04/08/83

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF FIRST SET OF CONSTRUCTION PERMIT INTERROGATORIES AND REQUESTS FOR ADMISSIONS TO NATURAL RESOURCES DEFENSE COUNCIL, INC. AND THE SIERRA CLUB CONCERNING CONTENTION 10

In accordance with the Board's March 10, 1983 Order Opening Discovery, the NRC Staff ("Staff") hereby submits to Intervenor Natural Resources Defense Council, Inc. and the Sierra Club (hereafter jointly referred to as "NRDC") the following interrogatories and requests for admissions.

INTERROGATORIES

Pursuant to 10 C.F.R. § 2.740(b), the NRC Staff requests NRDC, et al. to respond to the following interrogatories in writing and under oath. For each interrogatory, provide the following answer, in accordance with the terms of the parties' March 4, 1982 "Protocol For Discovery":

a) Provide the direct answer to the question.

b) Identify all documents and studies, and the particular parts thereof, relied upon by NRDC, now or in the past, which serve as the basis for the answer. In lieu thereof, at NRDC'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 NRDC'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 NRDC employee(s) or consultant(s) who provided the answer to the question, indicating the qualifications of that person to answer the question.

e) Explain whether NRDC, et al. are presently engaged in or intend to engage in any further, on-going research program which may affect its answer. Failure to provide such an answer means that NRDC, et al. do 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 NRDC, et al. intend 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 NRDC et al. have in fact identified the expert(s) in question or determined tht no expert will testify, as long as such answer provides reasonable notice to the Staff.

10-1(a) Define and describe with particularity, "safe cold shutdown", as that term is used in Contention 10. Set forth the bases for NRDC's definition.

(b) Does NRDC contend that there is only one kind of "safe cold shutdown" mode that CRBR systems must achieve? If not, list and describe with particularity all safe cold shutdown modes which NRDC regards as acceptable ("safe").

(c) Set forth all plant conditions or parameters (e.g., plant temperatures, flows, power levels), and the values for each condition or parameter for each safe cold shutdown mode which NRDC regards as acceptable ("safe").

10-2(a) Define and describe with particularity, "containment integrity", as that term is used in Contention 10. Set forth all quantitive or qualitive parameters NRDC believes should be used to determine whether containment integrity exists.

(b) Set forth the values for each parameter listed in NRDC's answer to Interrogatory 10-2(a) which indicate whether containment integrity exists.

10-3 Define "environmental conditions", as that term is used in Contention 10. Set forth the bases for NRDC's definition.

10-4(a) List the specific systems which NRDC contends are necessary to establish and maintain: (1) safe shutdown and (2) containment integrity.

(b) For each of these systems listed in NRDC's answer to Interrogatory 10-4(a), specifically list all relevant sections of the PSAR and SER where it has not been or has been inadequately demonstrated that they are capable of performing their functions during and after being exposed to the environmental conditions associated with postulated accidents including sodium fires.

(c) For each PSAR section and SER section listed in NRDC's answer to Interrogatory 10-4(b), describe with particularity, in NRDC's own words, why NRDC believes that these sections do not, or inadequately discuss the capabilities of these systems to function following the postulated accidents.

(d) What, in NRDC's judgment, is necessary to demonstrate that the systems provided to establish and maintain safe shutdown and containment integrity are, in fact, capable of performing their functions during and after being exposed to the environmental conditions associated with postulated accidents, including sodium fires?

10-5 List and describe with particularity each postulated accident that NRDC is referring to in Contention 10(a). The Staff shall consider an answer to this Interrogatory to be responsive only if NRDC lists each accident by name, describes the initiation mode for each accident, and sets forth the environmental conditions associated with each accident.

10-6 Describe with particularity NRDC's understanding of the environmental conditions resulting from the postulated accidents described in Interrogatory 10-5.

10-7 List all relevant sections and subsections of the SER which NRDC contends inadequately discuss environmental conditions due to postulated accidents and their effects on those CRBR systems necessary for maintaining safe cold shutdown and containment integrity.

10-8 For each section and subsection listed in NRDC's answer to Interrogatory 10-7, state with particularity the reasons why the Staff's discussion is inadequate. Set forth what subject

matters should be discussed, or are inadequately discussed with regard to this Contention.

10-9 State all locations in the at CRBR plant where sodium fire occurence may affect the ability of CRBR's safety systems to establish and maintain safe cold shutdown and containment integrity.

10-10(a) Describe with particularity the modes by which each sodium fire described by NRDC in response to interrogatory 10.6 will affect environmental conditions.

(b) Provide a quantitive description of the environmental conditions associated with each sodium fire described by NRDC in response to Interrogatory 10-9.

10-11 Define the terms, "burning" and "local detonation" of hydrogen, as used in Contention 10(b).

10-12 List and describe with particularity the mode of hydrogen generation at CRBR which, if ignited, may affect the capability of CRBR systems to establish and maintain safe cold shutdown.

10-13 Set forth all locations at CRBR where hydrogen generation may occur.

10-14 Set forth all locations in the CRBR plant where hydrogen ignition may affect CRBR's systems capabilities to establish and maintain safe cold shutdown and containment integrity.

10-15 List and describe with particularity each and every possible circumstance in which the ignition of hydrogen may affect CRBR's systems' capabilities to establish and maintain safe cold shutdown and containment integrity.

10-16(a) Describe with particularity the effects of hydrogen burning or detonation on environmental conditions.

(b) Provide a quantitive description of the environmental conditions associated with each hydrogen burn or detonation listed in NRDC's response to Interrogatory 10-15.

10-17 Are different conditions required for hydrogen detonation, as opposed to hydrogen ignition? If NRDC believes so, state the conditions required for hydrogen burning, and hydrogen detonation.

10-18(a) List all systems which NRDC contends may be affected by a hydrogen burn or detonation described in Interrogatory 10-14.

(b) Describe with particularity how each system listed in Interrogatory 10-14(a) may be affected by hydrogen burning or detonation.

10-19 List all relevant sections and subsections of the SER which NRDC contends inadequately discuss environmental conditions due to sodium fires and their effects on CRBR systems required for safe cold shutdown and containment integrity.

10-20 For each Section and subsection listed in NRDC's answer to Interrogatory 10-19, state with particularity the reasons why the Staff's discussion in these Sections and subsections are inadequate. Set forth what subject matters or items are inadequately discussed.

Interrogatory Related to Admissions

1. For each admission set forth below which NRDC denies or states it can neither admit nor deny, set forth with specificity the bases for NRDC's response.

ADMISSIONS

Pursuant to 10 C.F.R. Section 2.742, the Staff requests NRDC to admit the following matters of fact.

10-1 The Staff's evaluation of CRBR equipment qualification, as described in Section 3.11 and Appendix A of the SER, is adequate.

Respectfully submitted,

Geary S. Mizuno
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 8th day of April, 1983