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USNRC

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

'82 OCT -4 P4:34

In the Matter of	)	OFFICE OF SECRETARY DOCKETING & SERVICE BRANCH
UNITED STATES DEPARTMENT OF ENERGY	)	
PROJECT MANAGEMENT CORPORATION	)	Docket No. 50-537
TENNESSEE VALLEY AUTHORITY	)	
(Clinch River Breeder Reactor Plant)	)	

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

Pursuant to 10 C.F.R. § 2.740(b), and in accordance with the Board's Scheduling Order of August 31, 1982, the United States Department of Energy and Project Management Corporation, for themselves and on behalf of the Tennessee Valley Authority, submit the following interrogatories to Intervenors, Natural Resources Defense Council, Inc. and the Sierra Club. These interrogatories must 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 herein.

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

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PDR ADOCK 05000537
Q PDR

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(a) Identify all documents and studies, and the particular parts thereof, relied upon by Intervenors, now or in the past, which serve as the basis for the answer. In lieu thereof, at Intervenors' 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 Intervenors' 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 Intervenors 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 Intervenors 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 Applicants.

INTERROGATORIES

1. State whether NRDC agrees that, for purposes of estimating the number of cancers that may occur during the lifetime of individuals exposed to radiation, the BEIR-III

linear estimates are conservative. If NRDC disagrees, state in detail the basis for the disagreement and provide all documents which support NRDC's position.

2. State whether NRDC agrees with the statement in the Draft Environmental Statement Supplement ("DESS") that of the four alternative TVA sites considered in the DESS, none are substantially better than the proposed site at Clinch River. If NRDC disagrees, identify the TVA site(s) which NRDC believes is substantially better than Clinch River and, for each such site, provide the following:

(a) Describe in detail all characteristics of the alternative TVA site which NRDC believes demonstrates the site is substantially better than the Clinch River site.

(b) Describe the methodology by which NRDC determined that the characteristics of the alternative site demonstrated that such site is substantially better than the Clinch River site.

(c) Identify and provide all documents which support NRDC's analysis.

(d) Identify the person(s) who performed any analysis of alternative sites on NRDC's behalf.

3. State whether NRDC agrees that the four alternative TVA sites considered in Appendix L to the DESS are representative of the diversity of environmental resources in the TVA service region. If NRDC disagrees, state in detail the basis for the disagreement and, in addition, provide the following information:

(a) Identify all sites in the TVA service region which NRDC believes should have been considered for the location of CRBRP.

(b) As to each site identified in response to 3(a), describe in detail the basis for NRDC's position that the site should have been considered for the location of CRBRP.

(c) Identify and provide all documents which support NRDC's response to this interrogatory.

4. State whether NRDC agrees with the statement in the DESS that of the three alternative DOE sites considered in the DESS, none are substantially better than the proposed Clinch River site. If NRDC disagrees, identify the DOE site(s) which NRDC believes is substantially better than the Clinch River site and for each such site, provide the following information:

(a) Describe in detail all characteristics of the alternative DOE site which NRDC believes demonstrates the site is substantially better than the Clinch River site.

(b) Describe in detail the methodology by which NRDC determined that the characteristics of the alternative site demonstrated that such site is substantially better than the Clinch River site.

(c) Identify and provide all documents which support NRDC's analysis.

(d) Identify the person(s) who performed any analysis of alternative DOE sites on NRDC's behalf.

5. State whether NRDC agrees that the three DOE sites considered in the DESS are the only feasible sites owned by DOE for location of CRBRP. If NRDC disagrees, state in detail the basis for the disagreement and in addition, provide the following information:

(a) Identify all DOE sites which NRDC believes are better sites for the location of CRBRP.

(b) As to each site identified in response to 5(a), describe in detail the basis for NRDC's position that the site is a feasible site for the location of CRBRP.

(c) Identify and provide all documents which support NRDC's response to this interrogatory.

6. State whether NRDC agrees with the DESS's analysis of risks in regard to safeguards for CRBRP. If NRDC disagrees, describe in detail all such risks which NRDC believes have not been adequately analyzed. Provide all documents which support NRDC's position.

7. State whether NRDC agrees with the DESS's analysis of risks in regard to safeguards for the CRBRP fuel cycle. If NRDC disagrees, describe in detail all such risks which NRDC believes have not been adequately analyzed. Provide all documents which support NRDC's position.

8. State whether NRDC agrees with metabolic and dosimetric models used in the DESS in considering the radiological impacts of CRBRP. If NRDC disagrees, describe in detail the basis for the disagreement, including a description of the metabolic and dosimetric models which NRDC believes should

have been used. Provide all documents which support NRDC's position.

9. State whether NRDC agrees with the conclusion in the DESS at 5-21 that:

> the potential risk to the public health and safety from exposure to radioactivity attirbutable to normal operation of CRBRP and its related fuel cycle will be very small.

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

10. State whether NRDC agrees with the analysis of genetic effects contained in Section 5.7 of the DESS. If NRDC disagrees, describe in detail the basis of the disagreement. Provide all documents which NRDC believes support its position.

11. State whether NRDC agrees with the conclusion in the DESS at 7-6 that:

> the probability of successful theft, diversion, or sabotage is low, and therefore, the risks associated with these events do not represent a significant increase over the risks associated with currently operating facilities.

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

12. State whether NRDC agrees with the conclusion in the DESS at 7-5 that:

> transportation accidents involving radioactive material from CRBRP present a low risk of fatality or other serious health effects from radiation exposure.

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

13. State whether NRDC agrees with the conclusion in the DESS at 7-2 that:

> The overall assessment of environmental risk of accidents, assuming reasonable protective action, shows that it is not significantly different from the risk from light water reactors currently being licensed for operation. ...

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which support NRDC's position.

14. State whether NRDC agrees with the statement in the DESS at J-18 that:

> Compliance with current NRC siting, structural, and seismic design criteria and with 10 C.F.R. § 73 for physical security provides assurance that reactor-related risks from ... sabotage are adequately low.

If NRDC disagrees with this statement, describe in detail the basis for NRDC's disagreement including references to any relevant NRC criteria or regulations which NRDC believes are inadequate to assure that reactor related risks from sabotage are adequately low. Provide all documents which NRDC believes support its position.

15. State whether NRDC agrees with the conclusion in the DESS at L-6 that:

> licensing costs with respect to meteorology considerations at all the TVA sites would be comparable to those at the Clinch River site.

If NRDC disagrees with this conclusion as to any of the alternative TVA sites, identify the site and explain in detail the basis for NRDC's disagreement. Provide all documents which NRDC believes support its position.

16. In regard to the Hartsville alternative site, state whether NRDC agrees with the conclusion in the DESS at L-8 that:

> the Clinch River site is environmentally comparable or environmentally preferable to the Hartsville site under any plant configuration with respect to the impact of construction and operation in the aquatic biota inhabiting the source and receiving water bodies.

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

17. State whether NRDC agrees with the conclusion in the DESS at L-9 that:

> assuming the construction of CRBRP on the Hartsville site, either simultaneously or not during the same time frame as any of the commercial units, the staff concludes that the socioeconomic impacts at Hartsville would be comparable with those at Clinch River.

If NRDC disagrees with this conclusion, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

18. State whether NRDC agrees with the conclusion in the DESS at L-10 that neither CRBRP nor Hartsville can be considered environmentally preferable in regard to population characteristics. If NRDC disagrees, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

19. State whether NRDC agrees with the statement in the DESS at L-13 that the meteorological considerations for Murphy Hill are similar to those for the Hartsville and Clinch River sites. If NRDC disagrees with this statement, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

20. State whether NRDC agrees with the statement in the DESS at L-19 that the meteorological considerations for Phipps Bend are similar to those for the Hartsville and Clinch River sites. If NRDC disagrees with this statement, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

21. State whether NRDC agrees with the statement in the DESS at L-26 that the meteorological considerations for Yellow Creek are similar to those for the Hartsville, Phipps Bend and Clinch River sites. If NRDC disagrees with this statement, describe in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

22. Identify and provide a complete statement of the professional qualifications concerning meteorology of any meteorologist or individual claiming expertise in meteorology

who reviewed the meteorological data in the DESS on behalf of NRDC.

23. Define in detail the term "nuclear explosion" as used by NRDC in describing hypothetical core disruptive accidents in an LMFBR. In addition, provide the following information which characterize the "nuclear explosion" as defined by NRDC above:

(a) the reactivity insertion rate

(b) the maximum reactivity

(c) the termination mechanism

(d) the time necessary to generate 50% of energy

(e) the maximum temperature

(f) the peak pressure

(g) the expansion

(h) the damage mechanism

24. State whether NRDC believes a nuclear explosion is physically possible in an LMFBR. If so, describe the precise sequence of events and the values of the parameters set forth in 23(a)-(h) above which NRDC believes would result in a nuclear explosion.

25. Provide all documents which NRDC believes support its answers to interrogatories 23 and 24.

26. State whether NRDC agrees with the statement in the DESS at J-19 that:

> The analysis confirms the FES conclusion that the accident risks at CRBRP can be made acceptably low.

If NRDC disagrees with this conclusion, explain in detail the basis for the disagreement. Provide all documents which NRDC believes support its position.

Respectfully submitted,

George E. Edgar
Attorney for Project
Management Corporation

Warren E. Bergholz, Jr.
Attorney for the
Department of Energy

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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	)	
(Clinch River Breeder Reactor Plant)	)	
	)	

CERTIFICATE OF SERVICE

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DATED: October 4, 1982

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