuel stored allows for its unloading and handling like an intact fuel assembly. Dual-purpose systems that can not be unloaded and handled in the same manner as an intact assembly will be classified as "Non-standard" under the terms of the contract.

Your letter also requests that the Department afford SMUD's spent nuclear fuel advanced acceptance due to the permanently shutdown status of your facility. The Department has previously considered such requests for other similarly-situated contract holders, and has determined that such priority acceptance cannot be granted without adversely impacting other contract holders in the waste acceptance queue. Instead, we suggest you explore utilizing the provisions of the contract that allow contract holders to advance the acceptance of their spent nuclear fuel by trading acceptance allocations with other contract holders. I have enclosed a copy of a previous letter from Mr. Barrett on this subject for your information.

When we have further developed our ideas regarding modifications to the disposal contract, we will contact you to schedule discussions on this matter. If you require any further information, please contact me at 202-586-9198.

Sincerely,

DKZ

David K. Zabransky, Team Leader
Waste Acceptance and Transportation

Enclosure