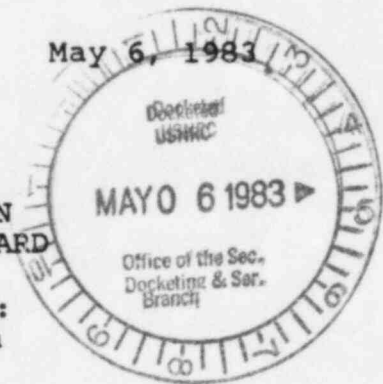


RELATED CORRESPONDENCE

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
Marshall E. Miller, Chairman  
Gustave A. Linenberger, Jr.  
Dr. Cadet H. Hand, Jr.



In the Matter of )  
)  
)

UNITED STATES DEPARTMENT OF ENERGY )  
PROJECT MANAGEMENT CORPORATION )  
TENNESSEE VALLEY AUTHORITY )

(Clinch River Breeder Reactor Plant) )  
)  
)

Docket No. 50-537

RESPONSE OF INTERVENORS, NATURAL RESOURCES  
DEFENSE COUNCIL, INC. AND THE SIERRA CLUB  
TO APPLICANTS' TENTH SET OF INTERROGATORIES  
DATED APRIL 21, 1983

Pursuant to 10 CFR § 2.740b, and in accordance with the  
Board's Construction Permit Scheduling Order of March 29, 1983,  
Intervenors, Natural Resources Defense Council, Inc. and the  
Sierra Club, hereby respond to Applicants' Tenth Set of  
Interrogatories, dated April 21, 1983.

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### General Answers

(a) & (b) Documents other than the PSAR and SER are identified below in the direct response to each question.

(c) Thomas B. Cochran is the primary Intervenor employee who provided the answer to each question.

(d) Intervenors have not yet identified any such experts.

### INTERROGATORIES

#### Interrogatory

1. Describe in detail the basis for Intervenors' belief that a protective action guide for bone exposure is necessary for CRBRP.

a. Identify all documents which support Intervenors' response to this interrogatory.

#### Response

1. The basis for Intervenors' belief is that bone surface dose may be controlling in terms of radiation absorbed dose commitment.

a. SSR, SER, Intervenors', Staff's and Applicants' testimony in the LWA-1 proceeding.

#### Interrogatory

2. Describe in detail the basis for Intervenors' belief that there is a "potentially high dosage associated with groundshine from fallout" of strong gamma emitters during cloud passage. See Intervenors' response to interrogatory 21, Applicants' Eighth Set of Interrogatories.

a. Quantify the phrase "high dosage" as used in Intervenors' response to interrogatory 21.

- b. List all strong gamma emitters which Intervenors believe will cause high groundshine doses from fallout during cloud passage.
- c. Identify and describe in detail all analyses, studies, experimental data, or any other data, which support Intervenors' belief that fallout of strong gamma emitters during cloud passage will result in high groundshine doses.
- d. Identify all documents which support Intervenors' response to this interrogatory.

#### Response

2. The basis for Intervenors' belief is Dr. Morgan testimony in the LWA-1 proceeding that from his experience he believed the groundshine dose from Na-24 may exceed the dose due to inhalation or immersion. That the dose due to groundshine can exceed the dose due to inhalation and immersion is also suggested by WASH-1400, Figure VI 13-1, p. 13-2. It is clear from the isotopes listed that strong beta, as well as gamma, contributions are important.

a. In this context Intervenors mean controlling and exceeding guidelines values. We have not quantified it.

b. Na-24 plus the fission products identified in WASH-1400, Figure VI 13-1 are candidates. As noted above, beta emitters must also be considered. Intervenors have no list.

c.-d. See WASH-1400 and Effects of Nuclear Weapons by Gladstone and Nolan.

#### Interrogatory

3. Describe in detail the methodology which Intervenors believe should be used in establishing the plume exposure EPZ.

a. Identify all documents which support Intervenors' methodology.

Response

3. Intervenors have not yet identified such methodology.

Interrogatory

4. Identify the distance to the boundary of the plume exposure pathway EPZ which Intervenors believe should be established for CRERP.

- a. Describe in detail the basis for Intervenors' plume exposure pathway EPZ.

- b. Identify all analyses or studies performed by Intervenors which support their plume exposure pathway EPZ.

- c. Identify all documents which support Intervenors' response to this interrogatory.

Response

4. The distance is not fixed but should be a function of the projected radiation doses. Intervenors do not believe Applicants and Staff have made a case that a 10-mile plume exposure EPZ boundary is adequate.

- a. Intervenors have not established the boundary.

- b. None.

- c. Intervenors have not conducted a literature survey for this purpose. Intervenors are aware of studies such as WASH-1400 that indicate high exposures are calculated for distances beyond 10 miles, depending on the release assumptions and assured meteorological conditions.

Interrogatory

5. Describe in detail the basis for Intervenors' belief that ground contamination levels should be taken into account in establishing the boundary of the plume exposure pathway EPZ.

- a. Describe the methodology which Intervenors believe should be used in determining ground contamination levels.

b. Describe any analyses or studies which Intervenors have performed of the ground contamination levels following an accident at CRERP.

c. Identify all documents which support Intervenors' response to this interrogatory.

#### Response

5. All potential exposure pathways should be considered, and groundshine and resuspension are two potential exposure pathways. Given that key personnel at nearby facilities, e.g. Y-12, are required to remain on site, plans should be made to control personnel and vehicle contamination and otherwise limit exposure.

a. Intervenors to date have not attempted to identify the appropriate methodology.

b. None.

c. WASH-1400.

#### Interrogatory

6. Describe in detail the basis for Intervenors' belief that there is a "potential for high doses following a CDA prior to completion of evacuation." Intervenors' response to interrogatory 27, Applicants' Eighth Set of Interrogatories.

a. Quantify the phrase "high doses" as used in Intervenors' response to interrogatory 27.

b. Identify and describe in detail all analyses, studies or experimental data which support Intervenors' belief that there is "a potential for high doses following a CDA prior to completion of evacuation."

c. Identify all documents which support Intervenors' response to this interrogatory.

#### Response

6. The analysis in Appendix A of the SER supports the conclusion that there is a potential for early venting. The SER

also provides dose calculations that are indicative of high doses following venting.

a. Intervenors have not quantified this phrase, but doses in the range of the 10 CFR 100 guideline values would qualify.

b. Intervenors' LWA-1 Testimony.

c. Intervenors' LWA-1 Testimony.

#### Interrogatory

7. Describe in detail what Intervenors believe to be the purpose of the plume exposure pathway EPZ.

a. Identify all documents which support Intervenors' response to this interrogatory.

#### Response

7. The purpose is to protect public health by insuring adequate planning for nuclear emergencies, particularly those involving core melt where there is a potential for doses exceeding PAGs.

a. NUREG-0654, SER.

#### Interrogatory

8. Describe in detail the basis for the statement in Intervenors' response to Applicants' interrogatory 31, Applicants' Eighth Set of Interrogatories to Intervenors, that "the time period available for evacuation is too short under some scenarios." The answer to this interrogatory must include a detailed description of all scenarios in which the evacuation time period is "too short."

a. For each scenario identified above, quantify the phrase "too short" with respect to that scenario.

b. Identify all documents which support Intervenors' response to this interrogatory.

Response

8. The basis for the statement is the analyses of the potential for early venting in the SER Appendix A. The scenarios are those discussed in Appendix A where venting occurs on the order of 9 hours or less. They generally involve making conservative assumptions in the analyses. A longer time period ( > 9 hr.) may be appropriate if the plume exposure EPZ is found to exceed 10 miles.

- a. Less than the evacuation time.
- b. SER.

Interrogatory

9. Describe in detail all analyses or studies performed by Intervenors which demonstrate that there is a "potentially short evacuation time in the event of an accident at CRBRP."

- a. Identify all documents which support Intervenors' response to this interrogatory.

Response

9. See SER and response to Interrogatory 8 above.

Interrogatory

10. Identify and describe in detail all studies or analyses performed by Intervenors which demonstrate that there would be a significant release of plutonium in the event of a CDA at CRBRP.

Response

10. We have nothing to add at this time to our LWA-1 testimony regarding the potential releases following CDAs.



Interrogatory

11. Describe in detail the basis for Intervenor's belief that off-site decontamination facilities would be necessary in the event of an accident at CRBRP.

a. Describe in detail the precise accident sequences which Intervenor believes would require off-site decontamination facilities.

b. Identify all documents which support Intervenor's response to this interrogatory.

Response

11. Facilities may be needed to decontaminate personnel who continues to work at ORGDP and Y-12, after they traverse the EPZ upon leaving the plant.

a. CDA.

b. SER, Intervenor's LWA-1 testimony.

Interrogatory

12. Describe in detail the basis for Intervenor's contention that reentry and rehabilitation PAG's should be established for purposes of emergency planning.

a. Identify any regulatory requirements of which Intervenor is aware which require an emergency plan to encompass reentry and rehabilitation.

b. Identify all documents which support Intervenor's response to this interrogatory.

Response

12. PAG's are needed to minimize potential exposure of key personnel that must continue to work at nearby facilities such as Y-12.

a. None are known.

b. FEMA-REP-1.



## ADMISSIONS

### Admission

1. Intervenors have performed no analyses or studies establishing that there is a potential for high doses following a CDA prior to completion of evacuation.

### Response

1. Deny. Intervenors have provided LWA-1 testimony and read the SER.

### Admission

2. The major impediments as set forth in Intervenors' contention 9(c) are "the potential for high doses following a CDA prior to completion of evacuation."

### Response

2. Can neither admit nor deny since our analysis of the SER is incomplete.

### Admission

3. Intervenors have done no analysis of evacuation times for an EPZ greater than ten miles.

### Response

3. Admit.

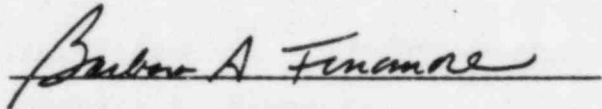
### Admission

4. The basis for Intervenors' contention 9(c) that the PSAR contains insufficient analysis of the time requirement to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent population, is that the PSAR analysis of evacuation times is limited to a ten mile EPZ.

Response

4. Admit.

Respectfully submitted,

A handwritten signature in cursive script, reading "Barbara A. Finamore", is written over a horizontal line.

Barbara A. Finamore  
S. Jacob Scherr

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Attorneys for Natural Resources  
Defense Council, Inc., and the  
Sierra Club

Dated: May 6, 1983