

January 10, 2000

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))	

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)"

INTRODUCTION

On December 29, 1999, the State of Utah ("State") filed the "State of Utah's Third Set of Discovery Requests Directed to the NRC Staff (Utah Contention H)" ("Request"), concerning the application for an Independent Spent Fuel Storage Installation ("ISFSI") filed by Private Fuel Storage, L.L.C. ("PFS" or "Applicant"). In its Request, the State filed 23 requests for admission, seven interrogatories (numbers 2-8), and six document requests, pertaining to Utah Contention H (adequacy of the HI-STORM 100 cask's thermal design). The NRC Staff ("Staff") hereby files its objections and responses to the State's Request, as follows.¹

¹ The State filed its Request with a notation that it may contain proprietary information. The Staff's answers to the State's Request do not contain proprietary information. In order to file its answers as non-proprietary, the Staff has redacted any potentially proprietary information from its recitation of the State's discovery requests, as indicated herein

GENERAL OBJECTIONS

Objection 1. The Staff objects to each of the State's discovery requests, in that the State has not complied with the Commission's regulations that govern discovery from the Staff. In this regard, it is well established that discovery against the Staff rests on a different footing than discovery in general. *Consumers Power Co. (Midland Plant, Units 1 and 2)*, ALAB-634, 13 NRC 96, 97-98 (1981). While discovery from parties in an NRC adjudicatory proceeding is generally governed by the provisions of 10 C.F.R. § 2.740 *et seq.*, interrogatory and document discovery against the Staff is governed by the provisions of 10 C.F.R. §§ 2.720(h)(ii)-(iii), 2.744 and 2.790.² These regulations establish certain limits to the Staff's obligation to respond to requests for discovery.

In particular, with regard to interrogatories, the Commission's rules provide:

[A] party may file with the presiding officer written interrogatories to be answered by NRC personnel with knowledge of the facts designated by the Executive Director for Operations. Upon a finding by the presiding officer that answers to the interrogatories are necessary to a proper decision in the proceeding and that answers to the interrogatories are not reasonably obtainable from any other source, the presiding officer may require that the staff answer the interrogatories.

10 C.F.R. § 2.720(h)(2)(ii). With regard to requests for the production of documents, the Commission's rules similarly provide:

(a) A request for the production of an NRC record or document not available pursuant to 10 C.F.R. § 2.790 . . . shall set forth the records or documents requested, either by individual item or by category, and shall describe each item or category with reasonable

² See also 10 C.F.R. §§ 2.740(f)(3), 2.740a(j), 2.740b(a), and 2.741(e) (excluding discovery from the Staff from the general provisions of those regulations).

particularity and shall state why that record or document is relevant to the proceeding.

(b) If the Executive Director for Operations objects to producing a requested record or document on the ground that (1) it is not relevant or (2) it is exempted from disclosure under § 2.790 and the disclosure is not necessary to a proper decision in the proceeding or the document or the information therein is reasonably obtainable from another source, he shall so advise the requesting party.

10 C.F.R. § 2.744(b). The rule further provides for application by the requesting party to the presiding officer to compel production of the documents, where the movant shows that the document is relevant to the issues in the proceeding; and the document is not exempt from disclosure under 10 C.F.R. § 2.790 -- or, if exempt, that the document or information is necessary to a proper decision in the proceeding and is not reasonably obtainable from another source. 10 C.F.R. §§ 2.744(c)-(d).³

Moreover, it is an adequate response to *any* discovery request for a party to state that the information or document requested is available in the public domain and to provide information to locate the material requested. 10 C.F.R. § 2.740(b)(1); *accord, Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-79-8, 10 NRC 141, 147-148 (1979).

Here, the State has not complied with any of the Commission's requirements governing discovery against the Staff. First, the State has not indicated that the requested documents and information are not available in the public domain. In this regard, the Staff notes that certain of the information and documents requested by the State pertain to the analyses conducted by Holtec

³ Additionally, 10 C.F.R. § 2.744(e) provides a framework for limited disclosure (under a protective order) of documents exempt from disclosure under 10 C.F.R. § 2.790, upon a finding by the presiding officer that such disclosure is necessary to a proper decision in the proceeding. Cf. 10 C.F.R. § 2.740(c).

International ("Holtec") using the FLUENT computer code, and can be obtained by the State from Holtec or PFS. The State, moreover, is well aware of the fact that this information can be obtained from Holtec or PFS, and, indeed, the State explicitly indicates that its requests seek information as to how Holtec conducted its analyses.⁴ Moreover, the Staff notes that the State has previously attempted to obtain this or similar information from Holtec or PFS (and may still be able to obtain the information from those entities),⁵ and that the State could have obtained this

⁴ In its Request, the State explicitly indicates that its requests relate, in part, to analyses performed by Holtec or information provided to the State by PFS, stating as follows:

The following discovery requests are based on proprietary information prepared by Holtec for PFS and submitted to the NRC in "HI-STORM Thermal Analysis for PFS RAI," Holtec Report No. HI-992134 (February 9, 1999) ("Thermal Analysis"). . . . Holtec labeled this model "EHT."

These discovery requests are also based on information provided to the State by PFS by way of William R. Hollaway's transmittal letter to Diane Curran (November 20, 1999), including the "input" files that were used by Holtec to perform the thermal analysis, and the "output" files that were generated by the analysis.

In addition, these discovery requests are based on representations made by the Staff in the Draft Safety Evaluation Report for the licensing review of the HI-STORM cask system.

Finally, these discovery requests are based on the Staff's Statement of Its Position regarding Utah Contention H, which was submitted to the Licensing Board on December 15, 1999.

Request at 9; emphasis added.

⁵ See, e.g., "State of Utah's Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (containing ten requests for admission (Nos. 1-10) requesting information concerning the thermal analysis conducted by Holtec International that are identical to ten of the State's requests for admission directed to the Staff (Nos. 1-10).

information by reviewing the inputs to the FLUENT computer code utilized by Holtec in its analysis, but elected not to do so, apparently due to its unwillingness to pay the fee required to obtain that information.⁶ Further, other documents requested by the State are available to the public at the Commission's Public Document Room (PDR) or the Local PDR (LPDR) in Salt Lake City. In this regard, the State has not indicated that the requested information and documents are exempt from disclosure under 10 C.F.R. § 2.790 or that it can not obtain the documents from public sources. Similarly, to the extent that any documents may be exempt from disclosure, the State has not explained why any such exempt items are necessary to a proper decision in the proceeding.

Objection 2. The Staff objects to each of the State's discovery requests, insofar as they request information that is not relevant to the issues in this proceeding and/or that exceeds the scope of admitted contentions in this proceeding.

Objection 3. The Staff objects to the State's discovery requests insofar as they relate to matters which are outside the jurisdiction of the NRC and/or are beyond the proper scope of this proceeding.

Objection 4. The Staff objects to each of the State's discovery requests, insofar as they request information or documents from the "Nuclear Regulatory Commission" or the "NRC," or

⁶ See, e.g., letters from Diane Curran, Esq., to William R. Hollaway, Esq., dated December 7 and 16, 1999 (attached as Exhibits 3 and 10 to "Applicant's Motion for Protective Order Regarding Discovery for Utah Contention H," dated December 20, 1999). The State and PFS have since resolved their dispute concerning production of the FLUENT code data and have withdrawn their related discovery motions. See, e.g., letter from Denise Chancellor, Esq., to the Licensing Board, dated December 28, 1999; and letter from Paul Gaukler, Esq., to the Licensing Board, dated January 6, 2000.

other persons or entities who are not members of the NRC Staff or consultants to the Staff in this proceeding. *See, e.g.*, Instruction A, "Scope of Discovery" (Request at 3); and Definition A (Request at 5). The NRC and persons other than NRC Staff members (*e.g.*, the Commissioners, Commissioners' Assistants, Licensing Board members, ACRS members, etc.) are not parties to this proceeding and are not properly subject to the State's requests for discovery in this proceeding.

Objection 5. The Staff objects to each of the State's discovery requests, insofar as they seek to impose an obligation to respond that is different from or greater than the obligations imposed by Commission regulations, as set forth in 10 C.F.R. Part 2. *See, e.g.*, Instruction B, "Lack of Information" (Request at 3).

Objection 6. The Staff objects to each of the State's discovery requests, insofar as they may request information or documents protected under the attorney-client privilege, the doctrines governing the disclosure of attorney work product and trial preparation materials, and/or any other privilege or exemption that warrants or permits the non-disclosure of documents under the Freedom of Information Act, as set forth in 10 C.F.R. § 2.790(a). Notwithstanding this objection, the Staff is preparing a privilege log to identify documents that are sought to be withheld from discovery as privileged, and will produce that log to the State.

RESPONSES TO DISCOVERY REQUESTS

Notwithstanding the above objections to the State's Request, and without waiving these objections or its right to interpose these or other objections in the future, the Staff hereby voluntarily provides the following responses to the State's Request.

A. REQUESTS FOR ADMISSIONS

REQUEST FOR ADMISSION NO. 1: Do you admit that the calculated temperature of the hypothetical reflecting boundary in the EHT model (e.g., the temperature at cell [REDACTED] as reported in the FLUENT output; pg. 41, [REDACTED]) is not the outer concrete surface temperature of a HI-STORM storage cask.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 1). Notwithstanding this objection, the Staff states that it lacks sufficient information to admit or deny this request.

REQUEST FOR ADMISSION NO. 2: Do you admit that the outer surfaces of the HI-STORM casks in the PFS array will be separated by a distance of approximately four feet.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 2). Notwithstanding this objection, the Staff states as follows: Yes.

REQUEST FOR ADMISSION NO. 3: Do you admit that the HI-STORM casks in the PFS array will thermally interact with each other.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 3). Notwithstanding this objection, the Staff states as follows: Yes.

REQUEST FOR ADMISSION NO. 4: Do you admit that the relative thermal contribution of one heated body to another is not a linear function of distance separating the two bodies.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 4). Notwithstanding this objection, the Staff states as follows: Yes; it can, for example, be due to changes in the view factors used in the thermal radiation calculation.

REQUEST FOR ADMISSION NO. 5: Do you admit that in an array of casks such as the PFS cask "Nx2" array, the cask surface closest to adjacent casks will have a higher temperature than a cask surface that is further away from other casks.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 5). Notwithstanding this objection, the Staff states as follows: Yes.

REQUEST FOR ADMISSION NO. 6: Do you admit that only the top two inches of the 36 inch thick PFS concrete ISFSI pad are modeled in the EHT thermal analysis by the FLUENT code.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 6). Notwithstanding this objection, the Staff states as follows: No. On information and belief, the full 36 inch thickness of the concrete was modeled in the EHT thermal analysis using the Fluent code.

REQUEST FOR ADMISSION NO. 7: Do you admit that in the EHT model for the Holtec thermal analysis, the solar insolation energy is modeled as being evenly distributed throughout only the top two inches of the ISFSI pad outside the overpack footprint.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 7). Notwithstanding this objection, the Staff states as follows: Yes. On information and belief, the top two inches of the concrete pad outside the overpack footprint was modeled as a heat generation source equal to the insulating energy.

REQUEST FOR ADMISSION NO. 8: Do you admit that the temperature of the air-ISFSI pad interface (the air immediately above the pad) is not used in the EHT model for the Holtec thermal analysis in determining the chimney effect (buoyancy force) due to insolation.

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 8). Notwithstanding this objection, the Staff states as follows: No. On information and belief, the Fluent computer code, used by Holtec in its EHT analysis, conserves mass and energy as the air travels from the atmosphere, past the pad and into the air passage within the overpack.

REQUEST FOR ADMISSION NO. 9: Do you admit that the temperature of the ISFSI pad outside the cask footprint in the top inch is modeled in the EHT model for the Holtec thermal analysis as [REDACTED].

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 9). Notwithstanding this objection, the Staff states that it lacks sufficient information to admit or deny this request.

REQUEST FOR ADMISSION NO. 10: Do you admit that the temperature of the ISFSI concrete pad outside of the cask footprint is modeled in the EHT model for the Holtec thermal analysis as [REDACTED], and the temperature of the outside of the cask at its midpoint (e.g., [REDACTED] in the file [REDACTED]) is modeled as [REDACTED].

STAFF RESPONSE. See Objection 1 above. This request for admission is identical to a request for admission contained in the State's "Seventh Set of Discovery Requests Directed to the Applicant," dated December 28, 1999 (Request for Admission No. 10). Notwithstanding this objection, the Staff states that it lacks sufficient information to admit or deny this request.

REQUEST FOR ADMISSION NO. 11: Do you admit that the NRC staff or one of its contractors has run the FLUENT code for purposes of evaluating the thermal design of the PFS facility.

STAFF RESPONSE. No. Neither the NRC staff nor its contractors has run the FLUENT code for purposes of evaluating the thermal design of the PFS facility.

REQUEST FOR ADMISSION NO. 12: Do you admit that the NRC Staff or one of its contractors has run the FLUENT code for purposes of evaluating the thermal design of the Holtec HI-STORM 100 storage cask system.

STAFF RESPONSE. No. Neither the NRC staff nor its contractors has run the FLUENT code for purposes of evaluating the thermal design of the Holtec HI-STORM 100 storage cask system.

REQUEST FOR ADMISSION NO. 13: Do you admit that the NRC Staff or one of its contractors has run the FLUENT code for purposes 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 the FLUENT code for purposes of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system.

REQUEST FOR ADMISSION NO. 14: 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 PFS facility.

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 PFS facility.

REQUEST FOR ADMISSION NO. 15: 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-STORM 100 storage 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 HI-STORM 100 storage cask system.

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. Steven 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.

REQUEST FOR ADMISSION NO. 19: Do you admit that to support its determination that the thermal design of the PFS facility is adequate to protect public health and safety, the NRC Staff relies in part on the results of its run of the ANSYS computer code for the HI-STAR 100 transportation cask.

STAFF RESPONSE. No. 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.

REQUEST FOR ADMISSION NO. 20: Do you admit that no computer code run was performed by the NRC Staff or its contractors to independently confirm the temperature calculation results of the FLUENT thermal simulation run by Holtec in support of the licensing application for the HI-STORM 100 storage cask system.

STAFF RESPONSE. Yes.

REQUEST FOR ADMISSION NO. 21: Do you admit that no hand calculation or spreadsheet calculations were performed by the NRC Staff to independently confirm the temperature calculation results of the FLUENT thermal simulation run by Holtec in support of the licensing application for the HI-STORM 100 storage cask system.

STAFF RESPONSE. No. The Staff did not perform any spreadsheet calculations to independently confirm the temperature results of the FLUENT thermal simulation for the HI-STORM 100 storage cask. Some hand calculations were performed by a member of the Staff (Mr. Jack Guttman) to assess the heated equivalent diameter input that went into the calculations; these hand calculations were not retained.

REQUEST FOR ADMISSION NO. 22: Do you admit that no computer code run was performed by the NRC Staff or its contractors to independently confirm the temperature calculation results of the FLUENT thermal simulation run by Holtec in support of the licensing application for the PFS facility.

STAFF RESPONSE. Yes.

REQUEST FOR ADMISSION NO. 23: Do you admit that no hand calculation or spreadsheet calculations were performed by the NRC Staff to independently confirm the temperature calculation results of the FLUENT thermal simulation run by Holtec in support of the licensing application for the PFS facility.

STAFF RESPONSE. Yes.

B. INTERROGATORIES⁷

INTERROGATORY NO. 2: For any computer run admitted to in Requests for Admission Nos. 11 through 17 above, identify the NRC docket number, computer code used, and the individual(s) responsible for performing the computer analysis.

STAFF RESPONSE. See response to Requests for Admission Nos. 17 and 18, above.

Mr. Hogsett's computer run of the ANSYS code was performed in connection with Docket No. 71-9261.

INTERROGATORY NO. 3: For any computer run admitted to in Requests for Admissions Nos. 11 through 17 above, describe in detail the nature of the modeling effort and the source and nature of all inputs to the model.

STAFF RESPONSE. See response to Requests for Admission Nos. 17 and 18, above.

INTERROGATORY NO. 4: If the NRC has performed any hand or spreadsheet calculations for purposes of evaluating the thermal design of the PFS facility, identify the individual responsible for performing the hand or spreadsheet calculations, describe in detail the hand or spreadsheet calculations, and describe the source and nature of all assumptions used in making the hand or spreadsheet calculations.

STAFF RESPONSE. See response to Request for Admission No. 21 above.

INTERROGATORY NO. 5: If the NRC has performed any hand or spreadsheet calculations for purposes of evaluating the thermal design of the Holtec HI-STORM 100 storage cask system, identify the individual responsible for performing the hand or spreadsheet calculations, describe in detail the hand or spreadsheet calculations, and describe the source and nature of all assumptions used in making the hand or spreadsheet calculations.

⁷ The State indicates that "[n]umbering for these interrogatories is continued from the last interrogatory previously submitted to the Staff" (Request at 15).

STAFF RESPONSE. See response to Request for Admission No. 21 above.

Mr. Guttman performed hand calculations to assess the heated equivalent diameter used by Holtec as input to its FLUENT computer code analysis. In addition, an NRC contractor (SAIC) did a hand calculation to confirm the loss coefficients used by Holtec for the air inlet passage. The hand calculations performed for evaluating the heated equivalent diameter utilized the standard equation of $D_H = 4(\text{Area})/\text{heated perimeter}$. The loss coefficients used for air passage up the vent gap (chimney) were based on geometric considerations using a standard handbook (Crane Company, Flow of Fluids Through Valves, Fittings and Pipe, Technical Paper No. 410 (1979)). The geometries are defined in the Holtec HI-STORM 100 SAR.

INTERROGATORY NO. 6: If the NRC has performed any hand or spreadsheet calculations for purposes of evaluating the thermal design of the Holtec HI-STAR 100 transportation cask system, identify the individual responsible for performing the hand or spreadsheet calculations, describe in detail the hand or spreadsheet calculations, and describe the source and nature of all assumptions used in making the hand or spreadsheet calculations.

STAFF RESPONSE. See response to Requests for Admission Nos. 17 and 18 above, concerning Mr. Hogsett's use of the ANSYS computer code in connection with the HI-STAR 100 transportation cask. The Staff lacks sufficient information to state whether any hand or spreadsheet calculations were performed in connection with that review.

INTERROGATORY NO. 7: Identify the NRC Staff member(s) or NRC contractors who are responsible for the conclusions presented in the NRC Staff's statement of its position concerning Utah Contention H, which was filed with the Licensing Board on December 15, 1999.

STAFF RESPONSE. Mr. Jack Guttman.

INTERROGATORY NO.8: Identify all documents submitted by PFS and/or Holtec that were relied on by the Staff in developing its position regarding Contention H, as submitted to the Licensing Board on December 15, 1999.

STAFF RESPONSE. The Staff relied upon various documents submitted for NRC review by Holtec and/or PFS. One such document was a letter from Brian Gutherman (Holtec) to the NRC, dated December 13, 1999, concerning heat transfer issues (discussed in the NRC Staff's Statement of Position on Contention H, dated December 15, 1999, at 13). These documents are a matter of record in the Holtec cask certification proceeding(s) and the PFS docket. The Staff objects to any further specification of the documents it relied upon in developing its position on Contention Utah H, on the grounds that all such documents are available to the State, and it would be unduly burdensome for the Staff to be required to list each of those documents.

C. DOCUMENT PRODUCTION REQUESTS

DOCUMENT REQUEST NO. 1: Provide copies of any computer code(s), other than FLUENT, that were used by the NRC Staff to evaluate the thermal design for the PFS facility, the HI-STORM 100 storage cask system, and/or the HI-STAR 100 transportation cask system.

STAFF RESPONSE. See response to Requests for Admission Nos. 17, 18, 20, 22, and 23, above. The Staff has not been able to locate any documents that may have been used by Mr. Hogsett in performing his ANSYS computer run. Further, the Staff notes that the ANSYS computer code does not belong to the Staff. It is a widely used industry code that can be obtained for a fee from the vendor.

DOCUMENT REQUEST NO. 2: Provide all documents, including computer files, containing assumptions, inputs, and outputs that were used in or produced by any computer runs performed by the NRC Staff for the purpose of evaluating the thermal design of the PFS facility, the HI-STORM 100 storage cask system, and/or the HI-STAR 100 transportation cask system.

STAFF RESPONSE. See response to Requests for Admission Nos. 17, 18, 20, 22 and 23, above. Further, to the extent that this request may seek to obtain documents other than computer-related documents, the Staff notes that it relied upon various documents submitted for NRC review by Holtec and/or PFS. These documents are a matter of record in the Holtec cask certification proceeding(s) and the PFS docket. The Staff objects to providing copies of the documents it relied upon in evaluating the thermal design of the PFS facility, the HI-STORM 100 storage cask system, and/or the HI-STAR 100 transportation cask system, to the extent that these documents are contained in the dockets for those proceedings, on the grounds that all such documents are currently available to the State, and it would be unduly burdensome for the Staff to be required to list each of those documents.

DOCUMENT REQUEST NO. 3: To the extent that you admit Requests for Admissions Nos. 20-23, provide all notes of hand or spreadsheet calculations that were performed, and all related notes, correspondence, reports, and memoranda.

STAFF RESPONSE. See response to Requests for Admission Nos. 20-23, above.

DOCUMENT REQUEST NO. 4: To the extent not already produced under Document Requests Nos. 1-3, provide all notes, memoranda, correspondence, reports, calculations, or other documents which were prepared and/or obtained by the NRC Staff in the course of evaluating the adequacy of the thermal design of the PFS facility. This request includes all documents referenced in the Staff's position statement of December 15, 1999.

STAFF RESPONSE. See response to Document Requests Nos. 1-3, above.

DOCUMENT REQUEST NO. 5: To the extent not already produced under Document Requests Nos. 1-3, provide all notes, memoranda, correspondence, reports, calculations, or other documents which were prepared and/or obtained by the NRC Staff in the course of evaluating the adequacy of the thermal design of the HI-STORM 100 storage cask system.

STAFF RESPONSE. See response to Document Requests Nos. 1-3, above.

DOCUMENT REQUEST NO. 6: To the extent not already produced under Document Requests Nos. 1-3, provide all notes, memoranda, correspondence, reports, calculations, or other documents which were prepared and/or obtained by the NRC Staff in the course of evaluating the adequacy of the thermal design of the HI-STAR 100 transportation cask system.

STAFF RESPONSE. See response to Document Requests Nos. 1-3, above.

Respectfully submitted,

A handwritten signature in black ink that reads "Sherwin E. Turk". The signature is written in a cursive style with a large, sweeping initial 'S'.

Sherwin E. Turk
Counsel for NRC Staff

Dated at Rockville, Maryland
this 10th day of January 2000

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))

AFFIDAVIT OF JACK GUTTMANN

COUNTY OF MONTGOMERY)
) SS:
STATE OF MARYLAND)

Jack Guttman, having first been duly sworn, does hereby state as follows:

1. I am employed as a Senior Nuclear Engineer in the Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, in Washington, D.C.

2. I have reviewed the foregoing responses of the NRC Staff to the "State of Utah's Third Set of Discovery Requests Directed to the NRC Staff (Utah Contention H)," and verify that they are true and correct to the best of my information and belief.


Jack Guttman

Sworn to before me this
7th day of January 2000


Notary Public



My commission expires: March 1, 2003

Jack Guttman
Senior Nuclear Engineer
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards (NMSS)
U. S. Nuclear Regulatory Commission

B.S. in Mechanical Engineering, Michigan Technological University, 1973
M.S. Nuclear Engineering, University of Michigan, 1974

Mr. Guttman has experience in nuclear engineering related to thermal-hydraulic and mechanical engineering analysis. Mr. Guttman worked at the Idaho National Engineering Laboratory as a contractor to the NRC in the area of thermal-hydraulic computer code validation and analysis. He performed analyses that quantified the conservatism between the accident analysis requirements for licensing nuclear power plants (10 C.F.R. Part 50, Appendix K), validated the computer code RELAP for regulatory application by the NRC, and performed independent confirmatory transient and accident analyses of operating reactor events and safety issues defined by the NRC.

While working at the NRC, Mr. Guttman was responsible for reviewing and approving the computer codes used by the nuclear industry for transient and accident analysis. He was the Office of Nuclear Reactor Regulation (NRR) representative on the Advanced Code Review Committee, the Loss of Fluid Test Facility, and the Semiscale Test Facility. Mr. Guttman performed independent analyses of plant operating events, including regulatory responses to the TMI event. He was a member of the BWR Bulletins and Orders Task Force that reviewed the ramifications of the TMI-2 events for boiling water reactors. He reviewed and approved emergency operator procedures for PWR designs and performed quality assurance inspections. Mr. Guttman developed standard review plans for analyzing reactor transient and accident events, developed regulatory guidance and NUREG documents for implementing Risk-Informed In-Service Testing of Piping, and was on the task force for developing Risk-Informed regulatory guidance documents.

With respect to policy development, Mr. Guttman served as a technical assistant to Commissioner Forrest J. Remick. He advised Commissioner Remick on policy development of advanced nuclear power plants, operating reactor issues, research needs, and represented the Commission as an observer on INPO inspections.

Mr. Guttman is currently performing thermal and containment evaluations of spent nuclear fuel transportation and storage casks. His work includes the evaluation of normal, off-normal and accident dose analyses, and the adequacy of the thermal design of spent nuclear fuel casks.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the "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)'" in the above captioned proceeding have been served on the following through deposit in the Nuclear Regulatory Commission's internal mail system, or by deposit in the United States mail, first class, as indicated by an asterisk, with copies by electronic mail as indicated, this 10th day of January, 2000.

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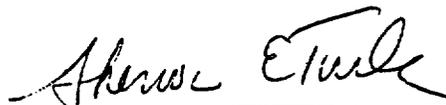
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