

April 15, 1982

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter Of
UNITED STATES DEPARTMENT OF ENERGY
PROJECT MANAGEMENT CORPORATION
TENNESSEE VALLEY AUTHORITY
(Clinch River Breeder Reactor
Plant)

Docket No. 50-537



APPLICANTS' FOURTH SET OF
INTERROGATORIES TO INTERVENORS,
NATURAL RESOURCES DEFENSE COUNCIL, INC.
AND THE SIERRA CLUB

Pursuant to 10 C.F.R. § 2.740b and in accordance with the Board's Prehearing Conference Order of February 11, 1982, the United States Department of Energy, Project Management Corporation, and the Tennessee Valley Authority (the Applicants) hereby propound the following interrogatories to the Intervenor's', Natural Resources Defense Council, Inc. (NRDC) and the Sierra Club, to be answered fully, within 14 days in writing and under oath, by one or more representatives of NRDC or the Sierra Club who have personal knowledge of the matters therein.

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Each answer to an interrogatory shall be preceded by a copy of the particular question to which the answer is responding.

In addition to providing the direct answer to each interrogatory, where applicable, please provide the following:

(a) Identify all documents and studies, and the particular parts thereof, relied upon by Intervenorors, now or in the past, which serve as the basis for the answer. In lieu thereof, at Intervenorors' option, a copy of such document and study may be attached to the answer.

(b) Identify principal documents and studies, and the particular parts thereof, specifically examined but not cited in (a). In lieu thereof, at Intervenorors' option, a copy of each such document and study may be attached to the answer.

(c) Identify by name, title and affiliation the primary Intervenor employee(s) or consultant(s) who provided the answer to the question.

(d) Identify the expert(s) if any, which Intervenorors intent 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 Intervenorors have in fact identified the

expert(s) in question or determined that no expert will testify, as long as such answer provides reasonable notice to Intervenor(s).

Finally, in responding to interrogatories related to Contentions 1, 2 and 3, Intervenor(s) may defer their response until after an LWA partial initial decision for any interrogatory raising matters which, in Intervenor(s) view, are not necessary to a decision on Applicants' LWA request, by so indicating in the response.

Interrogatories

1. For each admitted contention:

(a) Please identify any documents, by author, title, publisher and date of publication which have come to the attention of Intervenor(s) since this proceeding was suspended in 1977 and which Intervenor(s) intend to rely upon, in preparation for or at the hearing in this proceeding.

(b) Please identify the expert(s), if any, who Intervenor(s) intend to have testify on the subject matter of the contention and state the qualifications of each expert in terms of education and/or experience.

(c) Please identify any ongoing research or analysis of which Intervenors are aware which relate to the subject matter of the contention.

2. For Contention 1 (Old 2)

(a) Please identify all CDA initiators, other than anticipated transients without scram, for which NRDC believes that a demonstration must still be made that their probability is sufficiently low to enable CDAs to be excluded from the envelope of DBAs.

(b) As to each "CDA initiator" identified in response to 2(a) above, including anticipated transients without scram, please provide a description of the minimum scope and detail of reliable data (including analyses, tests, data, compilations thereof, facts, opinions, or assumptions) which you consider to be necessary and sufficient to demonstrate that such "CDA initiator" has a sufficiently low probability that it may be excluded from the design bases for CRBR.

(c) Please identify and describe in detail all "credible failure modes" which you believe are not encompassed in the projected data base to be used in the reliability program.

(d) As to each "credible failure mode" identified in response to 2(c) above, describe in detail the data

necessary to encompass such "credible failure mode" in the projected data base.

(e) Please identify and describe in detail all "human elements" which you believe are not encompassed in the projected data base to be used in the reliability program.

(f) As to each "human element" identified in response to 2(e) above, describe in detail the data necessary to encompass such "human element" in the projected data base to be used in the reliability program.

(g) Please describe specifically the "implications of the TMI-2 accident, particularly regarding the effects of human error in failure to scram" in relation to the CRBR.

3. For Contention 2 (Old 3)

(a) Please identify and describe in detail each specific element of the analyses of CDAs and their consequences by Applicants and Staff which you consider to be inadequate for licensing the CRBR. The answer to this interrogatory must include a detailed description or explanation of the inadequacies in the analyses.

_/ See Intervenor's New Information Relevant to Intervenor's Contentions at 4 (March 12, 1982).

(b) Please identify and describe in detail each specific element of the analyses of CDAs and their consequences by Applicants and Staff which you consider to be inadequate for performing the NEPA cost/benefit analyses. The answer to this interrogatory must include a detailed description or explanation of the inadequacies in the analyses.

(c) Please identify and describe in detail each specific element of the analyses of CDAs and their consequences by Applicants and Staff which you consider to be inadequate for demonstrating that the radiological source term for CRBRP would result in potential hazards not excluded by those from any accident considered credible. The answer to this interrogatory must include a detailed description or explanation of the inadequacies in the analyses.

(d) Please identify all changes in reactor vessel and core design which have not been included in Applicants' accident modeling, and which you believe should have been so included.

(e) Please describe in detail the specific technical bases for Intervenors' contention that "the radiological source term analysis in CRBRP site suitability should be derived through a mechanistic analysis."

(f) Please describe in detail the specific technical bases for Intervenors' contention that "radiological source term analysis should be based on the assumption that CDAs (failure to scram with substantial core description) are credible accidents within the DBA envelope, should place an upper bound on the explosive potential of a CDA, and should then derive a conservative estimate of the fission product release from such an accident."

(g) Please identify and explain specifically why you believe the radiological source term analysis has inadequately considered (1) the release of fission products and core materials, and (2) the environmental conditions in the reactor building created by release of substantial quantities of sodium. The discussion of deficiencies in the analysis must include any analytical standards which have not been met.

(h) Please list any fission products and core materials other than halogens, iodine and plutonium, which must be considered in the radiological source term analysis.

(i) Please describe in detail the environmental conditions in the reactor containment building created by the release of substantial quantities of sodium which you believe were not adequately considered in the radiological source term analysis.

(j) Please describe in detail the inadequacies in the Applicants' or Staff's analysis of containment design.

4. For Contention 3 (Old 4)

(a) Please identify and describe in detail all accidents associated with core meltthrough following loss of core geometry and sodium-concrete interactions which you believe have not been adequately analyzed. The answer to this interrogatory must include a detailed description or explanation of all bases for Intervenors' assertion that such accidents have not been adequately analyzed.

(b) Please identify and describe in detail all human errors which can initiate, exacerbate or interfere with the mitigation of CRBR accidents and which you believe have not been adequately analyzed by Applicants or Staff. The answer to this interrogatory must include a detailed description or explanation of all bases for Intervenors' assertion that such human errors have not been adequately analyzed.

(c) Please identify and describe in detail any accident possibilities of greater frequency or consequence than the accident scenarios analyzed by Applicants and Staff.

(d) Please furnish a copy of the January 27, 1982 letter from Richard Shikiar to Thomas Cochran to which

Intervenors refer on page 28 of their Revised Statement of Contentions and Bases.

5. For Contention 5 (Old 6)

(a) Please identify and describe in detail the population characteristics of the CRBR site which you consider sufficiently unfavorable that an alternative site should be selected.

(b) Please identify the several alternative sites which you consider to have population densities which are more favorable than the population density of the CRBR.

(c) As to each alternative site identified in response to 5(b) above, describe in detail the population characteristics of that alternative site.

(d) Please list all "other proposed fuel cycle facilities" referred to in Contention 5(b).

6. For Contention 11 (Old 8)

(a) Please describe in detail the approach which you believe should be used in establishing guideline values for permissible organ doses.

(b) Please identify all "important organs" which you believe should be considered in establishing dose guidelines.

(c) Identify and describe in detail all "new knowledge" which you believe should be considered in establishing dose guidelines.

(d) Please explain specifically the basis for your assertion that Applicants and Staff have not adequately assessed the residual risks associated with genetic effects from radiation exposure in compliance with existing NRC standards. The answer to this interrogatory must include a detailed description or explanation of Intervenor's view as to why the assessment is not adequate.

(e) Please identify and describe in detail the basis for your assertion that Applicants and Staff have not adequately assessed the residual risks associated with induction of cancer from the exposure of plant employees and the public in compliance with existing NRC standards.

7. For Contention 8 (Old 14)

(a) Please identify and describe in detail the unavoidable adverse environmental effects associated with the decommissioning of the CRBR which you believe have not been adequately analyzed. The answer to this interrogatory must include a detailed description or explanation of the specific elements of the analyses which you assert are inadequate and the bases for that assertion.

(b) Please identify and describe in detail the costs associated with the decommissioned CRBR which you assert are not adequately assessed in the NEPA cost/benefit balancing of the CRBR. The answer to this interrogatory must include a detailed description or explanation of the

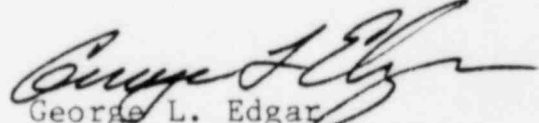
specific elements of the analyses which you assert are inadequate and the bases for that assertion.

(c) Please state whether it is your view that the CRBR FES is inadequate due in part to recently discovered omissions in regard to the subject matter of contention 8 and, if so, identify and describe all such "recently discovered omissions."

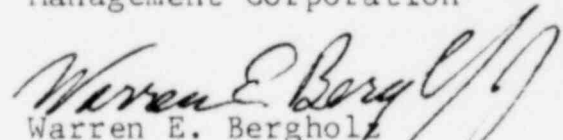
(d) Please state whether it is your view that the CRBR FES is inadequate for reasons other than "recently discovered omissions and, if so, identify and describe all such inadequacies in the CRBR FES.

(e) Please identify specifically any and all neutron activation products, other than nickel 59 and niobium 94, which you assert have not been adequately analyzed for the decommissioning of the CRBR and/or which you believe must be so analyzed.

Respectfully submitted,



George L. Edgar
Attorney for Project
Management Corporation



Warren E. Bergholz
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Department of Energy

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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TENNESSEE VALLEY AUTHORITY
(Clinch River Breeder Reactor Plant)

Docket No. 50-537

CERTIFICATE OF SERVICE

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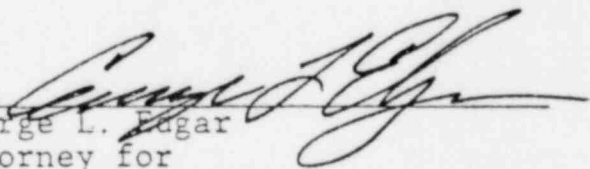
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DATED: April 15, 1982

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