

# **EXHIBIT 10**

**HARMON, CURRAN, SPIELBERG & EISENBERG, LLP**

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December 16, 1999

BY FAX

William R. Hollaway, Esq.  
ShawPittman  
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Washington, D.C. 20037-80007

**SUBJECT: Discovery on Utah Contention H in PFS Licensing Case**

Dear Bill,

I am writing to follow up on our telephone conversation of yesterday afternoon, in which you responded to my letter to you of December 14, 1999. My letter provided additional clarification and information regarding the State's request that PFS and/or Holtec identify the "yes-no" and/or numerical choices made in various "decision boxes" that appear in the User's Manual for the FLUENT Code, for each of 18 zones that are identified in the input files that were used for the Holtec thermal analysis. These choices reflect the selection of various equations and/or conceptual models that were used in the thermal analysis. In effect, they constitute the conceptual assumptions that Holtec relied upon in performing the analysis. Without knowing what these assumptions were, it is impossible to evaluate the Holtec thermal analysis.

The State has compromised with PFS regarding our original request to obtain the FLUENT computer code. As I mentioned to you on the telephone, we have decided that we do not need to obtain the FLUENT Code itself, as long as we are able to obtain all of the assumptions that went into the Holtec thermal analysis. PFS has already provided all of the factual assumptions, which are contained in the "case" or "input" files given to us on November 30, 1999. We are still seeking the conceptual assumptions, *i.e.*, the choices that are reflected in the decision boxes in the User's Manual.

In our conversation, you stated that Holtec is able to produce all of the information requested in my letter. You also stated, however, that Holtec does not have this information in an accessible format, and must go back into the FLUENT program to retrieve it. Apparently, the information is buried in the input files, and must be "backed out" of the files by using the FLUENT program. You also stated that Holtec will charge a fee to do this computer analysis, and it is estimated to cost about \$15,000. PFS wants the State to pay the fee.

The State is not willing to pay for the information, other than the normal cost per page of photo-

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copying. If PFS intends to rely on the Holtec thermal analysis to satisfy regulatory requirements needed to obtain a license for the PFS facility, it should be able to provide a party sponsoring a relevant admitted contention with the assumptions that went into the analysis. Otherwise, the Holtec thermal analysis is nothing more than a "black box," incapable of evaluation. The rules of discovery require such documentation to be produced. Moreover, the conceptual assumptions that went into the analysis should have been provided to the NRC Staff when it did its review of the HI-STAR transportation cask, and signed off on the adequacy of the analysis. If the information was produced to the NRC Staff, it should also be producible to us. If it wasn't produced, then we are puzzled as to what was the Staff's basis for approving the adequacy of the thermal analysis.

We believe that if PFS seeks a protective order from the Board, we will prevail on the issue of whether PFS should be required to produce the conceptual assumptions at its own cost. Although courts weigh the burden of discovery on the producing party, burden alone is not grounds for noncompliance with legitimate discovery requests; the requested discovery must be *unduly* burdensome or expensive. *Fann v. Giant Food, Inc.*, 115 F.R.D. 593, 596 (D.D.C. 1987). The mere fact that compliance with a discovery request would cause significant expense does not, of itself, justify denial of the request. *Biben v. Card*, 119 F.R.D. 421, 429 (W.D. Mo. 1987). Where the expense of responding to discovery is due in part to the party's own cumbersome record-keeping system, cost alone is not determinative in deciding whether to accord discovery. *Delozier v. First National Bank of Gatlinburg*, 109 F.R.D. 161, 164 (E.D. Tenn. 1986); *In re Hartley*, 45 B.R. 543, 545 (Bkrtcy. E.D. Pa. 1988); *Baxter Travenol Laboratories, Inc., v. LeMay*, 93 F.R.D. 379, 383 (S.D. Oh. 1981). In this case, there appears to be no justification for PFS's failure to obtain from Holtec some documentary record of the conceptual assumptions that Holtec made in performing its thermal analysis. Without this information, there is no way for the State or any other reviewer to evaluate the thermal analysis or determine whether the assumptions that went into it are reasonable.

If there is some other ground on which PFS intends to seek a protective order, I would be glad to consider it before you go to the trouble of filing a motion.

Please let me know at your earliest convenience whether PFS is willing to produce the requested material. Otherwise, you should go ahead and file a motion for a protective order. Please note that as a result of our discussions, the scope of the requested discovery has narrowed to the identification of the "yes-no" and/or numerical choices in the decision boxes for the 18 "zones" that were identified in my December 14 letter to you, and we will not be seeking production of the FLUENT code itself.

Please call me if you have any questions about this letter.

**HARMON, CURRAN, SPIELBERG & EISENBERG, LLP**

William R. Hollaway

December 16, 1999

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Sincerely,



Diane Curran

cc: Denise Chancellor

**UNITED STATES OF AMERICA**  
**NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

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

**DECLARATION OF INDRESH RAMPALL**

Indresh Rampall states as follows under penalties of perjury:

1. I am a principal engineer at Holtec International. In that position I am responsible for performing engineering and thermal analysis of spent fuel storage systems. I am providing this declaration, in support of a motion for a protective order submitted by Private Fuel Storage, L.L.C. ("PFS") in the above captioned proceeding, to demonstrate the unreasonableness of the cost and burden the State of Utah ("State") asks PFS to bear in responding to the State's discovery request.
2. My professional and educational experience is summarized in the curriculum vitae attached as Exhibit I to this declaration. Since my employment at Holtec International, a substantial portion of my work has been directed towards thermal qualification of spent fuel storage systems in wet and dry conditions. I have performed the expanded HI-STORM thermal (EHT) model incorporating second order thermal effects for the HI-STORM 100 spent fuel storage cask to be used at the Private Fuel Storage Facility (PFSF) for the storage of spent nuclear fuel.
3. In performing the EHT analysis for the HI-STORM 100, I used the "FLUENT" thermal-hydraulic computer code. I use the FLUENT code in performing thermal-hydraulic analyses as part of my responsibilities at Holtec. I

am also responsible for the FLUENT code installation at Holtec and for maintaining Holtec's license with Fluent, Inc. to run the FLUENT code at Holtec.

4. It is not possible for PFS or Holtec to copy the FLUENT code and provide it to the State. The FLUENT code is commercially available from Fluent, Inc. It was developed by and is the intellectual property of Fluent, Inc. As such, Holtec acquired the FLUENT code by purchasing it from Fluent, Inc. along with a license to use the code on a single, identified computer at Holtec. Fluent, Inc. supplies a software license key (which is renewable annually) that enables the FLUENT code to be run only on one computer at Holtec. It is not possible to run the FLUENT code without the software license key. Holtec provided to Fluent, Inc. the hard drive disk serial number for the computer on which Holtec would run the FLUENT code. Fluent, Inc. then wrote the software license key specifically to allow the copy of the FLUENT code it was providing Holtec to run only on the computer for which Holtec had provided the hard drive disk serial number. The code will not run on any computer with a different hard drive disk serial number. Thus, it is not possible for Holtec to copy the FLUENT code and run it on another computer at Holtec. It is also not possible for Holtec to copy the code and give it to another individual to run on some computer outside of Holtec.
5. The software license key is disabled after a date specified by Fluent, Inc. (e.g., the current Holtec license expires on January 2, 2000). If a buyer wishes to use the code after that date, it must purchase an extension of its license from Fluent, Inc. In which case, Fluent, Inc. sends the buyer a new software license key that allows the code to be run until the date specified under the extension of the buyer's license.
6. The thermal analysis of the HI-STORM 100 at the PFSF site, as performed by Holtec using the EHT model and the FLUENT code, is the subject of Contention Utah H in the above captioned proceeding. (The EHT model was used by Holtec to characterize the temperature field in a cask array at the PFSF incorporating the

heat transfer effects that the State had claimed were not present in the original thermal analysis for the HI-STORM 100.) The State of Utah requested the FLUENT code from PFS in discovery in that proceeding. After PFS informed the State that it was not possible for PFS or Holtec to copy the code and provide it to the State and that the price of the code was approximately \$30,000, PFS and the State entered into discussions as to whether PFS could provide documents describing the FLUENT code in lieu of the code itself that would satisfy the State's needs.

7. Over the course of the discussions between PFS and the State, Holtec provided to the State (through PFS) a copy of the relevant sections of the User's Manual for the FLUENT code, which explains the data, equations and relationships the FLUENT code uses to calculate the temperatures of the various components of the HI-STORM 100. It also produced (1) all the "case file" input files (in text form) for the FLUENT code runs that were performed using the EHT model for Holtec Report No. HI-992134, "Hi-Storm Thermal Analysis for PFS RAI," analyzing the HI-STORM 100 spent fuel storage cask at the PFSF site (which contain all the input data for FLUENT for the EHT model runs performed for Report No. HI-992134), (2) provided the State all the output files (in text form) from the FLUENT code runs that were performed for Report No. HI-992134 (using the EHT model) in the thermal analysis of the HI-STORM 100 spent fuel storage cask at the PFSF site, (which contain all the output data from FLUENT for the EHT model runs performed for Report No. HI-992134), and (3) provided the State with electronic ZIP copies of the input and output files for Report No. HI-992134 which it could use to rerun and duplicate the results of the EHT model should it choose to purchase the FLUENT code. Thus, Holtec provided to the State (through PFS) all the input data that was used to perform the FLUENT code runs that were performed for Report No. HI-992134 (using the EHT model) in the thermal analysis of the HI-STORM 100 at the PFSF site and all the output data from those runs as that data is maintained in Holtec's usual

course of business. No other input was required or used by Holtec to perform this thermal analysis of the HI-STORM 100 at the PFSF site using the EHT model and no other output was produced by the FLUENT code for this analysis.

8. After receiving the material provided by Holtec, and after further discussions with PFS, the State dropped its request for the FLUENT code. Letter from Diane Curran, counsel for State of Utah, to William Hollaway, counsel for PFS (Dec. 16, 1999). The State now requests instead that PFS obtain for it, from Holtec, paper printouts of the computer screen images that contain the series of "yes-no" and numerical choices made in so-called "decision boxes" that appear in the FLUENT code User's Manual tutorial pages. Id.; Letter from Diane Curran, counsel for State of Utah, to William Hollaway, counsel for PFS (Dec. 14, 1999). The so-called "decision boxes" for which the State requests the computer screen images are merely alternative, redundant devices a user can employ to create the case file (i.e., input file) for FLUENT. There are other such devices in FLUENT as well and a user may display and use any of the input devices on the computer screen for inputting data. (In fact, Holtec did not use the particular input devices in the display panels from the User's Manual identified by the State but used different input display panels when it developed the EHT model for the HI-STORM 100 at the PFSF.) When the user changes an element of code input data by one of the input devices (to include a relationship or equation to be used by FLUENT to perform its thermal calculations) each input device that controls that element of code input data is automatically updated by the program to reflect the change in the data made by the user. No matter how the data is changed, however, from the various input panels, the input data ultimately used by FLUENT to perform its calculations is indicated in the case file for the code run. Thus, all the data used by Holtec to perform its analysis with the EHT model is present in the case files provided to the State.

9. Specifically, the State requests the "yes-no" and/or numerical choices in various computer screen panels of "decision boxes" (i.e., input devices) for each of the 19 "zones" identified in the input files used for the FLUENT code in the EHT analysis of the HI-STORM 100 at the PFSF site. Letter from D. Curran to W. Hollaway (Dec. 14, 1999). The State's letter attaches 25 such computer screens which it apparently requests for each of the 19 zones, or a total of 475 computer screen panels. Each panel is an organized display of information concerning the FLUENT input data. Each zone represents a sub-region of the physical entity (i.e., the HI-STORM 100 cask) being modeled. Holtec does not, however, maintain in its regular course of business the panel decision boxes requested by the State in hard copy paper format or an accessible electronic format. Rather, the 475 panel decision boxes requested by the State would need to be "backed out" or manually extracted from the computer files at great time and cost, as described in detail below.
10. Further, all of the information used by the FLUENT code to perform its calculations is contained in the "case file" input files, which Holtec has provided to the State through PFS. The case files reflect all the relationships and equations, the geometry of the object(s) being modeled, and all thermophysical properties of the object(s) that were chosen by Holtec for the EHT model and which FLUENT used in performing the calculations for the EHT model. All the data used by FLUENT in Holtec's thermal analysis with the EHT model for the HI-STORM 100 at the PFSF site are reflected in the "case file" input files. The FLUENT code uses the case files to perform its calculations and produce its output data, which indicates the temperatures of the various components of the spent fuel storage cask.
11. As indicated above, a user may employ different devices within FLUENT to create the case files and Holtec did not create its case files using the particular input devices for which the State requests the computer screen images.

Nevertheless, all the data used by Holtec in performing its runs of the EHT model for PFS are present in the case files provided to the State. The input devices for which the State requests the computer screen images do not represent independent bits of information over and above the input data in the FLUENT case files. Thus, in order to duplicate the runs of the FLUENT code Holtec used in the EHT analysis of the HI-STORM 100 at the PFSF site one would only need the case files, not the "decision boxes" (i.e., alternative input devices) for which the State requests the computer screen images.

12. The State asserted in a letter from its counsel to counsel for PFS that while the "factual assumptions" that went into Holtec's EHT analysis of the HI-STORM 100 are contained in the case file input files for FLUENT, the "conceptual assumptions" are only represented by the choices reflected in the decision boxes in the FLUENT User's Manual. Letter from D. Curran to W. Hollaway (Dec. 16, 1999). The State defines the conceptual assumptions as "the selection of various equations and/or conceptual models that were used in the thermal analysis." Id. The State's assertion is wrong. The conceptual assumptions (i.e., the choices of the relationships and equations that FLUENT uses to perform its thermal calculations) are, in fact, reflected in the case file input files that Holtec provided to the State. For example, one display panel, for which the State requests the computer screen image, indicates the status of the "ALLOW HEAT FLUX BOUNDARY CONDITION" for the zones in the model (either "yes" or "no"). The status of that same boundary condition is indicated in the FLUENT case file in the Special Temperature Boundaries section, in the column labeled "HEAT FLUX BOUNDARY." As indicated above, FLUENT does not use any data or operate in any way on the basis of information in the decision boxes that is not reflected in the case files.
13. Moreover, with the User's Manual and the case files, one can determine the equations and relationships that FLUENT uses to perform its calculations. The

case files (in text form, as Holtec provided to the State) are intelligible; the computer screen images of the alternative input devices (i.e., "decision boxes") are not necessary to understand the operation of FLUENT. For example, on the cover page of the case file, the EHT model run condition is indicated in terms of ambient temperature and spent fuel heat load. The following pages provide a comprehensive listing of the units for all the variables (e.g., pressure, temperature, and density) used by the FLUENT code. The geometric data for the EHT model (which describes the geometry of the object modeled, i.e., the cask), the grid information, and nodal positions are indicated in the Geometry section. This is followed by a topographical layout of the entire computational grid structure developed for the EHT model for the HI-STORM 100 cask at the PFSF. All the zones in the model are depicted and accurately reflect their relative positions in the model structure. This is followed by many sections of information concerning the thermophysical properties of all the EHT model zones. These include, e.g., "VELOCITY/PRESSURE BOUNDARY CONDITIONS," "TEMPERATURE BOUNDARY CONDITION," "CONDUCTING WALL ZONE PROPERTIES," "POROUS ZONE PROPERTIES," and "ZONE EMISSIVITIES." This comprehensive array of coherently packaged information defines in-toto the complete EHT model of the HI-STORM 100 spent fuel storage cask at the PFSF.

14. The production of the 475 panels of decision boxes would be unreasonably burdensome for PFS and Holtec. Holtec does maintain in its usual course of business copies of the FLUENT case files, which it has provided to the State. The 475 panels of decision boxes sought by the State, however, are not maintained by Holtec in its usual course of business either separately in paper or readily accessible electronic form. Rather, they must be specially generated individually following a laborious process by someone who is familiar with how the FLUENT code works, such as myself, by manually extracting them from the computer while the case files are loaded into the computer. The extraction process involves

the following stepwise procedure for producing on paper each of the 475 display panels with the decision boxes requested by the State:

- a. Step 1: With the FLUENT program running and the electronic modeling databases read in, the user must step through the command structure as described in the User's Manual instructions to access the display panel with the requested decision boxes.
  - b. Step 2: With the display panel information on the computer screen, the user must start a separate screen capture program to scan the screen video display bitmap. This is necessary because it is not possible to print the screen directly while the FLUENT code is running. The screen capture program enables the screen image of the display panel to be captured and then printed separately.
  - c. Step 3: The user must save the captured information—the screen video display bitmap—on the computer's hard disk.
  - d. Step 4: The user must use a separate video editing program to read the saved screen capture information.
  - e. Step 5: The screen dumps produced by the capturing program contains extraneous information (color graphical images) that may render the information sought by the State illegible when printed. For those display panels for which that is the case, the user will have to edit the video bitmap and clip out the relevant display panel information so that it is not obscured by the display panel graphical images.
  - f. Step 6: The user must print the captured screen image of the display panel on a high resolution printer.
  - g. Step 7: The user must proofread the print for visual clarity and correlate and assemble the printed screens in the proper order.
15. Based on my familiarity with the FLUENT code, I estimate that this process will take on average approximately 10 minutes per computer screen display panel requested by the State. Therefore, since the State has requested 475 panels (25 panels for each of 19 zones in the model of the HI-STORM 100), it would take approximately 80 man-hours of a user who is familiar with the operation of the FLUENT code, such as myself, to comply with the State's request, assuming that the user works continuously without interruption. The 80 hours of my time to produce copies of the 475 panels of decision boxes requested by the State would

cost approximately \$ 15,000. In addition, the results of my work would need to go through Holtec's normal validation and Quality Assurance (QA) process. Based on Holtec's past experience, such validation and QA would increase this cost estimate by a factor of three to \$45,000.

16. This large cost of generating, producing and validating the 475 panels of decision boxes, not maintained as such by Holtec in its usual course of business, is an especially unreasonable burden on Holtec and PFS in that, as indicated above, Holtec (through PFS) has provided the State with all the input data—including the input data reflecting the choices of relationships and equations in FLUENT—in an intelligible form, used in the EHT analysis of the HI-STORM 100. The State's request merely asks for data it has already received to be created and produced in a different form. The requested information is unduly burdensome for Holtec and PFS to produce and unnecessary to perform a competent review of the PFS EHT model. Holtec and PFS should not bear the burden essentially of translating the data already provided into a form of the State's choice. Should the State truly believe that it requires the data in the form requested, it could always acquire the FLUENT code and use the electronic version of the input files provided to it by Holtec and the State to generate the requested pull down decision boxes.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 20, 1999.

  
Indresh Rampall