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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

ON FILE
ADJ

In the Matter of:)	Docket No. 72-22-ISFSI
)	
PRIVATE FUEL STORAGE, LLC)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel)	
Storage Installation))	February 9, 2000

**STATE OF UTAH'S MOTION TO COMPEL
DEPOSITION OF NRC STAFF WITNESS**

INTRODUCTION

Pursuant to 10 C.F.R. § 2.720(h)(2), the State of Utah hereby moves to compel the Nuclear Regulatory Commission ("NRC" or "Commission") Staff to produce a witness for deposition who is knowledgeable about the technical content of and basis for the NRC Staff's safety evaluation of the thermal analysis for the HI-STAR 100 storage cask system. In correspondence and telephone conversations, the NRC Staff has refused to produce such a witness. This motion is supported by the Declaration of Marvin Resnikoff, Ph.D., dated February 8, 2000,¹ attached hereto as Exhibit 1.

FACTUAL BACKGROUND

Contention H challenges the adequacy of the site-specific thermal analysis for

¹ The State anticipated that it would file its Motion to Compel on February 8th, and that is why Dr. Resnikoff's Declaration refers to State's February 8th Motion to Compel. However, the State waited until today to file this Motion in order to discuss the matter again with the NRC Staff.

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PFS's proposed use of Holtec International's HI-STORM 100 storage cask system at the PFS facility. The Staff has conducted a safety review of this site-specific thermal analysis, and found it to be adequate with respect to the issues raised in Utah Contention H. NRC Staff's Statement of Its Position Concerning Group I-II Contentions, Contention Utah H (Inadequate Thermal Design) (hereinafter "Staff's Position on Utah H") at 8 (December 15, 1999).

The Staff's safety evaluation of the site-specific thermal analysis for the PFS facility is not a stand-alone analysis, but rather relies in part on the Staff's generic safety evaluation of the HI-STORM 100 storage cask system, which was performed in support of the proposed HI-STORM 100 Certificate of Compliance. For instance, in its statement of its position with respect to Contention H, the Staff makes the following response to the State's assertion that "[s]torage casks used in the License Application are not analyzed for the PFS maximum site design ambient temperature of 110°:

The HI-STORM 100 system was analyzed for an ambient temperature up to 125°F. Holtec International's analyses were reviewed by the staff and found to be acceptable, as noted in the Staff's safety evaluation report for the HI-STORM 100 system dated July 30, 1999."

Staff's Position on Utah H at 8.

The HI-STORM 100 SER relies in turn on the Staff's safety evaluation for the HI-STAR 100 storage cask system. In particular, rather than performing a new computer run to confirm the methodology and results of Holtec's thermal analysis for the HI-STORM 100 storage cask system, the Staff relied on the computer analysis performed by the Staff

for the HI-STAR 100 storage cask system. As stated in the HI-STORM 100 SER:

4.5.4 Confirmatory Analysis

The staff reviewed all inputs, assumptions, *methodology, and results* of the applicant's temperature and pressure analyses which were submitted in support of the SAR. All the assumptions were found to be in compliance with NUREG-1536 Section 4.V.5.(c). Input parameters are consistent with design values for the HI-STORM overpack. The applicant selected suitably bounding and appropriate boundary conditions for normal, off-normal, and accident conditions. *Previous staff evaluation of the applicant's HI-STAR 100 SAR's FLUENT computer code results, using the ANSYS finite element computer code, confirmed the temperature calculation results of this method.* The staff performed independent calculations for the form loss and friction loss coefficients used by the applicant to simulate the hydraulic characteristics of the internal air passage. The applicant's form loss coefficients were found to be suitably bounding and applicable to the specific geometry of the HI-STORM 100 air passages. The staff evaluated and accepted the applicant's selected heat transfer coefficients. *The temperature and pressure results were found to be correctly calculated using the identified inputs, assumptions, and methodology.*

Holtec International Hi-STORM 100 Cask System, Preliminary Safety Evaluation Report at 4-8 (July 30, 1999) (emphasis added).

The SER for the HI-STAR 100 storage cask system discusses the computer analysis referred to in the HI-STORM 100 SER as follows:

The staff reviewed the models used by the applicant in the thermal analyses. The code inputs in the calculation packages were checked for consistency to confirm that the applicant used the appropriate material properties and boundary conditions where required. The engineering drawings were also consulted to verify that proper geometry dimensions were translated to the code model. The material properties presented in the TSAR were reviewed to verify that they were appropriately referenced and used conservatively. In addition, the staff performed a confirmatory analysis of the thermal performance of the cask SSCs identified as important to safety. *A detailed model of the fuel regions and basket geometry was developed using the ANSYS finite element code to ensure that the TSAR results were realistic and conservative. Independent homogenized thermal resistances were determined for the confirmatory calculation and employed in the model.*

The temperature distributions generated by the staff's model displayed agreement with those values determined by the applicant.

Holtec HI-STAR 100 Cask System, Preliminary Safety Evaluation Report, at 4-10 (September 30, 1998) (emphasis added).

Thus, rather than perform new computer calculations for its safety evaluation of the HI-STORM 100 thermal analysis, the Staff referred back to computer analyses performed by the Staff for the HI-STAR 100 SER, which are described in some detail in the HI-STAR 100 SER. By referencing the HI-STORM 100 safety evaluation in the safety evaluation for the site-specific PFS thermal analysis, the NRC Staff must in turn rely on the HI-STAR 100 safety evaluation and the computer runs done in support of that analysis. These computer runs were not duplicated or repeated for either the HI-STORM 100 SER or the Staff's safety evaluation of the site-specific thermal analysis for the PFS facility. Instead, the Staff's position statement on Contention H, the SER for the HI-STORM 100 storage cask, and the SER for the HI-STAR 100 storage cask, show a chain of reliance by the Staff on computer analyses that were performed by the Staff for the HI-STAR 100 SER.

PROCEDURAL BACKGROUND

On February 3, 2000, State's counsel, Diane Curran, wrote to NRC Staff's counsel, Sherwin E. Turk, requesting that the Staff make available for deposition a witness or witnesses who is or are knowledgeable about the Staff's evaluations of the thermal analyses that were performed by Holtec for the PFS facility, the HI-STORM 100 storage

cask system, and the HI-STAR 100 transportation cask system. E-mail message from Diane Curran to Sherwin Turk, attached hereto as Exhibit 2. Counsel for the Staff responded in a letter dated February 4, 2000. The Staff agreed to produce Jack Guttman, a Staff witness who is familiar with the site-specific PFS and generic HI-STORM 100 thermal analyses. The Staff refused, however, to produce a Staff witness who is knowledgeable about the Staff's evaluation of the generic thermal analysis for the HI-STAR 100 cask system, on the grounds that (a) the HI-STAR transportation cask is beyond the scope of the proceeding, (b) Contention H relates only on the HI-STORM 100 cask, and (c) there is no apparent basis for the State's assertion that "the Staff is relying on its SERs for both the HI-STORM and HI-STAR cask systems for its evaluation of the thermal analysis for the PFS facility." Letter from Sherwin E. Turk to Diane Curran (February 4, 2000), attached hereto as Exhibit 3.

In an effort to resolve the matter without resort to litigation, counsel for the State replied on February 7 to Mr. Turk's letter, setting forth the various indications in the record that the Staff's safety evaluation of the site-specific thermal analysis for the PFS facility relies indirectly on the safety evaluation for the HI-STAR 100 cask system. Letter from Diane Curran to Sherwin E. Turk, attached hereto as Exhibit 4. The State then filed its Notice of Deposition of NRC Staff Witness Regarding NRC Staff Safety Evaluation of HI-STAR 100 Cask System, dated February 7, 2000 (hereinafter "Notice of Deposition"). On February 8, 2000, counsel for the State notified counsel for the NRC of an error in her previous correspondence, which had mistakenly referred to the Staff's evaluation of the

thermal analysis for the HI-STAR 100 *transportation* cask system. E-mail message from Diane Curran to Sherwin Turk, attached hereto as Exhibit 5. The State then filed its Corrected Notice of Deposition of NRC Staff Witness Regarding NRC Staff Safety Evaluation of HI-STAR 100 Cask System on February 8. As Ms. Curran noted in her e-mail message to Mr. Turk, the error had no effect on the substance of the State's position. In fact, the HI-STAR 100 cask system is referred to as a "storage" cask system, although the components of the system include a Multi-Purpose Cask that is also intended to be used for transportation. When counsel for the State called NRC Staff counsel to verbally alert him to this error, Mr. Turk reiterated his previous refusal to produce a witness who is specifically knowledgeable about the Staff's evaluation of the thermal analysis for the HI-STAR 100 storage cask system.

Mr. Turk, in a February 9 phone conversation with Ms. Curran, indicated that the Staff's position on this matter remains the same, and requested that the State make mention in this Motion the fact that the Staff would have filed a Motion for a Protective Order after receiving the February 7 Notice of Deposition, but will not since the State is filing this Motion to Compel.

ARGUMENT

NRC regulations at 10 C.F.R. § 2.720(h)(2)(i) provide in relevant part that:

In a proceeding in which the NRC is a party, the NRC staff will make available one or more witnesses designated by the Executive Director for Operations, for oral examination at the hearing or on deposition regarding any matter, not privileged, which is relevant to the issues in the proceeding.

As permitted by this regulation, the State has asked the NRC Staff to identify and produce for deposition a witness who is knowledgeable about the Staff's safety evaluation of the thermal analysis for the HI-STAR 100 storage cask system. Notably, the State has not asked the Staff to produce a particular individual, which would require a showing of "exceptional circumstances." *Id.* Instead, the State has asked the Staff to designate an individual who is knowledgeable about a particular subject. The dispute between the parties, and the standard that must be applied by the Board to resolve this Motion, centers on whether that subject is "relevant" to the proceeding. *See Safety Light Corporation (Bloomsburg Site Decontamination)*, LBP-92-3A, 35 NRC 110, 111-12 (1992). The standard for relevance in discovery is "more liberal" than the admissibility standard used for hearings: discovery will be granted if it "could reasonably lead to obtaining evidence that would be admissible at the future evidentiary hearing on this proceeding." *Id.*

Here, the requested deposition should be granted because it is reasonably calculated to lead to the discovery of evidence that would be admissible at the hearing on Contention H. Specifically, the State seeks to learn the extent to which the Staff now relies or relied in the past on the HI-STAR safety evaluation for its evaluation of the site-specific thermal analysis for PFS facility.

The State also seeks to use the deposition for the purpose of exploring inconsistencies between representations made by the Staff in the SERs for the HI-STORM and HI-STAR storage cask systems, and representations made by the Staff in response to discovery on Contention H. For instance, the passages of the HI-STORM 100

and HI-STAR 100 SERs that are quoted in the Factual Background above provide clear indication that the NRC Staff performed and relied on independent computer analyses, using the ANSYS code, to confirm the methodology and results of the HI-STAR 100 thermal analysis. This computer analysis was in turn relied on for the Staff's safety evaluation of the HI-STORM 100 storage cask system, as reported in the HI-STORM SER.

More recent responses by the NRC Staff to discovery questions by the State appear to undermine and contradict these representations. The Staff's January 10 responses to the State's Request for Admission Nos. 16, 17 and 18 now indicate that (a) contrary to the assertions in the HI-STAR SER, it was not the Staff who used the ANSYS code, but an individual named Steven Hogsett; (b) Mr. Hogsett did not run the ANSYS code for the benefit of the Staff's safety review, but for his own personal understanding; (c) Mr. Hogsett has left the agency; and (d) there apparently are no surviving records of Mr. Hogsett's analysis. These responses state as follows:

REQUEST FOR ADMISSION NO. 16: Do you admit that the NRC Staff or one of its contractors has run one or more computer codes, other than FLUENT, for the purpose of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system.

STAFF RESPONSE. No. Neither the NRC staff nor its contractors has run a computer code other than FLUENT for the purpose of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system. However, a former member of the Staff ran the ANSYS code in connection with his review of the HI-STAR transportation cask, as more fully described in response to Request for Admission No. 17, below.

REQUEST FOR ADMISSION NO. 17: Do you admit that the NRC Staff or one

of its contractors ran the ANSYS computer program for the purpose of evaluating the thermal design of the HI-STAR 100 transportation cask system.

STAFF RESPONSE. No. However, on information and belief, an individual member of the Staff (Mr. Steve Hogsett) performed an ANSYS computer run for the purpose of obtaining a better understanding of the HI-STAR cask design and to confirm the Holtec ANSYS calculations. Mr. Hogsett is no longer employed at the NRC.

REQUEST FOR ADMISSION NO. 18: Do you admit that neither the NRC Staff nor its contractor maintained any record of the inputs or outputs to the run(s) of the ANSYS computer code that was (were) done for the purpose of evaluating the thermal design of the HI-STAR 100 transportation cask.

STAFF RESPONSE. The Staff objects to this request on the grounds that it improperly contains a compound question. Notwithstanding this objection, the Staff notes that it has not located any records concerning Mr. Hogsett's ANSYS computer run, or the inputs or outputs related thereto.

NRC Staff's Objections and Responses to the "State of Utah's Third Set of Discovery Requests Directed to the NRC Staff (Utah Contention H)" (hereinafter "Staff Response Third Set") at 11-12 (January 10, 2000). The Staff also claims in response to discovery that it "does not rely on the results of Mr. Hogsett's run of the ANSYS computer code for the HI-STAR 100 transportation cask to support its determination that the thermal design of the PFS facility is adequate to protect public health and safety." Staff's Response Third Set at 12, Admission Request No. 19.

The contradictions between the SERs and the Staff's discovery responses raise fundamental questions about the validity of the safety evaluation performed by the Staff for the HI-STAR 100 thermal analysis, and the legitimacy of the Staff's reliance on the HI-STAR safety evaluation for its approval of the HI-STORM 100 thermal analysis.

This, in turn, raises grave questions about the extent to which the Staff relied in the past on the HI-STAR safety evaluation for its approval of the site-specific PFS thermal analysis, the nature and timing of the change in reliance, the reasons for the change, and whether those reasons are safety-based or pragmatic. Because these inquiries may lead to the discovery of admissible evidence regarding the basis for the Staff's evaluation of the site-specific thermal analysis for the PFS facility, they are relevant under the NRC's discovery standards, and the requested deposition should be allowed.

CONCLUSION

For the foregoing reasons, the State's Motion to Compel the NRC Staff to produce a witness who is knowledgeable about the HI-STAR 100 thermal analysis should be granted.

DATED this 9th day of February, 2000.

Respectfully submitted,



Denise Chancellor, Assistant Attorney General
Fred G Nelson, Assistant Attorney General
Connie Nakahara, Special Assistant Attorney General
Diane Curran, Special Assistant Attorney General
Laura Lockhart, Assistant Attorney General
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Utah Attorney General's Office
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CERTIFICATE OF SERVICE

'00 FEB 25 P 3:40

I hereby certify that a copy of STATE OF UTAH'S MOTION TO COMPEL

DEPOSITION OF NRC STAFF WITNESS was served on the persons listed below by
electronic mail (unless otherwise noted) with conforming copies by United States mail

first class, this 9th day of February, 2000:

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A handwritten signature in black ink, appearing to read "Denise Chancellor", written over a horizontal line.

Denise Chancellor
Assistant Attorney General
State of Utah

EXHIBIT 1

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

PRIVATE FUEL STORAGE, LLC
(Independent Spent Fuel
Storage Installation)

)
) Docket No. 72-22-ISFSI
)
) ASLBP No. 97-732-02-ISFSI
)
) February 8, 2000

DECLARATION OF MARVIN RESNIKOFF, Ph.D.

I, Dr. Marvin Resnikoff, declare under penalty of perjury and pursuant to 28 U.S.C. § 1746, that I am the State of Utah's expert witness on Contention H, and have assisted the State in conducting discovery on Contention H throughout this proceeding. The factual statements contained in State of Utah's February 8, 2000 Motion to Compel Deposition of NRC Staff Member are true and correct to the best of my knowledge, information and belief.

Executed this 8th day of February 2000.

By:

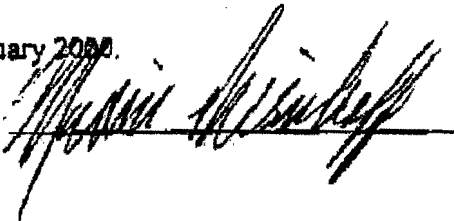


EXHIBIT 2

From: "Diane Curran" <dcurran@harmoncurran.com>
To: Sherwin Turk <pfscase@nrc.gov>
Date: 2/3/00 10:00AM
Subject: Depositions

Dear Sherwin,

I am writing to follow up on our telephone conversation this morning about the State's wish to depose the NRC Staff's expert witness(es) on Contention H. As I told you on the telephone, the State has reviewed the NRC Staff's interrogatory responses, and it does not appear that the Staff has identified an expert witness for Contention H. My understanding from our conversation is that the Staff's expert witness will be Jack Guttman. Please update your discovery responses to confirm that this is correct.

In our conversation, I also told you that in the deposition, the State wants to be able to question a Staff member or members who is or are knowledgeable about the Staff's evaluations of the thermal analyses that were performed by Holtec for the PFS facility, the HI-STORM 100 storage cask system, and the HI-STAR 100 transportation cask system. This is important because, as you know, the Staff is relying on its SERs for both the HI-STORM and HI-STAR cask systems for its evaluation of the thermal analysis for the PFS facility.

It is my understanding from our conversation that Mr. Guttman is familiar with the thermal analyses for the PFS facility and the HI-STORM 100 cask system. However, you did not know whether he was also familiar with the thermal analysis for the HI-STAR 100 cask system. Please let me know as soon as possible whether Mr. Guttman is familiar with the HI-STAR thermal analysis, or identify someone else who can be questioned at the deposition. We ask that whatever witnesses you provide be the same individuals who are responsible for the technical conclusions reached by the Staff regarding the adequacy of the Holtec thermal analyses for the HI-STORM and HI-STAR cask systems and the PFS facility. If Mr. Guttman is only partially or tangentially responsible for reviewing the HI-STORM 100 or HI-STAR 100 thermal analyses, we will want to talk to the key reviewer(s) as well. For efficiency's sake, we are amenable to interviewing Staff members in a panel. Our chief concern is to have access to fully knowledgeable individuals.

As I mentioned on the telephone, in consideration of the expert witnesses' schedules, the State and PFS have arranged for depositions of our Contention H experts on March 8 and 9, with the permission of the Licensing Board. The State would like to take Mr. Guttman's and any other NRC Staff member's deposition on the 10th of March. We also

wonder whether the Staff witness(es) could be available on the afternoon of March 9th. If the depositions of the State and PFS witnesses go quickly, we would like to be able to follow them directly with the Staff deposition(s).

Please call me as soon as possible so that we can make the necessary arrangements. I will be out of the office this afternoon, but will be checking my office voice mail. I will also be in the office tomorrow morning.

Thank you very much.

Sincerely,
Diane Curran

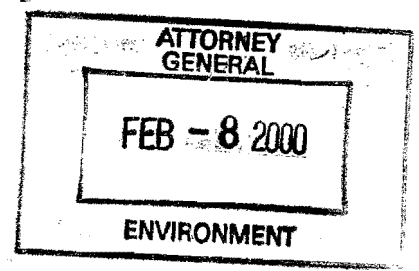
CC: Denise Chancellor <dchancel@state.ut.us>, Connie Nakahara <atkey01.cnakahar@state.ut.us>

EXHIBIT 3



OFFICE OF THE
GENERAL COUNSEL

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



February 4, 2000

Diane Curran, Esq.
Harmon, Curran, Spielberg
& Eisenberg, L.L.P.
1726 M. Street N.W., Suite 600
Washington, D.C. 20036

In the Matter of
Private Fuel Storage L.L.C.
(Independent Spent Fuel Storage Installation)
Docket No. 72-22-ISFSI

Diane
Dear ~~Ms.~~ Curran:

This is in reply to your E-mail message of yesterday, concerning the State of Utah's ("State") interest in conducting depositions of the NRC Staff ("Staff") concerning Contention Utah H (thermal analysis). Our position with regard to the matters identified in your message is as follows.

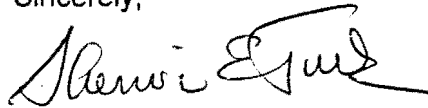
- (1) As I indicated in our conversation yesterday, the Staff will present Jack Guttman as its witness on Contention Utah H. We will update our responses to the State's discovery to make this clear, although I believe this is already apparent.
- (2) The Staff will agree to your request that Mr. Guttman be made available for a deposition on Contention Utah H on March 10, 2000, notwithstanding the fact that this represents an extension of the February 15 cutoff date for discovery against the Staff. Mr. Guttman will not be available on March 9, as we will need some time to prepare for his deposition following the depositions of PFS and State witnesses.
- (3) The Staff does not plan to make a witness available for depositions on the HI-STAR transportation cask. The issue of transportation cask safety is beyond the permissible scope of this proceeding. In addition, Utah Contention H addresses only the HI-STORM storage cask, not the HI-STAR transportation cask; and the Staff's statement of position, filed on December 15, 1999, addresses only the HI-STORM cask, not the HI-STAR cask. I see no apparent basis for your assertion that "the Staff is relying on its SERs for both the HI-STORM and HI-STAR cask systems for its evaluation of the thermal analysis for the PFS facility."
- (4) As indicated in our interrogatory responses, Mr. Guttman is familiar with both the PFS and HI-STORM thermal analyses; he should be able to respond adequately to your questions on the HI-STORM cask. Although other persons may well be familiar with the thermal analyses for the HI-STORM cask system, you have provided no

Diane Curran, Esq.
February 4, 2000
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reason to believe that any "exceptional circumstances" exist such that other Staff witnesses need to be made available for deposition. See 10 CFR 2.720(h)(2)(i). Accordingly, we would not agree to depositions of persons other than Mr. Guttman, and our agreement to extend the discovery period, set forth in paragraph (2) above, applies only to his deposition.

I believe the above represents a reasonable and proper accommodation of the State's request. I look forward to seeing you at the depositions in March.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sherwin E. Turk".

Sherwin E. Turk
Counsel for NRC Staff

cc: Service List

EXHIBIT 4

HARMON, CURRAN, SPIELBERG & WEISENBERG, LLP

1726 M Street, NW, Suite 600 Washington, DC 20036

(202) 328-3500 (202) 328-6918 fax

February 7, 2000

Sherwin E. Turk, Esq.
Office of General Counsel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Licensing Proceeding re: Private Fuel Storage L.L.C.,
Docket No. 72-22-ISFSI

Dear Mr. Turk:

I am writing in reply to your letter of February 4, 2000, in which you responded to my request to make a Staff witness available for deposition regarding the Staff's evaluation of the PFS thermal design, the Holtec HI-STORM 100 cask system thermal design, and the Holtec HI-STAR 100 cask system thermal design. You have agreed to produce Jack Guttman, a Staff witness who is familiar with the the PFS and HI-STORM 100 thermal analyses. As per your telephone message of Friday afternoon, the State is filing a notice of Mr. Guttman's deposition and a motion to extend the discovery schedule until March 10.

You have refused, however, to produce a Staff witness who is knowledgeable about the HI-STAR 100 cask system, on the following grounds:

The Staff does not plan to make a witness available for depositions on the HI-STAR transportation cask. The issue of transportation cask safety is beyond the permissible scope of this proceeding. In addition, Utah Contention H addresses only the HI-STORM storage cask, not the HI-STAR transportation cask; and the Staff's statement of position, filed on December 15, 1999, addresses only the HI-STORM cask, not the HI-STAR cask. I see no apparent basis for your assertion that "the Staff is relying on its SERs for both the HI-STORM and HI-STAR cask systems for its evaluation of the thermal analysis for the PFS facility."

In the hope of resolving this matter without having to seek relief from the Licensing Board, I am writing to request that you reconsider your response. As you know very well, the State's interest in questioning a knowledgeable witness about the HI-STAR 100 thermal analysis has nothing to do with the fact that HI-STAR is a transportation cask. The State seeks to depose a knowledgeable Staff witness regarding the Staff's evaluation of the thermal analysis for the HI-STAR 100 transportation cask system because NRC Staff documents make it quite clear that the Staff has, at least up until now, relied to some extent on its safety evaluation of the HI-STAR 100 transportation cask system in support of its safety evaluation of the thermal analysis for the HI-STORM 100 storage cask system, which in turn is used to justify the Staff's acceptance of the

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Sherwin E. Turk, Esq.

February 7, 2000

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site-specific thermal analysis for the HI-STORM cask at the PFS facility. Thus, an inquiry into the Staff's basis for approving the thermal analysis for the HI-STAR 100 transportation cask system is highly relevant and necessary to the State's understanding of the Staff's basis for approving the site-specific thermal analysis for the casks to be used at the PFS facility.

There is only one place where the Staff disavows reliance on the safety analysis for the HI-STAR 100 cask system: the Staff's January 10, 2000, response to Utah Request for Admission No. 19 regarding Contention H, in which the Staff states that: "The Staff does not rely on the results of Mr. Hogsett's run of the ANSYS computer code for the HI-STAR 100 transportation cask to support its determination that the thermal design of the PFS facility is adequate to protect public health and safety." NRC Staff's Objections and Responses to the State of Utah's Third Set of Discovery Requests Directed to the NRC Staff (Utah Contention H) at 12. This assertion is quite recent, and is contradicted by previous Staff representations demonstrating that the Staff's safety review of the site-specific thermal analysis for the PFS facility is indirectly based on computer analyses that allegedly were performed for the Staff's safety evaluation of the HI-STAR 100 transportation cask system.

There can be no doubt that the Staff relies for its evaluation of the PFS thermal design on the Staff's July 30, 1999, safety evaluation of the thermal design for the HI-STORM 100 storage cask system. In its statement of its position with respect to Contention H, the Staff makes the following response to the State's assertion that "storage casks used in the License Application are not analyzed for the PFS maximum site design ambient temperature of 100°":

The HI-STORM 100 system was analyzed for an ambient temperature up to 125°. Holtec International's analyses were reviewed by the staff and found to be acceptable, as noted in the Staff's safety evaluation report for the HI-STORM 100 system dated July 30, 1999."

NRC Staff's Position Concerning Contention Utah H (Inadequate Thermal Design) at 8.

The SER for the HI-STORM 100 storage cask system, in turn, contains language establishing that the Staff's safety analysis for the HI-STORM 100 storage cask system relied in part on the Staff's safety analysis of the HI-STAR 100 transportation cask system:

4.5.4 Confirmatory Analysis

The staff reviewed all inputs, assumptions, *methodology*, and *results* of the applicant's temperature and pressure analyses which were submitted in support of the SAR. All the assumptions were found to be in compliance with NUREG-1536 Section 4.V.5.(c). Input parameters are consistent with design values for the HI-STORM overpack. The applicant selected suitably bounding and appropriate boundary conditions for normal, off-normal, and accident conditions. *Previous staff evaluation of the applicant's HI-STAR 100 SAR's*

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February 7, 2000

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FLUENT computer code results, using the ANSYS finite element computer code, confirmed the temperature calculation results of this method. The staff performed independent calculations for the form loss and friction loss coefficients used by the applicant to simulate the hydraulic characteristics of the internal air passage. The applicant's form loss coefficients were found to be suitably bounding and applicable to the specific geometry of the HI-STORM 100 air passages. The staff evaluated and accepted the applicant's selected heat transfer coefficients. The temperature and pressure results were found to be correctly calculated using the identified inputs, assumptions, and methodology.

SER at 4-8 (emphasis added). Thus, the SER for the HI-STORM 100 cask system establishes quite clearly that the Staff relied on computer analyses of the HI-STAR transportation cask system to establish the adequacy of the methodology and results of Holtec's thermal analysis for the HI-STORM storage cask system. While the Staff may now seek to change or disavow those assertions, it is relevant to inquire into the reasons for the change, and whether the Staff continues to rely on the HI-STAR 100 SER to any extent.

An opportunity to question a knowledgeable NRC Staff witness on the HI-STAR 100 SER is all the more relevant and important because of the extent to which the Staff's response to Requests for Admissions Nos. 17 and 18 appear to undermine and contradict the assertions in the HI-STAR 100 SER regarding the Staff's basis for approving the HI-STAR 100 thermal design.

The SER for the HI-STAR 100 transportation cask system makes the following assertions regarding the Staff's review of the HI-STAR 100 thermal analysis:

The staff reviewed the models used by the applicant in the thermal analyses. The code inputs in the calculation packages were checked for consistency to confirm that the applicant used the appropriate material properties and boundary conditions where required. The engineering drawings were also consulted to verify that proper geometry dimensions were translated to the code model. The material properties presented in the TSAR were reviewed to verify that they were appropriately referenced and used conservatively. In addition, the staff performed a confirmatory analysis of the thermal performance of the cask SSCs identified as important to safety. A detailed model of the fuel regions and basket geometry was developed using the ANSYS finite element code to ensure that the TSAR results were realistic and conservative. Independent homogenized thermal resistances were determined for the confirmatory calculation and employed in the model. The temperature distributions generated by the staff's model displayed agreement with those values determined by the applicant.

SER at 4-10 (emphasis added). The Staff's January 10 responses to the State's Requests for Admissions Nos. 16, 17 and 18 now indicate that (a) contrary to the assertions in the HI-STAR SER, it wasn't the Staff that used the ANSYS code, but an individual named Steve Hogsett; (b)

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Mr. Hogsett didn't run the ANSYS code for the benefit of the Staff's safety review, but for his own personal understanding; (c) Mr. Hogsett has left the agency; and (d) there apparently are no surviving records of Mr. Hogsett's analysis. These responses state as follows:

REQUEST FOR ADMISSION NO. 16: Do you admit that the NRC Staff or one of its contractors has run one or more computer codes, other than FLUENT, for the purpose of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system.

STAFF RESPONSE: No. Neither the NRC staff nor its contractors has run a computer code other than FLUENT for the purpose of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system. However, a former member of the Staff ran the ANSYS code in connection with his review of the HI-STAR transportation cask, as more fully described in response to Request for Admission No. 17, below.

REQUEST FOR ADMISSION NO. 17: Do you admit that the NRC Staff or one of its contractors ran the ANSYS computer program for the purpose of evaluating the thermal design of the HI-STAR 100 transportation cask system.

STAFF RESPONSE: No. However, on information and belief, an individual member of the Staff (Mr. Steve Hogsett) performed an ANSYS computer run for the purpose of obtaining a better understanding of the HI-STAR cask design and to confirm the Holtec ANSYS calculations. Mr. Hogsett is no longer employed at the NRC.

REQUEST FOR ADMISSION NO. 18: Do you admit that neither the NRC Staff nor its contractor maintained any record of the inputs or outputs to the run(s) of the ANSYS computer code that was (were) done for the purpose of evaluating the thermal design of the HI-STAR 100 transportation cask.

STAFF RESPONSE: The Staff objects to this request on the grounds that it improperly contains a compound question. Notwithstanding this objection, the Staff notes that it has not located any records concerning Mr. Hogsett's ANSYS computer run, or the inputs or outputs related thereto.

The Staff's responses to these requests for admissions cast fundamental doubt on the validity of the safety evaluation performed by the Staff for the HI-STAR 100 thermal analysis, and the legitimacy of the Staff's reliance on the HI-STAR safety evaluation for its approval of the HI-STORM 100 thermal analysis. This, in turn, raises grave questions about the extent and legitimacy of any reliance by the Staff on the HI-STAR safety evaluation for its approval of the site-specific thermal analysis for the PFS facility.

Therefore, under the NRC's standard of relevance, the State is entitled to inquire into the extent to which the Staff may be relying on its evaluation of the HI-STAR 100 thermal analysis for its

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approval of the site-specific thermal analysis for the PFS facility. If the Staff has changed its position to disavow reliance on the Staff's safety evaluation of the HI-STAR 100 thermal analysis, the State is entitled to know when and why.

In closing, I hope that you will reconsider your refusal to produce, for deposition, an NRC Staff witness who is knowledgeable about the safety evaluation for the HI-STAR 100 transportation cask system. Please let me know of your decision by tomorrow noon, so that I can take any necessary action before the Licensing Board.

In the meantime, I am filing a notice of deposition seeking to depose a member of the NRC Staff who is knowledgeable about the thermal analysis for the HI-STAR 100 transportation cask system.

Sincerely,



Diane Curran

cc: Service List

EXHIBIT 5

From: "Diane Curran" <dcurran@harmoncurran.com>
To: Sherwin Turk <SET@nrc.gov>
Date: 2/8/00 9:42AM
Subject: Re: deposition of Staff witness on Contention H

Dear Sherwin:

I am writing to correct an error to the letter I sent you yesterday. I have been since been informed that the NRC Staff safety evaluation of the HI-STAR 100 cask system that is referenced in my letter is actually a safety evaluation for the HI-STAR 100 storage cask system, not the transportation cask system. This change does not affect the substance of my letter. The State continues to assert that the Staff's safety evaluation of the thermal analysis for the HI-STAR storage system is a relevant subject of inquiry in depositions, because the Staff appears to have relied indirectly on the HI-STAR safety evaluation for its site-specific safety findings with respect to the PFS facility.

Please excuse any inconvenience caused by my mistake.

Sherwin Turk wrote:

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> Attached please find the Staff's response to Ms. Curran's E-mail request for depositions of Staff witnesses on Contention H. (Please disregard any previous transmission of this letter that you may have received).

>

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> -----

> Name: LETcurran-Email.wpd
> LETcurran-Email.wpd Type: WordPerfect Document (application/wordperfect5.1)
> Encoding: base64
> Description: WordPerfect 6.1

CC: <kjerry@erols.com>, <joro61@inconnect.com>, <john@kennedys.org>, <GPB@nrc.gov>, <HEARINGDOCKET@nrc.gov>, <JMC3@nrc.gov>, <JRK2@nrc.gov>, <PSL@nrc.gov>, <ernest_blake@shawpittman.com>, <jay_silberg@shawpittman.com>, <paul_gaukler@shawpittman.com>, <cnakahar.atkey01@state.ut.us>, <dchancel@state.ut.us>, <jbraxton@state.ut.us>, <llockhar@state.ut.us>, <quintana@xmission.com>, <CLM@nrc.gov>, <EJL@nrc.gov>, <FIY@nrc.gov>, <JXR@nrc.gov>, <MSD@nrc.gov>, <RMW@nrc.gov>, <scf@nrc.gov>