

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
U.S. DEPARTMENT OF ENERGY	)	Docket No. 50-537
PROJECT MANAGEMENT CORPORATION	)	
TENNESSEE VALLEY AUTHORITY	)	
(Clinch River Breeder Reactor Plant)	)	

NRC STAFF'S UPDATED ANSWERS TO NATURAL RESOURCES  
DEFENSE COUNCIL, INC. AND THE SIERRA CLUB EIGHTEENTH SET  
OF INTERROGATORIES TO NUCLEAR REGULATORY COMMISSION STAFF  
AND THIRTEENTH SET OF INTERROGATORIES TO APPLICANTS

Pursuant to the Licensing Board's Prehearing Conference Order of February 11, 1982, the Nuclear Regulatory Commission Staff (Staff) hereby updates its April 6, 1977 response to Intervenors' Natural Resources Defense Council, Inc. and the Sierra Club Eighteenth Set of Interrogatories to the Nuclear Regulatory Commission Staff and Thirteenth Set of Interrogatories to Applicants filed on January 14, 1977. Attached hereto are the NRC Staff's Answers to NRDC's and the Sierra Club's interrogatories, together with the affidavits of Mr. Stark, Mr. Holz, Mr. Allen and Mr. Morris.<sup>1/</sup>

On March 4, 1982, the parties in this proceeding developed a Protocol for Discovery. NRDC has requested that answers to interrogatory questions be provided in six parts. The following six parts are:

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<sup>1/</sup> The affidavits of Mr. Stark, Mr. Holz, Mr. Allen and Mr. Morris are unsigned. However, a copy of their signed, notarized affidavits will be filed shortly.

- A) Provide the direct answer to the question.
- B) Identify all documents and studies, and the particular parts thereof, relied upon by the Staff, now or in the past, which serve as the basis for the answer. In lieu thereof, at Staff's option, a copy of such document and study may be attached to the answer.
- C) Identify principal documents and studies, and the particular parts thereof, specifically examined but not cited in (b). In lieu thereof, at Staff's option a copy of each such document and study may be attached to the answer.
- D) Identify by name, title and affiliation the primary Staff employee(s) or consultant(s) who provided the answer to the question.
- E) Explain whether the Staff is presently engaged in or intends to engage in any further, ongoing research program which may affect the Staff's answer. This answer need be provided only in cases where the Staff intends to rely upon ongoing research not included in Section 1.5 of the PSAR at the LWA or construction permit hearing on the CRBR. Failure to provide such an answer means that the Staff does not intend to rely upon the existence of any such research at the LWA or construction permit hearing on the CRBR.
- F) Identify the expert(s), if any, which the Staff intends to have testify on the subject matter questioned, and state the qualifications of each such expert. This answer may be provided for each separate question or for a group of related questions. This answer need not be provided until the Staff has in fact identified the expert(s) in question or determined that no expert will testify, as long as such answer provides reasonable notice to Intervenors.

For all the responses to interrogatories in this set the following are the answers to the requested parts in the Protocol for Discovery.

- B) All documents and studies, and the particular parts thereof, relied upon by the Staff now or in the past which serve as the basis for the answer are mentioned in the direct answer to the question unless otherwise noted.

- C) There were no principal documents and studies specifically examined but not cited in (b) unless otherwise noted.
- D) The name, title and affiliation of the Staff employee(s) or consultant(s) who provided the answer to the question are available in the affidavits.
- E) The Staff is not presently engaged in nor intends to engage in any further, on-going research program which may affect the Staff's answer unless otherwise noted.
- F) At this time, the Staff has not determined who will testify on the subject matter questioned. Reasonable notice will be given to all parties after the Staff has made this determination. At that time, a statement of professional qualifications will be provided for each witness.

Respectfully submitted,



Daniel T. Swanson  
Counsel for NRC Staff

Dated at Bethesda, Maryland  
this 28 day of April, 1982.

NRC STAFF'S ANSWERS TO NRDC'S  
AND THE SIERRA CLUB'S INTERROGATORIES

Interrogatory 1

Please identify all safety systems, materials, concepts and significant design alternatives, including those discussed above that are not presently incorporated in the CRBR design but that could conceivably impact on the probability or energetics of a CRBR CDA.

Interrogatory 2

With respect to each of these:

(a) Please identify and supply complete and current documentation of these systems, materials, concepts and design alternatives;

(b) Describe to the fullest extent possible and quantify where possible the impact each would have on the probability and/or energetics of CDA's if each was incorporated in the CRBR design;

(c) What effect in terms of CRBR cost and scheduling would be felt if it was incorporated in the CRBR design?

(d) What was the basis for the Applicants/Staff (select appropriate one) determination that it should be excluded from the CRBR design?

(e) To what extent does the Applicants/Staff (select appropriate one) conclusions regarding (i) CDA energetics, (ii) probability of CDA, (iii) adequacy of the current design to cope with CDAs with respect to their prevention or mitigation, or (iv) the adequacy of the NRC criteria set forth in the May 6, 1976, letter by Denise impact on whether it should be included or excluded from the CRBR design?

(f) If the Applicants/Staff's conclusions regarding (i) through (iv) in (e) above were substantially found to be in error and non-conservative, how large an error or what change in criteria would be required before the Applicants/Staff would likely consider incorporating it in the CRBR design?

Response to Interrogatories #1 and #2

In the NRC Staff Answers to Natural Resources Defense Council, Sierra Club and East Tennessee Energy Group Eighteenth Set of Interrogatories to Nuclear Regulatory Commission Staff filed on April 6, 1977, insert the following response on page 8 before the paragraph entitled "Heavy Flywheels".

The applicant, during the period in which the NRC staff was no longer reviewing CRBR, officially changed the core design from a homogeneous core to a heterogeneous core. The fact that the referenced core is now a heterogeneous core will not change the staff's obligation to evaluate and characterize the heterogeneous core and the safety considerations associated with it. The evaluation will include the same safety-related issues such as core catcher, containment, containment venting and processing of the containment atmosphere during a class 9 event. We will also reexamine the 24 hr. criterion and the rationale for the numerical value of 24 hrs. Since we have not completed our review of the heterogeneous core and we would not expect the meltdown scenario to change once fuel penetration is initiated we would not expect a significant change in the conclusions for the core catcher given above. Further discussion of a variation of the heterogeneous core is given in the response to this interrogatory under the title of Parfait Cores.







