

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONBEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF'S RESPONSE TO STATE OF UTAH'S REQUEST
FOR ADMISSION OF LATE-FILED CONTENTIONS UTAH LL THROUGH OOINTRODUCTION

Pursuant to 10 C.F.R. § 2.714(c) and the Atomic Safety and Licensing Board's "Order (Granting Extension Request)," dated August 11, 2000,¹ the staff of the Nuclear Regulatory Commission ("Staff") hereby responds to the "State of Utah's Request for Admission of Late-Filed Contentions Utah LL Through OO (Relating to the DEIS's analysis of spent fuel transportation risks)," dated August 2, 2000 ("Late-Filed Request"). As discussed below, the Staff submits that Contention OO and a portion of Contention NN (pertaining to economic issues) do not satisfy the Commission's standards for late-filing; and none of the contentions meet the Commission's legal standards for an admissible contention. Therefore, the State's request for admission of late-filed Contentions Utah LL through OO should be denied.

BACKGROUND

On June 25, 1997, Private Fuel Storage, L.L.C. ("PFS" or "Applicant"), filed an application for a license to possess and store spent nuclear fuel in an Independent Spent

¹ The Board had previously issued an "Order (Scheduling/Administrative Matters)" on August 4, 2000, in which it had ordered that responses to the Late-Filed Request be filed on or before August 16, 2000.

Fuel Storage Installation ("ISFSI") to be constructed and operated on the Skull Valley Goshute Indian Reservation in Skull Valley, Utah. The application included five documents: a license application, safety analysis report, emergency plan, physical security plan -- and, as pertinent here, an Environmental Report ("ER").

On July 31, 1997, the Commission published in the *Federal Register* a Notice of Consideration and Notice of Opportunity for Hearing concerning the license application. See 62 Fed. Reg. 41,099 (1997). The Notice advised interested persons, *inter alia*, that petitioners for leave to intervene must file a list of contentions they wish to litigate no later than 15 days before the first prehearing conference scheduled in the proceeding.

In accordance with the Licensing Board's Orders in this proceeding, on or before November 24, 1997, numerous contentions were timely filed by various petitioners, including approximately 40 contentions filed by the State. Many of these contentions challenged the adequacy of PFS' application and Environmental Report under the National Environmental Policy Act of 1969 ("NEPA"). In particular, as pertinent here, one contention (Utah V) challenged the adequacy of the Applicant's consideration of the radiological impacts of transportation of spent fuel to and from its facility.²

On April 22, 1998, the Licensing Board issued its ruling on standing and the admissibility of the petitioners' contentions. As pertinent here, the Board admitted one portion of Contention Utah V, contesting the Applicant's reliance on 10 C.F.R. § 51.52 (Summary Table S-4) and NUREG-1437,³ based on the State's assertion that the weight of loaded shipping casks to be used in transporting spent fuel exceeds the parameters of

² "State of Utah's Contentions on the Construction and Operating Licence Application by Private Fuel Storage, LLC, for an Independent Spent Fuel Storage Facility" ("Utah Contentions"), dated November 23, 1997, at 144-161.

³ NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996).

Table S-4, thus requiring a “full description and detailed analysis of the environmental effects of transportation” as stated in 10 C.F.R. § 51.52(b). Significantly, the Board rejected other assertions in Contention Utah V, alleging (a) that all environmental impacts of spent fuel transportation to and from the site need to be evaluated (Contention V, ¶ 1), (b) that PFS may not rely on Summary Table S-4 since its facility is not a reactor (*Id.*, ¶ 2); (c) that PFS inadequately considered the impacts at the Rowley Junction intermodal transfer facility (*Id.*, ¶ 3), and (d) that Summary Table S-4, which rests upon WASH-1238, relies upon inadequate and outdated data (*Id.*, ¶ 4). *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 199-201 (1998).⁴

As a result, the Licensing Board admitted the following issue for litigation:

Utah V - Inadequate Consideration of Transportation-Related Radiological Environmental Impacts

The Environmental Report (“ER”) fails to give adequate consideration to the transportation-related environmental impacts of the proposed ISFSI in that PFS does not satisfy the threshold condition for weight specified in 10 C.F.R. § 51.52(a) for use of Summary Table S-4, so that PFS must provide “a full description and detailed analysis of the environmental effects of transportation of spent fuel and wastes to and from the reactor” in accordance with 10 C.F.R. § 51.52(b).

⁴ These other assertions were rejected on the grounds that they:

[F]ail to establish with specificity any genuine dispute; impermissibly challenge the applicable Commission regulations or rulemaking-associated generic determinations, including 10 C.F.R. §§ 51.52, 72.108, and ‘Environmental Survey of Transportation of Radioactive Materials to and From Nuclear Power Plants,’ WASH-1238 (Dec. 1972), as supplemented, NUREG-75/038 (Supp. 1 Apr. 1975); lack adequate factual or expert opinion support; and/or fail properly to challenge the PFS application.

Id. at 256. The Licensing Board subsequently denied PFS' motion for reconsideration of this ruling.⁵

On October 4, 1999, the State filed a request for admission of Late-Filed Amended Contention V, challenging the PFS Environmental Report's reliance on Table S-4 and its failure to consider convergent transportation impacts in the Wasatch Front region:

Amended Contention V. The ER for the PFS facility fails to give adequate consideration to the transportation-related environmental impacts of the proposed independent spent fuel storage installation ("ISFSI") in that it relies on Table S-4, which neglects to consider the impacts of converging many spent fuel shipments on the Wasatch Front region, including the impact of a severe and foreseeable accident on Salt Lake City and its environments, and including economic as well as physical impacts. Therefore, the ER is inadequate to satisfy 10 C.F.R. § 72.108. The impacts on the Wasatch Front must also be considered cumulatively with the impacts on high population areas in Nevada, such as Las Vegas.⁶

In support of this contention, the State relied upon an August 1999 Addendum to NUREG-1437,⁷ which had evaluated the potential cumulative impacts of transporting spent nuclear fuel in the vicinity of the proposed Yucca Mountain repository to determine whether the environmental impacts of transporting higher enrichment and higher burnup spent fuel are consistent with the values stated in Table S-4. NUREG-1437 Addendum 1, at iii.

⁵ In its motion, PFS asserted that this contention "should be circumscribed to include only consideration of regional impacts" as provided in 10 C.F.R. § 72.108. The Board rejected this assertion on the grounds that consideration of "reasonably foreseeable environmental impacts" under NEPA includes "the potentially extra-regional impacts reflected in Table S-4." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-10, 47 NRC 288, 295-96 (1998).

⁶ "State of Utah's Request for Admission of Late-Filed Amended Utah Contention V" (Late-Filed Contention V), filed October 4, 1999, at 2-3.

⁷ NUREG-1437, Vol. 1, Addendum 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (Main Report, Section 6.3 - Transportation Table 9.1 Summary of findings on NEPA issues for license renewal of nuclear power plants)" (Final Report, August 1999).

On June 1, 2000, the Licensing Board issued an Order denying the State's request for admission of Late-Filed Amended Contention V, on the grounds that (1) a balancing of the five factors in 10 C.F.R. § 2.714(a)(1) did not support the late admission of the contention, and (2) to the extent the State sought reconsideration of the Board's April 1998 ruling on original Contention V, its request was untimely. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-14, 51 NRC 301, 311 (2000).⁸

On or about June 16, 2000, the NRC Staff and cooperating federal agencies (the U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, and U.S. Surface Transportation Board) issued their Draft Environmental Impact Statement ("DEIS") concerning PFS' application for an NRC license and its requests for related Federal agency actions, in accordance with their NEPA responsibilities.⁹ In the DEIS, the Staff and cooperating agencies evaluated the environmental effects of their proposed actions, including, *inter alia*, the environmental impacts resulting from transportation of spent fuel to and from the PFS facility. See, e.g., DEIS, § 5.7.1 ("Non-Radiological Impacts"); § 5.7.2

⁸ In its decision, the Licensing Board observed that it would have found all but one portion of Late-Filed Contention V to be admissible, if it had not found the contention to be barred as untimely. LBP-00-14, 51 NRC at 310 n.3. Further, the Licensing Board noted that its ruling "is without prejudice to any additional challenge the State may wish to interpose on this transportation impact "convergence" issue based on any discussion in the soon to be issued Staff draft EIS for the PFS facility. See 10 C.F.R. § 2.714(b)(iii)." *Id.*

⁹ NUREG-1714, "Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah" (June 2000) ("DEIS"); see also, "Notice of Availability of Draft Environmental Impact Statement and Notice of Public Meetings for the Private Fuel Storage, L.L.C.; Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah," 65 Fed. Reg. 39,206 (June 23, 2000).

("Radiological Impacts"); Appendix C ("Rail Routes to the Proposed PFSF Site"); and Appendix D ("Transportation Risks Analysis").¹⁰

On August 2, 2000, approximately 45 days following its June 19 receipt of the DEIS, the State filed the instant request for admission of late-filed Contentions LL, MM, NN, and OO, challenging various aspects of the Staff's DEIS transportation risk analysis.

For the reasons set forth below, the Staff respectfully submits that (a) Contention OO and a portion of Contention NN (pertaining to economic issues) should be rejected on the grounds that they are impermissibly late, and the State has not demonstrated that good cause and the other factors set forth in 10 C.F.R. § 2.714(a)(1) support their admission at this time, and (b) each of these four late-filed contentions fails to set forth an admissible issue for litigation. See 10 C.F.R. § 2.714(b)(2).

DISCUSSION

I. Application of the Late-Filing Standards of 10 C.F.R. § 2.714.

A. Legal Standards for Late-Filed Contentions.

The criteria to be considered when determining the admissibility of a late-filed contention are set forth in 10 C.F.R. § 2.714(a)(1)(i)-(v), as follows:

- (i) Good cause, if any, for failure to file on time.
- (ii) The availability of other means whereby the petitioner's interest will be protected.

¹⁰ The State incorrectly states that "[t]he DEIS transportation analysis was prepared by Science Applications (SAIC, Oak Ridge)" (Late-Filed Request at 2). In fact, the transportation analysis was prepared by the Staff, not SAIC. Similarly, the State is incorrect in suggesting that by including a PFS-specific transportation analysis in the DEIS, the Staff generally adopts the State's criticism of Table S-4 (*see id.*). In fact, the Staff believes that the conclusions in Table S-4 and various generic analyses published by the Commission are not called into question by the Staff's conduct of a PFS-specific analysis. The Staff intends to clarify this matter in the Final EIS.

(iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.

(iv) The extent to which the petitioner's interest will be represented by existing parties.

(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

It has long been held that the first factor, good cause for lateness, carries the most weight in the balancing test. See *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 295 (1993). Absent a showing of good cause, a petitioner must make a compelling showing that the remaining factors outweigh the lack of good cause for the untimely filing. *Id.*; *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). The petitioner, as the proponent of the admission of its late-filed contentions, bears the burden of demonstrating that a balancing of these factors weighs in favor of their admission. *Cf. Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 69 (1992).

Where a contention is based upon the publication of a licensing-related document (such as a DEIS), the institutional unavailability of the document does not establish good cause for filing a contention late if information was publicly available early enough to provide the basis for the timely filing of that contention. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045 (1983). Thus, it has been held that where a contention purportedly is based on the existence of a document recently made publically available, an important consideration in assessing good cause for lateness is the extent to which the contention could have been submitted prior to the document's availability. See *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2),

ALAB-737, 18 NRC 168, 172 n.4 (1983); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-29, 48 NRC 286, 292 (1998).

In evaluating the five lateness factors, two factors -- the availability of other means to protect the petitioner's interest and the ability of other parties to represent the petitioner's interest -- are less important than the other factors, and are therefore entitled to less weight. *Comanche Peak*, CLI-92-12, 36 NRC at 74. With respect to the third factor (the potential contribution to the development of a sound record), petitioners are to provide a "real clue about what they would say to support the contention beyond the minimal information they provide for admitting the contention." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation) LBP-98-7, 47 NRC 142, 208-09 (1998).

Finally, in addition to showing that a balancing of the five factors favors intervention, a petitioner must also meet the requirements for setting forth a valid contention, as stated in 10 C.F.R. § 2.714(d)(2).

B. Contention OO and A Portion of Contention NN Raising Economic Issues Should Be Rejected as Late-Filed Without Good Cause.

In its discussion of the late-filing criteria, the State asserts that it has good cause for filing all four of its late-filed contentions at this time, on the grounds that (a) it filed these contentions shortly after receiving the Staff's DEIS for the PFS facility, (b) it had other litigation-related tasks to perform during this period, (c) the issues are complex and require a significant amount of time to analyze, (d) it had been diligent in raising transportation issues earlier in this proceeding and in a recent Part 51 rulemaking proceeding,¹¹ and

¹¹ The State also cites a Commission statement in the Part 51 rulemaking proceeding, issued in response to the State's assertion that the regulations for license renewal should address transportation impacts along the Wasatch front (Late-Filed Request at 25). The Commission stated:

(continued...)

(e) the Staff's DEIS utilizes methodology and data that differ significantly from those in the Applicant's Environmental Report (Late-Filed Request, at 24-25). Nowhere, however, does the State address the fact that some of the issues raised in these contentions could have been raised sooner, without waiting for the Staff to publish its DEIS.

In this regard, the Staff notes that the Applicant's Environmental Report had included a discussion of the environmental impacts of accidents in transporting spent fuel to and from the PFS facility (see Environmental Report, § 5.2). However, at no time prior to issuance of the Staff's DEIS did the State attempt to challenge the adequacy of PFS' discussion of (or failure to discuss) the economic consequences of transportation accidents involving spent fuel. Further, while the State now asserts that a RADTRAN5 economic analysis should be conducted with respect to accidents involving the transportation of spent fuel to the PFS facility (Late-Filed Request, at 21, 22-23), the State altogether failed to raise this issue with respect to the Applicant's Environmental Report. Significantly, RADTRAN5 has been available to the State for some time (see Late-Filed Request, at 22 n.15), and any assertion based on that document should have been made long ago. Further, the State

¹¹(...continued)

[T]he NRC is currently reviewing a site-specific application for construction and operation of the proposed Private Fuel Storage facility at Skull Valley in a separate regulatory action. A site-specific study of the cumulative impacts of transportation is part of that review. The study will be reported in a draft Environmental Impact Statement to be published for public comment[.]

Statement of Consideration, "Changes to Requirements for Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 64 Fed. Reg. 48,496, 48,501 (September 3, 1999). While the State appears to suggest that this statement supports the admissibility of the instant contentions, in fact, this statement reflects no more than the Commission's recognition that the Staff was considering site-specific transportation issues in its EIS for the PFS facility. The Commission did not suggest that its established rules governing the admissibility of late-filed contentions should be disregarded in this proceeding.

could have raised an economic consequence contention when it filed its initial contentions in 1997 -- based, for example, on RADTRAN4, which served as the basis for some of the radiological issues asserted in initial Contention Utah V. See Late-Filed Request, at 2; Utah Contentions (November 1997) at 159. Accordingly, the State's assertions are unjustifiably late without good cause.

In this regard, 10 C.F.R. § 2.714(b)(2)(iii) provides:

On issues arising under the National Environmental policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner can amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement . . . that differ significantly from the data or conclusions in the applicant's document.

Accordingly, it has been held that "as a matter of law, an intervenor must file contentions on the basis of an applicant's ER, and does not have good cause for delaying its filing until issuance of a Staff document unless it establishes that new or different data or conclusions are contained in that Staff environmental document." *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 251 (1993).

The State asserts that "the methodology and the data used in the DEIS differ significantly from the Applicant's Environmental Report," in an apparent attempt to meet the requirements of 10 C.F.R. § 2.714(b)(2)(iii) -- arguing that this factor supports the admission of all four of its late-filed contentions (Late-Filed Request at 25-26). However, the sole support for this assertion is the State's reference to "Section II.A" of its Late-Filed Request (*Id.*) -- which pertains only to radiological analyses, and nowhere mentions the economic consequences of transportation accidents. See Late-Filed Request at 3-7. Accordingly, the State has not shown that any differences between the Applicant's Environmental Report and the DEIS support its late filing of concerns regarding the economic impacts of transportation accidents.

In short, the unavailability of the DEIS until now does not establish good cause for the late filing of these economic contentions, particularly since information was publicly available to the State early enough to provide a basis for timely filing these contentions. *See, e.g., Catawba*, CLI-83-19, 17 NRC at 1045; *Seabrook*, ALAB-737, 18 NRC at 172 n.4; *Private Fuel Storage*, LBP-98-29, 48 NRC at 292. Further, the State has not shown that the other factors set forth in 10 C.F.R. § 2.714(a)(1) support the late-filing of these contentions.

Regarding factors two and four, while the State's interest may not be represented by existing parties with respect to the issues raised in these late-filed contentions, other means are available to protect the State's interest with respect to these issues, in that the State has an opportunity to comment on the Staff's Draft EIS evaluation of transportation issues. *See* 65 Fed. Reg. at 39,207. Thus, there is no merit in the State's assertion that "there is no other forum in which the State can raise its concerns regarding the DEIS's analysis of spent fuel transportation risks for the PFS facility" (Late-Filed Request at 26).

With respect to factors three and five, the State's participation may arguably be expected to assist in developing a sound record; however, as recognized by the State, the admission of this contention will broaden the issues in the proceeding. Late-Filed Request, at 27. NEPA issues are included in Group III, which is scheduled for hearing in July 2001. Inclusion of these complex contentions at the end of the hearing process will require time for discovery, summary disposition motions, and the preparation of testimony, all of which would have to be accounted for in the schedule for the litigation of this contention. Thus, the Staff believes that the admission of these contentions will cause a delay in the overall schedule for this proceeding.

In sum, the Staff submits that the State has failed to establish good cause for the late filing of Contention NN (relating to economic issues) and Contention OO, inasmuch as

the State could have framed these contentions long ago. Further, the State's lack of good cause for filing this contention late is not overcome by a "compelling" showing that the other factors specified in 10 C.F.R. § 2.714(a)(1) favor its admission. *State of New Jersey* (Department of Law and Public Safety's Requests Dated October 8, 1993), CLI-93-25, 38 NRC 289, 296 (1993). For these reasons, the Staff submits that these late filed contentions should be rejected.

II. Application of the Commission's Standards for Admission of Contentions.

A. Legal Standards for Admission of Contentions

1. Standards applicable to all contentions

In order for a contention to be admitted to a proceeding, the requirements of 10 C.F.R. § 2.714 must be met. *Duke Energy Corporation* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333 (1999); *Yankee Atomic Electric Company* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 248 (1996). A contention must meet the standards set forth in 10 C.F.R. § 2.714(b)(2), which provides that each contention must consist of a "specific statement of the issue of law or fact to be raised or controverted" and must be accompanied by:

- (i) A brief explanation of the bases of the contention;
- (ii) A concise statement of the alleged facts or expert opinion which supports the contention . . . together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion;
- (iii) Sufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact.

10 C.F.R. § 2.714(b)(2). The failure of a contention to comply with any one of these requirements is grounds for dismissing the contention. See 10 C.F.R. § 2.714(d)(2)(i); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 and 3),

CLI-91-12, 34 NRC 149, 155-56 (1991); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 178-181 (1998).

With respect to documentary or other factual information or expert opinion alleged to provide the basis for a contention, the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention. In the case of a document, the Board should review the information provided to ensure that it does indeed supply a basis for the contention. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989); *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990); *see also Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996)(a document put forth by an intervenor as the basis for a contention is subject to scrutiny both for what it does and does not show). Contentions that are not supported by some alleged fact or facts should not be admitted, nor should the full adjudicatory hearing process be triggered by contentions that lack a factual and legal foundation. *Oconee*, CLI-99-11, 49 NRC at 334-35, *citing Final Rule*, "Rules of Practice for Domestic Licensing Proceedings -- Procedural Changes in the Hearing Process," 54 Fed. Reg. 33,168, 33,172 (1989). Further, when a postulated accident scenario provides the premise for a contention, a causative mechanism for the accident must be described and some credible basis for it must be provided. *Vermont Yankee*, ALAB-919, 30 NRC at 44.

Finally, a contention must show that a genuine dispute exists with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.714(b)(2)(iii); *Oconee*, CLI-99-11, 49 NRC at 333-34. "The intervenor must "be able to identify some facts at the time it proposes a contention to indicate that a dispute exists between it and the applicant on a material issue.'" *Id.* at 335, *citing* 54 Fed. Reg. at 33,171.

2. Standards for admission of environmental contentions

The Commission has established standards, in addition to those described above, applicable to the admission and treatment of environmental contentions. In this regard, it is well established that the National Environmental Policy Act of 1969, as amended (“NEPA”), is to be interpreted by a “rule of reason.” See *Vermont Yankee*, ALAB-919, 30 NRC at 44, citing *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989) and *San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287, 1300 (D.C. Cir. 1984), *aff’d en banc*, 789 F.2d 26, *cert. denied* 479 U.S. 923 (1986).

Under this “rule of reason,” not all alleged environmental or economic impacts need to be considered in an Environmental Impact Statement under NEPA, regardless of their likelihood of occurrence. Rather, an EIS is required to consider only those environmental impacts which are “reasonably foreseeable” to result from the agency’s action; “remote and speculative” environmental impacts, in contrast, need not be considered. See, e.g., *Scientists’ Institute for Public Information, Inc. v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973); *Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2)*, ALAB-518, 9 NRC 14, 38-39 (1979); *Public Service Co. of Oklahoma (Black Fox Station, Units 1 & 2)*, LBP-78-26, 8 NRC 102, 141 (1978).

Under the NEPA “rule of reason,” an agency need not consider remote and speculative risks, or “events whose probabilities they believe to be inconsequentially small.” *Vermont Yankee*, ALAB-919, 30 NRC at 44. In addition, neither NEPA nor the case law based thereon requires a “worst case analysis.” See *Vermont Yankee*, ALAB-919, 30 NRC at 44, citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333-34 (1989).

For the reasons discussed below, the Staff submits that under these standards, the State’s late-filed contentions do not merit admission as litigable issues in this proceeding.

B. The State's Late-Filed Contention LL Does Not Meet the Standards for the Admission of Contentions, Set Forth in 10 C.F.R. § 2.714.

The State proposes Contention LL as follows:

The DEIS fails to comply with requirements of 10 CFR § 51.70 and NEPA in that it underestimates the risks posed by transportation of spent fuel to the PFS facility, because it ignores elements of the project which affect the transportation risks.

Late-Filed Request at 9. Contention LL consists of two subparts, which, together with their bases, are discussed below.

1. Contention LL, Subpart 1

In Subpart 1 of Contention LL, the State asserts that “[t]he DEIS ignores the impacts of incident-free transportation that result from the loading of fuel and from the intermodal transfer from trucks to railheads near reactor sites.” *Id.* As its basis for this assertion, the State argues that (a) 14 of the 19 reactors owned by the PFS members do not have rail access (*id.* at 9-10); (b) there would be additional radiological impacts on workers at these sites as a result of cask loading and transfer operations, and loading and sealing canisters, comparable to radiological impacts at the Timpie intermodal transfer facility (ITF) (*id.* at 10); and (c) there would be additional radiological exposures to members of the public due to intermodal transportation from reactor sites to railheads, which the State attempts to calculate (*id.*).¹² Accordingly, the State asserts that the Maine Yankee-to-PFSF route analyzed by the Staff is not representative of the reactors owned by PFS members, and that the predicted increase in latent cancer fatalities (“LCFs”) is six times greater than the LCF value predicted by the Staff. *Id.* at 9, 11-12.

¹² In part, the State's calculation uses the population dose calculated by the Staff for heavy haul transportation from the proposed ITF to the proposed PFSF, but assumes a suburban population density of 719 persons/km² rather than the rural population density of 1.3 persons/km² used by the Staff for the route from the ITF to the PFSF. See Late-Filed Request, at 11.

a. Contention LL, Subpart 1, lacks adequate basis.

The Staff submits that subpart 1 of Contention LL lacks adequate basis, in that certain of the State's assertions conflict with the documentation on which the State relies. First, the State miscalculates the number of reactors from which spent nuclear fuel ("SNF") would be removed by means other than rail transport. While the State asserts that PFS members own 19 reactors, in fact, the DEIS shows that they own 20 reactors.¹³ Second, the State claims that 14 of these "19" reactors currently "do not have rail access" and therefore "will have to" use heavy-haul transport to remove SNF from their sites -- citing Table J-12 of the Department of Energy ("DOE") Draft EIS for Yucca Mountain¹⁴ (Late-Filed Request at 9-10). In fact, however, Table J-12 lists 15 of the 20 reactors owned by PFS members as "[c]ommercial sites with direct rail access." Yucca Mountain DEIS, Table J-12, at J-28--30; emphasis added.¹⁵ The State's incorrect assumption is significant, since the State's entire calculation rests upon its misunderstanding of the number of reactors that may have, or lack, direct rail access.

¹³ The reactors owned by PFS members are listed in Table 1.1 of the DEIS. These are: Indian Point (Units 1 and 2); San Onofre (Units 1, 2, and 3); La Crosse Boiling Water Reactor; D.C. Cook (Units 1 and 2); Clinton; Oyster Creek; Three-Mile Island; Monticello; Prairie Island (Units 1 and 2); Farley (Units 1 and 2); Hatch (Units 1 and 2); and Vogtle (Units 1 and 2). DEIS at 1-9. This list, of course, is subject to change in view of the ongoing trends involving industry integration and acquisitions.

¹⁴ "Draft 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" (DOE, July 1999) ("Yucca Mountain DEIS").

¹⁵ Thus, even if some of these reactor sites may indeed require repairs or upgrades to permit direct rail transport, the State has provided no basis for its assumption that they could not obtain such direct access in the future. For example, the State does not indicate that direct rail access could not be provided to these reactor sites by improvements such as repair or upgrade of existing rail lines or grade crossings, or installation of a short rail line segment to connect the fuel handling building with an existing on-site rail line.

Further, contrary to the State's apparent belief that heavy haul transport will be utilized by all of the reactors that lack direct rail access, the Yucca Mountain DEIS indicates that SNF from one of the five reactors in question (Oyster Creek), could be transported to the railhead by barge (*Id.*, at J-77 and J-78) -- which the Yucca Mountain DEIS indicates would result in "small" public exposures. *Id.* at J-73. Similarly, while two other PFS member-owned reactors (Monticello and La Crosse) are identified in the Yucca Mountain DEIS as sites from which SNF would be removed by legal-weight trucks (*Id.* at J-11), the Yucca Mountain DEIS explains that shipment by legal-weight trucks was analyzed for sites "that do not have the capability to load rail casks" (*Id.* at J-10, emphasis added). Table J-12, however, is silent as to whether Monticello and La Crosse lack rail access or whether some other impediment exists which could be cured in the future so as to permit rail shipment.¹⁶

In sum, the documentation relied on by the State (the Yucca Mountain DEIS) shows that only two reactors at a single site (Indian Point, Units 1 and 2) -- out of the 20 reactors owned by PFS members (*i.e.*, 10% of PFS member-owned reactors) -- may be expected to be move SNF via heavy-haul vehicles to the railhead. In contrast, in Contention LL, the State calculates the occupational, transportation crew, and public doses associated with heavy haul transport by multiplying the corresponding doses for the ITF by a factor of 14/19 (*i.e.*, 73.7%). Because the document relied upon by the State shows that the correct factor should be 2/20 or, at most, 4/20 (*i.e.*, 20 %, assuming Monticello and La Crosse lack direct rail access), the State's calculated increased dose (Late-Filed Request at 11), based on this

¹⁶ While Table J-12 indicates that SNF may not now be shipped from Monticello and La Crosse by rail cask, the State does not assert that the installation of loading capability is impracticable at those sites, or that any local transportation method other than rail will ultimately be used there. Because the State has not asserted any reason to believe the Monticello and La Crosse reactors would not ultimately be able to use direct rail transport, the only PFS member-owned reactors that may lack direct rail access in the future may be Indian Point Units 1 and 2.

error alone, is at least three and one-half (or as much as seven) times too high. Thus, this asserted issue, on its face, lacks the requisite factual basis to support the admission of Contention Utah LL.

Other errors are readily apparent in this contention. For example, the State appears to assume, without any supporting basis, that the distance for heavy-haul transport to the nearest railhead from any site that lacks rail access is the same as the distance from the Timpie ITF to the proposed PFSF (Late-Filed Request at 10). In fact, these distances would vary from reactor to reactor, and could be much shorter than the 26 miles from the ITF to the PFS site. See DEIS at 2-39. The State provides no reason why such a long route, through suburban areas only, should be used for analyzing heavy-haul transportation of SNF from a reactor to a railhead. Accordingly, the State's assumption lacks any basis -- and this further compounds the errors in the State's dose calculations resulting from its mistake as to the number of reactors that lack direct rail access.

In addition, the State assumes, without any supporting foundation, that the population density for the entire (assumed) 26-mile heavy-haul route from reactor to railhead may be appropriately modeled as having a suburban population density (*i.e.*, 719 persons/km²). In making this assumption, the State purports to use a "default suburban population density in RADTRAN4" (Late-Filed Request at 11). The State fails, however, to provide any reason to believe this is an appropriate value to assign to those reactor sites' population density. In fact, population densities are likely to vary from reactor to reactor, and no basis was provided by the State to believe that its use of this suburban default value is appropriate. Accordingly, this portion of the basis for this contention lacks basis and should be rejected.

The State also asserts that "reactor personnel who load and seal the canisters, and who transfer the canisters, to a transportation overpack, would also receive doses that are

not included in the DEIS. According to the DEIS, the additional occupational dose to crew members “resulting from this exposure at the Timpie end of the operation is 0.50 person-rem per year.” Late-Filed Request at 10 (emphasis added). This assertion, however, lacks any factual basis, in that canisters are not “loaded,” “sealed” or “unloaded” at the Timpie ITF.¹⁷ This portion of the State’s basis for Contention LL thus lacks any factual validity, and should be rejected.

As set forth in the discussion of legal principles above, the Board is required to review the State’s documentary evidence, to determine what it does or does not show. See *Vermont Yankee*, ALAB-919, 30 NRC at 48; *Yankee Atomic*, LBP-96-2, 43 NRC at 90. Further, contentions that lack factual basis must be rejected. *Oconee*, CLI-99-11, 49 NRC at 334-45. In the Staff’s view, each of the errors identified above, and the repudiating information contained in the documents on which the State relies, shows that Contention Utah LL lacks adequate factual basis. The factual error in Contention LL, Subpart 1, pertaining to the number of reactors that lack direct rail access result in the State’s estimate of occupational, transportation crew, and public population doses being at least three and one-half times too high, without even considering the other errors described above. Therefore, the State has not shown any reason to believe that the DEIS significantly underestimates the radiation doses resulting from cross-country transportation of SNF. The State’s basis is erroneous on its face, and Contention LL, Subpart 1, therefore should not be admitted.

¹⁷ Contrary to the State’s apparent assumption, canister transfer would take place at the PFSF, not the ITF. See, e.g., DEIS at 2-19 to 2-22.

- b. The State has not shown that it has a genuine dispute on a material fact with respect to Contention LL, Subpart 1

As required by 10 C.F.R. § 2.714(d)(2)(iii) and discussed above, a contention, must show that a genuine dispute exists on a material issue of law or fact. *Oconee*, CLI-99-11, 49 NRC at 333, 335. As, set forth below, the Staff submits that the State has not demonstrated that it disputes the results documented in the DEIS regarding the doses and radiological risks associated with the cross-country transportation of SNF.

The State asserts that the latent cancer fatalities (LCFs) calculated in the DEIS would increase sixfold if the doses from intermodal transportation and transfer from reactors to railheads were included in the DEIS (Late-Filed Request at 11-12). However, the risk the State derived from its calculations, even if true, is smaller than the risks discussed in NUREG-0170,¹⁸ referred to in the DEIS. Thus, based on the evaluation of doses resulting from the cross-country transportation of SNF documented in NUREG-0170, the Commission concluded long ago that its regulations are “adequate to protect the public against unreasonable risk from the transport of radioactive materials.”¹⁹ The conclusions documented in NUREG-0170, which were approved by the Commission in its 1981 determination not to revise its transportation regulations, are reiterated in the DEIS for this facility. DEIS at 5-36 to 5-38. Further, the risk (erroneously) postulated by the State is smaller than the risk evaluated in NUREG-0170 -- which the Commission found to be

¹⁸ NUREG-0170, “Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes” (Dec. 1977).

¹⁹ See “Withdrawal of Advance Notice of Rulemaking (Radioactive Material; Packaging and Transportation by Air),” 46 Fed. Reg. 21,619, 21, 620 (April 13, 1981).

small.²⁰ See DEIS, Table 5.5, *citing* NUREG-0170, Table 4-18. Accordingly, the State's assertions fail to establish a genuine dispute of material fact.

Further, the State does not assert that the doses and LCFs it calculates for its proposed Contention LL, Subpart 1, are unacceptable -- and, based on the foregoing, that risk is small. Moreover, that risk does not take into account the errors in the State's calculations that exaggerate dose, as described above. Based on the above, the State has not shown that a genuine dispute exists with respect to the doses and risks associated with the cross-country transportation of SNF. The facts the State disputes are not material to the results of the dose assessment documented in the DEIS. Accordingly, Contention LL, Subpart 1, should be rejected.²¹

²⁰ Table 5.5 of the DEIS lists an estimated dose for the transport of 200 casks per year to the proposed PFSF of 0.104 person-Sieverts per year. The State estimates a dose of 1.26 person-Sieverts per year. Late-Filed Request at 12 n.5 (Table 1). That dose, however, is below the 2.98 person-Sieverts per year (for 652 shipments) found acceptable in NUREG-0170. See NUREG-0170 at 4-47. NUREG-0170 documents the conclusion that "the average radiation dose to the population at risk from normal transportation is a small fraction of the limits recommended for members of the general public from all sources of radiation other than natural and medical sources (Chapter 3, Section 3.5), and is a small fraction of natural background dose (Chapter 3, Section 3.3)." *Id.* at vii.

²¹ In addition, the State's assertions concerning at-reactor canister and cask loading doses are not accompanied by any assertion that such doses are significant or would change any result in the DEIS. Because the doses set forth in the DEIS (and NUREG-0170) are bounding with respect to such doses, the State has not established that a genuine dispute exists on a material issue of fact with respect to these doses. Those doses are simply immaterial to the results of the dose assessment documented in the DEIS. Accordingly, this portion of Contention LL, Subpart 1, should be rejected.

2. Contention LL, Subpart 2²²

The second part of Contention LL asserts that “[t]he DEIS does not describe the type of railroad cars to be used for transporting casks to the PFS facility, or evaluate the accident risks posed by putting extremely heavy loads on the rails.” Late-Filed Request at 12. The State’s basis for this assertion is that (a) the DEIS relies on an average accident rate for standard railcars (*id.*); (b) “according to the Applicant, it intends to use flat-bed railcars with 3-axle trolleys (also known as ‘Maxson-type’ cars)” (*id.*); and (c) the accident rate for Maxson-type trolleys can be expected to be higher than “the standard railcars evaluated” (*id.* at 13).

a. Contention LL, Subpart 2, lacks an adequate basis

While the State asserts that “according to the Applicant,” PFS intends to use Maxson-type three axle trolleys, it provides no basis for this statement. Nor is any basis for this statement readily apparent. Rather, the Applicant’s Safety Analysis Report (“SAR”) indicates that “the railcars will either be heavy duty 150 ton flatbed cars with 3 axle-trucks or depressed center flatbed cars with double bolsters (two sets of 2-axle trucks) similar to those used by the Department of Defense for their spent fuel shipments.” SAR, § 4.5.5.2, at 4.5.5; emphasis added. Further, PFS has stated that it intends to use a “train which will be built to specifications outlined by the American Association of Railroads [“AAR”] under its proposed standards for nuclear fuel shipments,” and that “insofar as cars for the

²² The State’s Late-Filed Request treats this issue as proprietary, inasmuch as a document attached as Exhibit 2 to its Request is marked “PFS Confidential Information.” Letter from Peter Conlon, Director of Railway Technology Training, of the Transportation Technology Center, Inc. (“TTCI”), to John Donnell (PFS), dated June 16, 1998 (“TTCI Letter”). In this regard, Counsel for PFS has informed the Staff and State that PFS has determined that this letter need not be treated as PFS Confidential Information. No reason appears, therefore, why proprietary treatment of this information is required.

transportation casks, [they] will be . . . built to the AAR standards.”²³ Thus, there does not appear to be any basis for the State’s belief that PFS may use inappropriate railcars.

The sole support for the State’s assertion appears to be a letter from Peter Conlon, Director of Railway Technology Training of the Transportation Technology Center, Inc., to John Donnell (PFS), dated June 16, 1998 (Late-Filed Request, Exhibit 2). This letter, however, does not support the State’s assertion that PFS intends to use accident-prone three-axle trolleys, as stated in Subpart 2 of this contention.

Further, the State ignores available information which demonstrates that its assertions lack factual basis. First, the TTCI Letter states that “the AAR is preparing to develop a performance specification for railcars and trains that will carry spent nuclear fuel.” TTCI Letter at 1.²⁴ As set forth above, PFS has proposed using railcars designed to meet the new standard proposed by the AAR, as is recommended in the TTCI Letter. The State does not assert that railcars meeting the new AAR standard would have a higher accident rate than railcars whose accident rates are reflected in the DEIS. Second, nothing in the TTCI letter or any other basis for this subpart of the contention supports the State’s assertion that PFS intends to choose railcars with three-axle trolleys rather than “double bolster” trolleys having “two sets of 2-axle trucks,” as reflected in its SAR. Accordingly, Contention LL, Subpart 2, is without basis and should be rejected.

- b. The State has not shown that it has a genuine dispute on a material fact with respect to Contention LL, Subpart 2

The State claims that the DEIS does not describe the type of railcars that PFS will use, and does not take a “hard look” at “accident risk posed by placing extremely heavy

²³ Letter dated February 18, 1999, from John D. Parkyn (PFS) to Director, Office of Nuclear Material Safety and Safeguards (NRC), Response to EIS RAI 1-1, at page 4 of 11.

²⁴ The letter indicates that TTCI “is a subsidiary of the Association of American Railroads.” TTCI Letter, at 1.

loads on railroad cars.” Late-Filed Request at 9. The State, however, is silent as to the accident rate for 3-axle trolley railcars. The State does not assert that use of some other accident rate for such cars would significantly change the results documented in the DEIS, and it similarly does not assert that the results of a DEIS analysis of rail accidents could somehow be unacceptable. The State provides no information whatsoever with respect to how the weight of casks compares to other loads transported by rail, or how cask weight might affect rail accident rates.

While Federal agencies are required under NEPA to take a “hard look” at environmental impacts, the State has provided no reason to believe that the railcars ultimately chosen by PFS will have a greater accident rate than those which have been analyzed in the past. A different result might obtain if such information had been presented. *See, e.g., Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 444-46 (1996) (requiring an agency to take a “hard look” at an issue, where the agency had information that might have warranted a different outcome). Accordingly, the State has not shown that it has a genuine dispute of material fact with respect to this issue. Contention LL, Subpart 2, should therefore be rejected.

C. The State’s Late-Filed Contention MM Does Not Meet the Standards for the Admission of Contentions Set Forth in 10 C.F.R. § 2.714.

Contention MM, as proposed by the State, is as follows:

The DEIS does not comply with the requirements of NEPA or 10 C.F.R. § 51.70 because it underestimates the risk of the most severe category of accident by understating both the probability and the consequences.

Late-Filed Request at 13. Contention MM consists of three subparts, which, together with their bases, are discussed below.

1. Contention MM, Subpart 1

The first part of Contention MM is the State's complaint that "[t]he DEIS employs the average rail accident rate, not the rail accident rate for specific rail lines that will be used." *Id.* at 14. The basis for this part of Contention MM is that the Staff used the "INTERLINE" program to select a route from Maine Yankee to the proposed PFSF, and that this route could have an actual accident rate that differs from the average rate used in the calculations in the DEIS. *Id.* The State complains that the route from Maine Yankee is not direct, implying that this somehow results in the use of an accident rate that is too low. *Id.* Further, the State asserts that the INTERLINE program will "not necessarily" choose the routes with the lowest accident rates because it minimizes the number of transfers between railroad companies. *Id.*

a. Contention MM, Subpart 1, does not have an adequate basis

As set forth above, the State may not ignore available information in relevant documents that it cites. *See Vermont Yankee*, ALAB-919, 30 NRC at 48. In proposing Contention MM, Subpart 1, the State ignores a portion of the DEIS that indicates that longer routes are conservative (DEIS at 5-39), *i.e.*, such routes result in overestimating accident risks. Further, the State ignores a portion of the DEIS that explains a second criterion that INTERLINE uses to select routes -- *i.e.*, the INTERLINE model "maximizes the use of rail lines that are used for higher density traffic." *See* DEIS at C-1. The State fails to consider these features of the INTERLINE code, or to explain why the application of these criteria considered by INTERLINE could lead to the selection of non-conservative routes.

Moreover, the State's argument fails to show that any inappropriate assumptions were used in the DEIS for route selection. Further, while the State asserts that an average accident rate may differ from the "accident rate for tracks actually taken" (Late-Filed Request at 14), the State ignores the fact that the actual routes for SNF shipment to the

PFS facility have not yet been identified; therefore, no reason has been provided why the use of an average rate for the representative route used in the DEIS is not appropriate. Accordingly, Contention MM, Subpart 1, lacks factual basis and should be rejected.

- b. The State has not shown that it has a genuine dispute on a material fact with respect to Contention MM, Subpart 1

The route from Maine Yankee to the proposed PFS facility is a representative one, as stated in the DEIS. DEIS at 5-39. Because Maine Yankee is among the furthest sites from which SNF might be shipped to PFS and radiological impacts are particularly sensitive to route length, the dose estimated from shipment of SNF on this route is conservative, (*i.e.*, result in larger doses). *See id.* Moreover, the analysis in the DEIS assumes that all shipments will originate at Maine Yankee. *Id.* The State has not shown, and does not argue, that the representative route analyzed in the DEIS is not conservative with respect to the cumulative effects of all real shipments. Therefore, the State has not shown that a genuine dispute exists with respect to this fact.

Further, neither NEPA nor the case law require a “worst case” analysis. *See Vermont Yankee*, ALAB-919, 30 NRC at 44. Accordingly, even if the State’s unsupported assertion that risk is underestimated were to be accepted, the State has provided no reason to believe that this would result in a modification of the Staff’s already conservative analysis in the DEIS. Contention MM, Subpart 1, should therefore be rejected.

2. Contention MM, Subpart 2

Part 2 of Contention MM is the State’s assertion that “[t]he probability of a severe accident is higher than estimated in the DEIS.” Late-Filed Request at 14. In support of this assertion, the State posits an accident frequency (in accidents per train-kilometer (km))

from the 1987 Modal Study.²⁵ Using the numbers for train-kilometers traveled and the fraction of Category 6 accidents used in the DEIS, the State then calculates the probability of a Category 6 accident as 4/1000 (*i.e.*, 4×10^{-3}).

a. Contention MM, Subpart 2, lacks an adequate basis.

The State does not assert that its calculated probability of a Category 6 accident is different from that used in the Staff's RADTRAN4 analysis, which is reflected in the DEIS.²⁶ The State does not identify any error in the Staff's data or calculations. In fact the DEIS reflects data identical to that relied on by the State. As set forth in the DEIS, "[t]he accident probabilities and release fractions used in this DEIS are based on the Modal Study."²⁷ DEIS at 5-44. The State's reference to the Modal Study, therefore, fails to provide an adequate basis for this contention.

The State also asserts that the DEIS "underestimates the likelihood of the occurrence of a Category 6 accident, because it assumes that some of the accidents that will occur will be minor." Late-Filed Request at 16. The State claims that the Saricks and Kvitek study²⁸ does not include minor accidents in its database, and that this leads to an inaccurate reflection of the frequency of a Category 6 accident. *Id.* at 16-17. Saricks and

²⁵ NUREG/CR-4829, "Shipping Container Response to Severe Highway and Railway Accident Conditions" (1987, reprinted Oct. 1988) ("Modal Study").

²⁶ In an errata notice filed on August 8, 2000, the State withdrew its assertion that its calculation of the category 6 accident probability, of 4×10^{-3} is "greater than the 3.5 accidents per 1000 (or 3.5×10^{-3}) estimated in the DEIS," and it withdrew its footnote 9, related thereto. See "Notification of Errata to State of Utah's Request for Admission of Late-Filed Contentions Utah LL Through OO," dated August 8, 2000.

²⁷ The Staff, as documented in the DEIS, further adjusted the accident rate from the Modal Study (and presented here by the State) to account for the number of cars per train that could be involved in an accident. See Modal Study at 9-15. The State does not raise any dispute with respect to this adjustment.

²⁸ ANL/ESD TM-68, Saricks, C. and Kvitek, T., "Longitudinal Review of State-Level Accident Statistics for Carriers of Interstate Freight" (Argonne National Laboratory, 1994).

Kvitek, however, report that “[t]he rail numerator . . . is total, reportable railcar-accident involvements, by state per unit of time.” Saricks and Kvitek at 9 (emphasis added). In addition, the report states that “[t]he denominator of the unit-risk factor is total railcar-kilometers per unit of time.” *Id.* at 11 (emphasis added). It is apparent, therefore, that Saricks and Kvitek omitted only non-reportable (*i.e.*, minor) accidents.²⁹ Further, including minor, non-reportable incidents in the database would inflate the number of Category 1 accidents, thus lowering the conditional probability of Category 6 accidents (*i.e.*, the data pertaining to severe accidents would represent a smaller percentage of the total number of accidents considered). The State’s basis for Contention MM, Subpart 2, therefore, is at odds with information in the documents upon which it relies. This subpart of the contention should therefore be rejected.

- b. The State has not shown that it has a genuine dispute on a material fact with respect to Contention MM, Subpart 2

The State asserts that, over the entire shipping campaign, the probability of a Category 6 accident is 4 in 1000 (or 4×10^{-3}). Late-Filed Request at 16. The State does not argue that use of its calculated probability would result in any change, let alone a significant change, in the conclusions that the radiological effects transportation of SNF are small, as documented in the DEIS. *See, e.g.*, DEIS at 5-37 - 5-38. Accordingly, the State has not shown that a genuine dispute exists with respect to the significance of the radiological effects of cross-country transportation of SNF.

3. Contention MM, Subpart 3

In Contention MM, Subpart 3, the State asserts that “[t]he DEIS underestimates the radiological consequences of a Severity Category 6 accident, by underestimating the

²⁹ Reportable and non-reportable accidents/incidents are described in 49 C.F.R. §§ 225.15 and 225.19. *See also*, 49 C.F.R. § 225.11 (establishing reporting requirements).

release fraction for CRUD.” Late-Filed Request at 17. The State argues that “all spalled CRUD” (*i.e.*, CRUD that is loosely adhered to the outside of the fuel rods or loose inside the cask) “will be released into the environment if there is a leakage path available, such as a failed seal or open vent.” Late-Filed Request at 18. The State further asserts that “CRUD may escape from a breached or leaking canister, even if the fuel is undamaged.” *Id.*

a. Contention MM, Subpart 3, lacks an adequate basis.

First, it is important to note that the State does not identify any driving force, or causative mechanism, that would cause 100% of spalled CRUD to be released to the environment in the event of an accident. Identification of such a driving force is required for an admissible contention. *See Vermont Yankee*, ALAB-919, 30 NRC at 44. For this reason alone, Contention MM, Subpart 3, should be rejected.

Second, the State argues that because Cobalt-60 (which the State contends is the major radioactive component in the CRUD, Late-Filed Request at 18) is present “both inside *and* outside the fuel,” the release fraction for Cobalt-60 should be higher. Late-Filed Request at 19 (emphasis in original). While the presence of Cobalt-60 both inside and outside the fuel might affect the amount of Cobalt-60 that would be available for release, given a particular accident category, its presence is not logically related to any driving force for a release; nor does the State attempt to explain why such a relationship should be assumed to exist.³⁰ Accordingly, the State’s assertion does not provide any basis for this portion of Contention MM.

Finally, the State asserts that the Staff’s calculations are inconsistent with other calculations. First, the State declares that “SAND88-1358 assumed that 100% of CRUD

³⁰ The Staff notes that Cobalt-60 is not a fission product; rather, it is an activation product that may be present in the metal structure of certain fuel assemblies, but is not present in the spent fuel pellets themselves. Thus, it is unclear what the State intends when it refers to Cobalt-60 “inside . . . the fuel.” Late-Filed Request at 19.

would be spalled from fuel rods for all impact-related releases.” Late Filed Request at 19 (emphasis added). The State, however, does not explain how the mere fact that CRUD is spalled from fuel rods during an accident would be a reason to presume that all such CRUD would be released during that accident. Second, the State asserts that the Yucca Mountain DEIS is based on default assumptions contained in the RISKIND computer code which, according to the State, includes a 100% release of CRUD in the event of a severe accident. Late-Filed Request at 19. However, regardless of how RISKIND treats CRUD, it is apparent that DOE did not use an assumption of a 100% CRUD release in its RADTRAN4 calculations for accident doses. See Yucca Mountain DEIS, at J-57 (Table J-21).³¹ Thus, these assertions do not support the admission of the contention. In view of the above, the State has not provided a basis for Contention MM, Subpart 3, and it should not be admitted.

- b. The State has not shown that it has a genuine dispute on a material fact with respect to Contention MM, Subpart 3

The State does not contend that the doses it calculates, based on its assumption of 100% CRUD release, as compared to the Staff’s analysis in the DEIS, would result in any significant change to the calculated doses or LCFs, when compared to the results obtained in NUREG-0170, as discussed in the DEIS (at 5-37 - 5-38). To be sure, the State does assert that the dose to a person residing in a contaminated area for one week would be increased by 10% compared to the DEIS, and, for a person residing in a contaminated area for a year, the dose would be increased by 23% compared to the EIS. Late-Filed Request at 20. Table 3 of the Late-Filed Request summarizes the increases in LCF resulting from the State’s calculations. However, an examination of Table 5.7 in the DEIS reveals that the increases in LCF asserted by the State (even if assumed to be correct) remain well within the results of NUREG-0170 -- which found the risks of transportation accidents to be small.

³¹ Table J-21 in the Yucca Mountain DEIS corresponds to Table D-4 in the DEIS.

The State does not assert otherwise, and does not assert that the doses and LCFs would be anything but small. Therefore, the State's dispute is immaterial to the results of the dose and risk calculations documented in the DEIS. The State has not shown that a genuine dispute exists with respect to the significance of the radiological effects of the cross-country transportation of SNF. Accordingly, the contention should be rejected.

D. The State's Late-Filed Contention NN Does Not Meet the Standards
for the Admission of Contentions, Set Forth in 10 C.F.R. § 2.714.

Contention NN, as proposed by the State, is as follows:

The DEIS fails to comply with the requirements of 10 C.F.R.
§ 51.70 and NEPA in that it does not describe or analyze the
environmental impacts of a maximum credible accident.

Late-Filed Request at 20.

The State argues that the analysis set forth in the DEIS of the risk of transportation is improperly cast in terms of the fractional likelihood of latent cancer fatalities (LCFs), rather than environmental impacts. *Id.* at 20-21. The State asserts that the DEIS does not explain what the health or economic consequences would be for any of the categories of transportation accidents analyzed in the DEIS, and that "one is left to wonder" what those consequences may be." *Id.* at 21. The State then proposes several questions that it might ask regarding any particular accident scenario, and observes that none of its questions "is answered in the DEIS." *Id.*

Contention NN lacks an adequate basis.

Significantly, the State does not provide an analysis of any credible accident, to show that the effects of such an accident are significant and should be included in the DEIS analysis. Further, while insisting that the DEIS must include analysis of such an accident, the State does not identify any accident scenario that it believes would be appropriate for analysis. The State simply postulates an undefined "maximum credible accident," without

indicating that its undefined accident is any more severe than the accident categories considered in the DEIS. Therefore, whether such an accident is in fact credible, whether it would have significant radiological effects beyond the effects analyzed in the DEIS, or whether it is remote and speculative, cannot be determined. The State's assertion fails to contain sufficient basis to support an admissible contention, as required in 10 C.F.R. § 2.714(b)(2)(ii)-(iii). Therefore, the State has not raised an issue that can be litigated. See *Vermont Yankee*, ALAB-919, 30 NRC at 48.

The State refers to two documents which it claims included the type of analysis it seeks here: (a) the Yucca Mountain DEIS, and (b) the Final Environmental Statement (FES) for the Seabrook facility.³² Late-Filed Request at 21-22. The State's assertions lack merit.

While the State alleges that Appendix H of the Yucca Mountain DEIS contains "an extensive discussion of the consequences of severe transportation accidents" (Late-Filed Request at 21), the State does not mention the probability of such an accident. Without a description of an accident sequence, it is not possible to evaluate whether such an accident is credible or not. Further, Appendix H to the Yucca Mountain DEIS, which the State cites, does not analyze transportation accidents.

Moreover, the Yucca Mountain DEIS states that "[t]he analysis evaluated the impacts for these accidents, assuming the accident occurred without regard to the estimated probability." Yucca Mountain DEIS at H-1; emphasis added. Inasmuch as Appendix H of the Yucca Mountain DEIS disregarded the question of whether the accident was credible (versus remote and speculative), reference to Appendix H of the Yucca Mountain DEIS does not assist the State in meeting the requirements of 10 C.F.R. § 2.714 for this contention.

³² NUREG-0895, "Final Environmental Statement related to the operation of Seabrook Station, Units 1 and 2" (Dec. 1992) ("Seabrook FES").

With respect to the Seabrook FES, the analysis to which the State refers (Late-Filed Request at 21-22) was for reactor accidents. Thus, while the analysis in the Seabrook FES may have included the type of analysis the State seeks, it did so only for severe reactor accidents. See Seabrook FES at 5-47 to 5-64. In contrast, the analysis in the Seabrook FES for the transportation of radioactive materials relies on Table S-4 (Seabrook FES at 5-26) -- and thus did not utilize the RADTRAN5 approach championed by the State here.

Further, in the Seabrook FES, severe reactor accidents were considered to be “of exceedingly low probability of occurrence.” *Id.* 5-35. These accidents are not credible, but were included in power reactor EISs under an interim Commission policy statement.³³ The Statement of Interim Policy, however, applied only to power reactors. There is no reason why it should be applied to an EIS for facilities other than power reactors, or to the transportation of radioactive material; nor does the State assert any such reason. Accordingly, the Seabrook FES does not constitute an EIS model that is appropriate for emulation for the PFS facility.

In sum, the State has provided no reason to believe that the DEIS transportation accident analysis fails to consider any credible accident, nor has the State provided any information to indicate that any accident which it postulates is either a credible accident or

³³ Statement of Interim Policy, “Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969,” 45 Fed. Reg. 40,101 (June 13, 1980). This interim statement was succeeded by the Commission’s “Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants,” 50 Fed. Reg. 32,138 (1985) (“Final Policy Statement”), which stated that the objective of the Commission’s severe accident policy is to “take all reasonable steps to reduce the chances of occurrence of a severe accident involving substantial damage to the reactor core and to mitigate the consequences of such an accident[.]” *Id.* at 32,139. The Final Policy Statement, therefore, similarly applied only to reactors. Further, the Commission considers the risks of beyond design-basis accidents in initial reactor operating license proceedings as a matter of discretion, rather than as a requirement of NEPA. *Vermont Yankee*, ALAB-919, 30 NRC at 50 n.29, *citing San Luis Obispo Mothers for Peace*, 751 F.2d 1287, 1301 (D.C. Cir. 1984), *aff’d on rehearing en banc*, 789 F.2d 26 (D.C. Cir. 1986).

an accident that falls outside the scope of the accident categories considered in the DEIS. Accordingly, it has failed to satisfy the basis requirements set forth in 10 C.F.R. § 2.714(b)(2).

Moreover, while the State contests the DEIS's manner of presenting transportation risks (Late-Filed Request at 21), it is well established that in addressing risk, an EIS need not consider the consequences of accidents wholly disconnected from the accidents' probability of occurrence, as the State seeks here. Rather, the Staff may, in its discretion, employ an "overall risk analysis," as opposed to some other methodology, to evaluate risk. *See City of New York v. U.S. Dept. of Transportation*, 715 F.2d 732, 751 (1983). Accordingly, the State's assertions do not establish an admissible contention.

The State cites 10 C.F.R. § 51.70 and NEPA as authority for requiring the DEIS to include environmental and economic analysis of a maximum credible accident. Late-Filed Request at 20. The provisions in § 51.70, however, only state certain procedural requirements for preparation of an EIS by the Staff, and do not impose any specific requirement as to the type of analysis any such EIS must include.³⁴

In addition, it is important to note that the casks used to transport SNF to the proposed PFS facility must be certified in accordance with the requirements set forth in 10 C.F.R. Part 71. Part 71 requires that certified cask designs be evaluated against hypothetical accident conditions. 10 C.F.R. § 71.73. In order for the NRC to certify a particular cask design, the evaluation must show that the cask would meet specific release

³⁴ Requirements for the content of a draft EIS are set forth in 10 C.F.R. § 51.71. While that section requires the DEIS to provide an analysis that considers and weighs the environmental effects of the proposed action, and should include consideration of economic, technical, and other benefits and costs of the action, it contains no specific requirements pertaining to an analysis of maximum credible accidents, nor does it require separate consideration of accident consequences disconnected from the probability of occurrence.

criteria in the event of such an accident. 10 C.F.R. § 71.51. PFS must (and will) use NRC-certified shipping casks to transport SNF to the PFSF. *See, e.g.*, DEIS at 2.16. Accordingly, reliance may be placed on the Commission's generic evaluation of the adequacy of its rules in Part 71, based on its consideration of the environmental effects of transportation accidents and radiological releases in NUREG-0170, leading to the Commission's determination that its Part 71 regulations are adequate to protect public health and safety, without requiring revision. *See* 46 Fed. Reg. 21,619 (1981).

In view of the foregoing, Contention NN should be rejected.

E. The State's Late-Filed Contention OO Does Not Meet the Standards for the Admission of Contentions, Set Forth in 10 C.F.R. § 2.714.

Contention OO, as proposed by the State, is as follows:

The DEIS fails to comply with the requirements of 10 C.F.R. § 51.70 or NEPA in that it does not address economic risks or consequences of a transportation accident.

Late-Filed Request at 22.

The State argues that 10 C.F.R. § 51.71(d) requires the consideration of economic benefits and costs in a DEIS. *Id.* The State asserts that "an accident involving a radiological release during transportation of nuclear waste could have extremely large costs associated with it." *Id.* The State complains that the DEIS lacks a discussion of this matter, and that the Staff should have used the economic modeling capability in the RADTRAN5 program to estimate such costs. *Id.* at 22-23. The State goes on to report the results of its own economic analysis of such an accident. *Id.* at 23, and Appendix A.

Contention OO lacks an adequate basis.

In presenting its economic analysis, the State postulates an accident scenario in which it is "assumed" that 63% of the radioactive gas inventory is released, along with 0.2% of volatile solids and 0.002% of particulates, and 100% of the CRUD inventory. *Id.*,

Appendix A at 1. The State obtains the first three values from the Category 6 accident values stated in the DEIS. *Id.*, citing DEIS Table D-4 (see DEIS at D-8). However, the State fails to identify any justification for its final assumption (a 100% CRUD release). Further, the State fails to describe any causative mechanism whereby such an accident might occur, as is required by *Vermont Yankee*, ALAB-919, 30 NRC at 44.³⁵

Accordingly, Contention OO should be rejected.³⁶

CONCLUSION

Based upon the foregoing, the Staff submits that Contentions LL-OO do not meet the standards for the admission of contentions set forth in 10 C.F.R. § 2.714(b). Further, Contentions OO and a portion of Contention NN (related to economic matters) should be rejected as untimely. Accordingly, Late-Filed Contentions LL - OO should be rejected.

Respectfully submitted,

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Dated at Rockville, Maryland
this 30th day of August 2000.

³⁵ By failing to spell out the causative mechanism for its accident “scenario,” the State makes it impossible to evaluate whether its “scenario” is remote and speculative, and whether that accident “scenario” warrants consideration in the DEIS. Indeed, the State admits that its analysis considers a “severe rail accident” in an urban area. The State at one point uses a population density of 567 persons/km², which it asserts is the population density of Salt Lake City (Late-Filed Request, Appendix A at 1), and at another uses an urban population density of 1344 persons/km² (*Id.* at 3). The State does not, however, identify what the accident is, where it might occur, or what its probability of occurrence might be. While “severe” accidents may have large consequences, they may also be of very low probability. The State does not claim that its postulated accident is of high enough probability to warrant consideration as anything other than a remote and speculative event.

³⁶ As discussed in section I. B., *supra*, the State has also failed to provide good cause for the late filing of this contention.

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-ISFSI
)	
(Independent Spent)	
Fuel Storage Installation))	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSE TO STATE OF UTAH'S REQUEST FOR ADMISSION OF LATE-FILED CONTENTIONS UTAH LL THROUGH OO," in the above captioned proceeding have been served on the following through deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in the U.S. Postal Service, as indicated by double asterisk, with copies by electronic mail, this 30th day of August, 2000:

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