

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'  
ELEVENTH SET OF INTERROGATORIES AND REQUEST FOR ADMISSIONS

Pursuant to 10 CFR §2.740b, and in accordance with the Board's Construction Permit Scheduling Order of March 29, 1983, Intervenor, Natural Resources Defense Council, Inc., and the Sierra Club, hereby respond to Applicants' Eleventh Set of Interrogatories and Request for Admissions, dated April 25, 1983.

DSOB

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.

ADMISSIONS

Admission

1. Applicants' Reliability Program is described in Appendix C to the PSAR and Appendix C of the SER.

Response

1. Intervenors admit that some reliability assurance activities of Applicants are described in Appendix C of the SER and Appendix C of the PSAR. Intervenors have insufficient information to either admit or deny that these sections describe Applicants' Reliability Program in full.

Admission

2. The Probabilistic Risk Assessment Program plan to be implemented for CRBRP is described in Appendix D of the SER.

Response

2. Intervenors admit that Appendix D of the SER describes NRC Staff's understanding of the Probabilistic Risk Assessment Plan as of the date of the SER.

Admission

3. Intervenors do not have any specific disagreement as to the adequacy of the scope, content, or methodology of the Reliability Program plan described in the PSAR and the SER.

Response

3. Intervenors can neither admit nor deny this statement, as our review of the SER and the Applicants' reliability analyses is incomplete.

Admission

4. Intervenors do not have any specific disagreement as to the adequacy of the scope, content, or methodology of the Probabilistic Risk Assessment Program plan described in the SER.

Response

4. Intervenors can neither admit nor deny this statement, as our review of the SER and the Applicants' Probabilistic Risk Assessment Program is incomplete.

Admission

5. Intervenors disagree with the timing of the PRA Program plan.

Response

5. Intervenors admit this statement.

Admission

6. Intervenors' sole basis for disagreement with the PRA Program plan is that Intervenors believe the PRA must be completed prior to the issuance of a construction permit.

Response

6. Intervenors deny this statement. Even if the PRA Program plan were completed after issuance of a CP, Intervenors are not convinced it would be completed in time to have an impact on construction, as recommended by the ACRS.

Admission

7. Intervenors are not aware of any accident possibilities of greater frequency or consequence than the accident scenarios analyzed by Applicants and Staff in the PSAR and SER, respectively, other than CDAs.

Response

7. Intervenors can neither admit nor deny this statement. The PSAR and SER do not analyze quantitatively accident frequencies; therefore, Intervenors cannot determine to which "accident possibilities of greater frequency or consequence ..." Applicants are referring.

Admission

8. Intervenors have done no analysis of any CRBRP accident possibilities of greater frequency or consequence than the accident scenarios analyzed by Applicants and Staff in the PSAR and SER, respectively.

Response

8. Intervenors can neither admit nor deny this statement. The PSAR and SER do not analyze quantitatively accident frequencies; therefore, Intervenors cannot determine to which "CRBR accident possibilities of greater frequency or consequence..." Applicants are referring.

Admission

9. Intervenors have done no analysis which establishes that it is not possible to obtain sufficient failure mode data pertinent to CRBR systems to validly employ Fault Tree and Event Tree analysis in predicting the probability of CDAs.

Response

9. Intervenors admit this statement.

Admission

10. Intervenors have done no analysis of the probability of CDAs at CRBRP.

Response

10. Intervenors deny this statement. Intervenors did such an analysis in the LWA-1 proceeding.

Admission

11. Intervenors have done no analyses of credible failure modes and human elements.

Response

11. Intervenors deny this statement. Intervenors did such an analysis in the LWA-1 proceeding.

Admission

12. Intervenors have done no analysis demonstrating that CDAs should be considered DBAs.

Response

12. Intervenors deny this statement. Intervenors did such an analysis in the LWA-1 proceeding.

Admission

13. There is no regulatory requirement mandating completion of a PRA prior to issuance of a construction permit.

Response

13. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

14. There is no statutory requirement mandating completion of a PRA prior to the issuance of a construction permit.

Response

14. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

15. There is no NRC policy requiring completion of a PRA prior to issuance of a construction permit.

Response

15. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

16. There is no regulatory requirement mandating completion of a PRA as a prerequisite to the issuance of a construction permit.

Response

16. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

17. There is no statutory requirement mandating completion of a PRA as a prerequisite to the issuance of a construction permit.

Response

17. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

18. Under current NRC regulatory and statutory requirements, it is not necessary to complete a PRA prior to issuance of a construction permit.

Response

18. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

19. The exclusive licensing basis for nuclear plants is contained in current NRC regulatory requirements.

Response

19. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

20. Current NRC regulatory requirements contemplate a deterministic approach for reviewing design and operation of a nuclear power plant.

Response

20. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

21. Probabilistic risk assessment is not a required part of the deterministic approach for reviewing design and operation of a nuclear power plant contained in NRC regulatory requirements.

Response

21. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.



Admission

22. The Commission considers PRAs to be merely adjuncts to the established regulatory process and NRC's reactor safety regulations in 10 CFR Chapter I.

Response

22. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

23. The NRC has not developed any requirements for compliance with any numerical safety goal design objectives that might be approved for individual licensing reviews.

Response

23. Intervenors deny this statement. 10 CFR 100, for example, contains "numerical safety design objectives," namely the dose guidelines.

Admission

24. Existing NRC requirements are adequate to protect the public health and safety.

Response

24. Intervenors deny this statement. See, for example, NRDC's Petition to Amend Occupational Radiation Exposure Standards (40 Fed. Reg. 30319, Oct. 29, 1975).

Admission

25. Existing probabilistic risk analyses for individual nuclear power plants that have already been completed should not be used to draw inferences regarding bottom line safety conclusions at CRBRP.

Response

25. Intervenors deny this statement. PRA is a useful tool for identifying safety deficiencies that may be common to LWRs and the CRBR.

Admission

26. Quantitative design objectives are not substitutes for existing NRC regulations.

Response

26. Intervenors admit this statement.

Admission

27. Existing NRC regulations do not provide for quantitative design objectives.

Response

27. Intervenors deny this statement. 10 CFR 20, 10 CFR 50 Appendix I, and 10 CFR Part 100 include quantitative design objectives.

Admission

28. The exclusive licensing basis for nuclear power plants is conformance to deterministic NRC regulatory requirements.

Response

28. Intervenors deny this statement. All pertinent NRC regulatory requirements must be met.

Admission

29. The qualitative safety goals and quantitative design objectives contained in the Commission's Policy Statement, 47 Fed. Reg. 7023 (Feb. 17, 1982), do not require the performance of probabilistic risk assessments by applicants or licensees during the evaluation period.

Response

29. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

30. Existing NRC regulatory requirements, which do not require a PRA prior to issuance of a CP, are adequate for purposes of licensing CRBRP construction.

Response

30. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

31. NRC deterministic regulatory requirements used for purposes of analyzing the safety of nuclear power plants are adequate for purposes of licensing CRBRP construction.

Response

31. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

32. The NRC Staff's deterministic analysis of CRBRP safety is adequate for purposes of licensing CRBRP construction.

Response

32. Intervenors can neither admit nor deny this statement, since it calls for a legal conclusion.

Admission

33. Intervenors believe that a comprehensive PRA must be completed prior to issuance of a construction permit before one can reliably conclude that a CDA is not credible.

Response

33. Intervenors deny this statement. Intervenors claim that a comprehensive PRA should be completed prior to issuance of a CP for CRBR if the CP is to be based on placing CDAs outside the DBA envelope.

Admission

34. Intervenors believe that a comprehensive PRA cannot be completed until the CRBRP reliability test program is completed.

Response

34. Intervenors deny this statement. Intervenors claim that Applicants have not established that the test program will be timely enough to impact, through the PRA, a favorable decision that CDAs can be excluded from the DBA.

Admission

35. The basis for Intervenors' contention 1(b) is that the reliability test program must be completed in order to perform a comprehensive PRA.

Response

35. Intervenors deny this statement. Contention 1(b) and its basis are more comprehensive than addressing whether the reliability test program is necessary and sufficient for a comprehensive PRA.

Admission

36. The basis for Intervenors' contention 3(b) that "neither Applicants nor Staff's analysis of potential accident initiators, sequences, and events are sufficiently comprehensive to assure that analysis of the DBAs will envelope the entire spectrum of credible accident initiator sequences and events" is that CDAs can only be excluded as DBAs after completion of a comprehensive PRA.

Response

36. Intervenors admit this statement with respect to the CRBR.

Admission

37. The basis for Intervenors' contention 3(d) that "neither Applicants nor Staff have adequately identified and analyzed the ways in which human error can initiate, exacerbate or interfere with the mitigation of CRBRP accidents" is that a comprehensive PRA has not been performed for CRBRP.

Response

37. Intervenors admit this statement.

Admission

38. The mechanisms and/or sequences of events by which sodium concrete interactions at CRBR may result are fully described in the SER, Appendix A.

Response

38. Intervenors can neither admit nor deny this statement, since Intervenors have not completed their review of Appendix A of the SER.

Admission

39. The only initiators, sequences, and/or events not enveloped by Applicants' design basis accidents which could lead to reduced heat removal from the core or excess heat generation in the core are core disruptive accidents.

Response

39. Intervenors can neither admit nor deny this statement. Intervenors have not made the exhaustive review necessary to make this determination.

Admission

40. Assuming HCDAs are not DBAs, Applicants' and Staff's design basis accidents envelope all potential accident initiators, sequences, events, and consequences.

Response

40. Intervenors can neither admit nor deny this statement. Intervenors have not made the exhaustive review necessary to make this determination.

Admission

41. Applicants and Staff have adequately analyzed sodium concrete interactions.

Response

41. Intervenors deny this statement. Applicants and Staff have not assumed a CDA is a confinement system DBA and their respective analyses of sodium concrete interactions are not sufficiently conservative, nor do they analyze sufficiently alternative approaches that would mitigate sodium concrete interactions.

Admission

42. Applicants and Staff have properly applied the experimental data base to their analysis of sodium concrete interactions.

Response

42. Intervenors deny this statement for reasons stated in response to Admission 41 above.

Admission

43. Applicants and Staff's analyses of sodium concrete interactions use reaction rates which exceed experimentally observed values.

Response

43. Intervenors can neither admit nor deny this statement, since our analysis of the SER and other relevant documents is not complete.

Admission

44. Intervenors do not contest the applicability of the experimental data used by Applicants and Staff in their analysis of sodium concrete interactions. 1

Response

44. Intervenors can neither admit nor deny this statement, since our analysis of the SER and other relevant documents is not complete.



Admission

45. Intervenors are not aware of any experimental data which shows the values used by Applicants and Staff in their analysis of sodium concrete interactions underpredict the reaction rates.

Response

45. Intervenors admit this statement without admitting that Applicants and Staff have made appropriately conservative assumptions.

Admission

46. Assuming that an HCDA is not a DBA, the bounding loss of pumping power design basis accident is the simultaneous failure of all three pump motors and the subsequent close-down of all three primary pumps.

Response

46. Intervenors can neither admit nor deny this statement, since Intervenors have not yet performed this assessment.

Admission

47. The CRBRP design basis leak represents loss of a very small fraction of the total core flow and thus does not represent a significant reduction of heat removal capability.

Response

47. Intervenors admit this statement.

Admission

48. Assuming an HCDA is not a DBA, the bounding DBA for whole core heat removal due to increased core temperature is the complete and instantaneous stoppage of all heat removal from one intermediate heat exchanger while the reactor is operating at full power.

Response

48. Intervenors can neither admit nor deny this statement, since Intervenors have not yet performed this assessment. ✓

Admission

49. Assuming an HCDA is not a DBA, the bounding DBA which envelopes all fuel movement resulting in excessive heat generation is the instantaneous assertion of the maximum possible reactivity from subassembly duct compaction.

Response

49. Intervenors can neither admit nor deny this statement, since Intervenors have not yet performed this assessment.

Admission

50. Other than an HCDA, the only sequence of events which Intervenors believe could challenge the containment at CRBRP would necessarily result from human intervention.

Response

50. Intervenors can neither admit nor deny this statement, since Intervenors have not yet completed their analysis of this issue.

Admission

51. Other than HCDAs, Intervenors are aware of no accident initiators sequences or events not included in or enveloped by Applicants design basis accident envelope.

Response

51. Intervenors admit this statement, although further analysis of the SER is necessary. Applicants' reliability analyses and other relevant documents may reveal such events.

## INTERROGATORIES

### Interrogatory

1. As to any admissions which Intervenors deny, describe or explain in detail the basis for the denial.

(a) Identify all analysis, studies, or other data of which Intervenors are aware which support Intervenors' denial.

(b) Identify all documents Intervenors used in responding to this interrogatory.

### Response

1. Detailed descriptions or explanations are given above in response to each Admission.

(a) None, other than our LWA-1 testimony unless indicated in the responses above.

(b) None, other than those identified above.

### Interrogatory

2. Describe the Reliability Program criteria which Intervenors believe are inadequate.

### Response

2. These criteria are described in Appendix C of the SER.

### Interrogatory

3. Define the phrase "watered down" as used in Intervenors' Response to Interrogatory 1(b)-9 of Staff's First Set of Construction Permit Interrogatories concerning contentions 1, 2, and 3.

Response

3. By "watered down," Intervenors mean "made less stringent."

Interrogatory

4. Specifically identify each reliability program criteria which Intervenors believe has been "watered down."

Response

4. Intervenors believe the reliability program criteria as a whole have been "watered down." The Interrogatory response was not referring to any individual criterion.

Interrogatory

5. Specifically identify and describe any and all alternative criteria which Intervenors believe should be used by Applicants in their reliability program.

Response

5. Intervenors continue to believe that a comprehensive PRA should be employed as part of the decision-making process to determine whether CDAs should be within the containment/confinement system DBA envelope.

Interrogatory

6. Identify all reliability program criteria which Intervenors believe are "too vague." See Intervenors' Response to Admission 6 of Staff's First Set of Construction Permit Interrogatories and Requests for Admissions to Intervenors.

Response

6. Intervenors believe all the reliability program criteria in Appendix C of the SER are "too vague."

Interrogatory

7. Define the phrase "too vague."

Response

7. Intervenors define the phrase "too vague" as "not having a sufficiently precise meaning."

Interrogatory

8. As to each criteria which Intervenors believe is "too vague," explain in detail the basis for Intervenors' belief that the criteria is "too vague."

Response

8. Intervenors have not completed their analysis of Appendix C of the SER or the underlying documents and have not conducted a line-by-line analysis of each criterion necessary to answer this question. The criteria, however, "define the nature and extent of the Program in broad terms" (SER at C-2) but provide no details that would allow one independently to judge whether Applicants' program is sufficiently thorough to constitute an adequate PRA.

Interrogatory

9. Describe in detail any evidence which Intervenor intend to introduce at the construction permit hearings, and which was not produced during the LWA-1 hearings, in support of Intervenor's contention that core disruptive accidents should be included within design basis accidents at CRBRP.

Response

9. Intervenor's analysis is not complete, and therefore Intervenor cannot answer this interrogatory at this time.

Interrogatory

10. Describe in detail any reasons why Intervenor believe that core disruptive accidents should be included as design basis accidents at CRBRP which have not already been included in Intervenor's testimony at the LWA-1 hearings.

Response

10. Intervenor's analysis is not complete, and therefore Intervenor cannot answer this interrogatory at this time.

Interrogatory

11. Describe any analysis of core disruptive accidents performed by Intervenor in addition to Intervenor's testimony introduced at the LWA-1 hearings.

Response

11. Intervenor are in the process of analyzing the SER, its underlying documents, and responses to discovery requests.

Interrogatory

12. Describe in detail any analyses or studies which Intervenor are presently undertaking regarding core disruptive accidents at CRBRP.

(a) If such analyses or studies are not yet complete, provide an estimate of when such analyses or studies will be complete.

Response

12. Intervenor are in the process of analyzing the SER, its underlying documents, and responses to discovery requests.

(a) At the time Intervenor's testimony is filed for the construction permit proceeding.

Interrogatory

13. Identify specifically all errors in the Staff's evaluation of the reliability data for the important safety systems for CRBRP which Intervenor contend they identified at the LWA-1 proceeding. See Intervenor's Response to Admissions 31 of NRC Staff's First Set of Construction Permit Interrogatories and Request for Admissions to Intervenor.

Response

13. The record of the LWA-1 proceeding speaks for itself. Intervenor believe a fundamental error is Staff's failure to treat CDAs within the containment/confinement system design basis envelope.



Interrogatory

14. Describe in detail all reasons why "Intervenors believe Chapter 15 provides inadequate support" for the conclusion that CDAs should be considered outside the design basis spectrum of accidents. See Intervenors' Response to Admission 36 of NRC Staff's First Set of Construction Permit Interrogatories and Requests for Admissions to Intervenors.

(a) Identify all documented analyses which support Intervenors' belief other than Intervenors' LWA-1 testimony.

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

Response

14. Intervenors' analysis of the SER is incomplete. A principal fault in the SER is the lack of quantitative analysis of accident probabilities needed to judge whether CDAs are DBAs.

(a)-(b) Our analysis is ongoing. Intervenors are in the process of analyzing the SER, its underlying documents, and responses to discovery requests.

Interrogatory

15. Describe in detail the basis for Intervenors' statement that "the Staff fails to conservatively analyze CDAs and their consequences." See Intervenors' Response to Admission 39 of Staff's First Set of Construction Permit Interrogatories and Request for Admissions to Intervenors.

Response

15. Staff and Applicants have taken the position that, by excluding CDAs from the containment/confinement system DBA envelope, the Applicants are not required to make conservative assumptions in the models of the containment behavior under CDA conditions, for purposes of establishing the design requirements of the containment/confinement system. For example, the Applicants and Staff do not model the effect of the vent/purge systems in their 10 CFR 100 site suitability analysis.

Interrogatory

16. Specifically identify any experimental data which Intervenors believe shows that Applicants and Staff's sodium concrete reaction rates underpredict reaction rates.

(a) If Intervenors are aware of no such experimental data, please so specify.

Response

16. Intervenors are not aware of any analyses that show that Staff's sodium concrete reaction rates for the "Realistic Upper Bound" scenario underpredict reaction rates. Intervenors note that Staff's assumptions are more conservative than Applicants' (SER at A1-24). Otherwise, Intervenors' analysis of this issue is not yet complete.

Interrogatory

17. Describe all human errors during reactor operation of which Intervenors are aware which could modify fuel assembly ducts as stated in response to interrogatory 13 of Applicants' Ninth Set of Interrogatories.

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

Response

17. Any human error that is a contributor to CDA initiation.

(a) Documents supporting Intervenors' position that human error can contribute to CDAs are identified in Intervenors' LWA-1 testimony.

Interrogatory

18. State whether Intervenors have any basis for concluding that the reactor shut-down systems will not operate as intended.

(a) If Intervenors have such basis, describe it in detail.

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

Response

18. Yes.

(a) Reactor types such as LWRs and heavy water reactors have experienced failures of the reactor shutdown systems caused in part by human error (e.g., the recent Salem incident).

(b) Principal supporting documents are WASH-1400 and the recent article in Science on the Salem event.

Interrogatory

19. Do Intervenors have any criticisms of the design of the reactor shut-down systems for CRBRP? If so, describe in detail these criticisms.

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

Response

19. Intervenors have no specific criticisms of the engineering details of the reactor shutdown systems. Our concern is whether the overall reliability of the systems in conjunction with the reliability of other safety systems is sufficient to warrant exclusion of CDAs from the DBA envelope.

(a) Our LWA-1 testimony.

Interrogatory

20. Do Intervenors have any criticisms of the design of the shutdown heat removal systems? If so, describe in detail these criticisms.

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

Response

20. Intervenors have no specific criticisms of the design of the shutdown heat removal systems. Our concern is whether the overall reliability of the systems in conjunction with the

reliability of other safety systems is sufficient to warrant exclusion of CDAs from the DBA envelope.

(a) Our LWA-1 testimony.

Interrogatory

21. Describe any common cause failures of which Intervenors are aware which would preclude the direct heat removal system from removing shut-down heat in the event the three heat transport systems are simultaneously incapable of removing the shut-down heat.

Response

21. Intervenors have identified none but believe a primary objective of a comprehensive PRA is to identify potential common cause failures, of which this would be one category.

Interrogatory

22. Describe in detail the basis for Intervenors' statement that "the three primary loops are not diverse."

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

Response

22. "Diverse" means "unlike" and implies, as used here, different in design. The three primary loops are physically separated but are otherwise similar in design. The primary and secondary reactor shutdown systems are "diverse," but not the primary loops.

(a) PSAR

Interrogatory

23. Describe the other "physical phenomena" involved in crack growth referred to in Intervenor's Response 29 to Applicants' Ninth Set of Interrogatories.

Response

23. The physical phenomena and characteristics of pipes that affect crack growth are identified and discussed in Section 4.2 of WARD-D-0185.

Interrogatory

24. Describe in detail all ways of which Intervenor's are aware in which human intervention could result in loss of containment as stated in Response 35 to Applicants' Ninth Set of Interrogatories.

Response

24. Human errors could affect containment in a variety of ways, including failure to construct the containment to design specifications, which could impact on leak rate; failure to properly calibrate instruments; failure to follow procedures affecting whether containment penetrations (doors) are sealed when and as required. These are a few examples. Intervenor's have not attempted to develop an exhaustive list.

Interrogatory

25. Do Intervenors agree that it is feasible to design a vent and clean-up system which will perform adequately under CDA conditions?

(a) If Intervenors disagree, describe in detail the basis for Intervenors' disagreement.

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

Response

25. Yes.

(a) Not applicable.

(b) Intervenors are not aware of any documents that support Intervenors' response. However, Intervenors can envision a containment design where a backup vent/purge system is incorporated in the design but would not be needed in the event of a Class 1 CDA.

Interrogatory

26. Do Intervenors agree that the design of the vent and clean-up system for CRBRP as set forth in the SER will perform adequately under CDA conditions?

(a) If Intervenors disagree, describe in detail the basis for Intervenors' belief.

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



Response

26. No.

(a) The CRBR containment design does not provide an adequate safety margin in terms of its capability to reduce offsite exposure following CDAs.

(b) SER, PSAR, Intervenors' LWA-1 testimony.

Interrogatory

27. Identify the precise analyses in Appendix A of the SER referred to in Intervenors' response to Staff's interrogatory 9-26, NRC Staff's First Set of Construction Permit Interrogatories and Request for Admissions Concerning Contention 9.

Response

27. SER, Appendix A, Attachment 1, provides a sensitivity analysis of the time period from CDA initiation to venting. It is clear that CDAs provide the greatest challenge to the containment, given that accidents within the DBA envelope as defined by Applicants and Staff do not require venting.

Interrogatory

28. With regard to Dr. Cochran, Senior Staff Scientist, Natural Resources Defense Council, please provide a specific description of all relevant education and experience which Intervenors believe qualify him as an expert in

(a) emergency planning,

(b) CRBRP accident analysis,

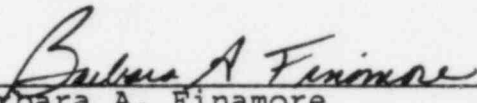


- (c) CRBRP HCDA analysis
- (d) sodium concrete interaction,
- (e) reliability analysis,
- (f) Fault Tree/Event Tree analysis,
- (g) probabilistic risk assessment,
- (h) containment analysis under HCDA conditions.

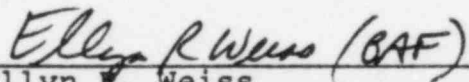
Response

28. Dr. Cochran's relevant education and experience were provided in the LWA-1 proceeding.

Respectfully submitted,

  
\_\_\_\_\_  
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Dated: May 13, 1983

DOCKET NUMBER  
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50-537

CERTIFICATE OF SERVICE

I hereby certify that copies of RESPONSE OF INTERVENORS TO APPLICANTS' ELEVENTH SET OF INTERROGATORIES AND REQUEST FOR ADMISSIONS and RESPONSE OF INTERVENORS TO NRC STAFF'S SECOND SET OF CONSTRUCTION PERMIT INTERROGATORIES AND REQUEST FOR ADMISSIONS were delivered this 13th day of May 1983 by hand\* or by first class mail upon:

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DS03

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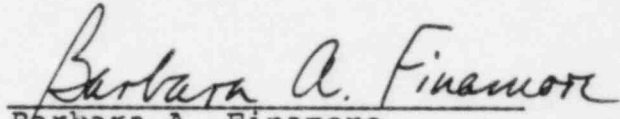
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