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

OFFICE OF SECRETARY  
DOCKETING SERVICE  
WASHINGTON

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

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In the Matter of )  
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UNITED STATES DEPARTMENT OF ENERGY )  
PROJECT MANAGEMENT CORPORATION )  
TENNESSEE VALLEY AUTHORITY )

(Clinch River Breeder Reactor Plant) )  
\_\_\_\_\_ )

Docket No. 50-537

NATURAL RESOURCES DEFENSE COUNCIL, INC.  
AND THE SIERRA CLUB TWENTY-SIXTH  
SET OF INTERROGATORIES TO  
STAFF  
\_\_\_\_\_

Pursuant to 10 CFR § 2.740b, and in accordance with the Board's Prehearing Conference Order of February 11, 1982, Intervenor, Natural Resources Defense Council, Inc. and the Sierra Club, submit the following interrogatories related to the Site Suitability Report in the Matter of Clinch River Breeder Reactor Plant (Revision to March 4, 1977 Report), NUREG-0786, June, 1982. Intervenor request that the attached interrogatories be answered fully, in writing and under oath,

by one or more officers or employees of Staff who has personal knowledge thereof or is the closest to having personal knowledge thereof. If the interrogatories are answered by more than one person, whether or not he or she verified the answers, and whether or not he or she is an officer or employee of Staff, such person's name and title should be set forth together with an identification of which interrogatories he or she is responsible for.

Each answer to an interrogatory shall be preceded by a copy of the particular question to which the answer is responding. Each question is instructed to be answered in six parts, as follows.

Answer to Question \_\_\_\_\_:

- (a) Provide the direct answer to the question.
- (b) Identify all documents and studies, and the particular parts thereof, relied upon by Staff, now or in the past, which serve as the basis for the answer. In lieu thereof, at Staff'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 Staff'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 Staff employee(s) or consultant(s) who provided the answer to the question.
- (e) Explain whether Staff is presently engaged in or intends to engage in any further, ongoing research program which may affect Staff's answer. This answer need be provided only in cases where Staff intends to rely upon ongoing research not included in Section 1.5 of the PSAR at the LWA or construction permit hearing on the CRBR. Failure to provide such an answer means that Staff does 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 Staff intends 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 Staff has in fact identified the expert(s) in question or determined that no expert will testify, as long as such answer provides reasonable notice to Intervenors.

As used herein, "documents" include, but are not limited to papers, photographs, criteria, standards of review, recordings, memoranda, books, records, writings, letters, telegrams,

mailgrams, correspondence, notes and minutes of meetings or of conversations or of phone calls, interoffice, intra-agency or interagency memoranda or written communications of any nature, recordings of conversations either in writing or upon any mechanical or electronic or electrical recording devices, notes, exhibits, appraisals, work papers, reports, studies, opinions, surveys, evaluations, projections, hypotheses, formulas, designs, drawings, manuals, notebooks, worksheets, contracts, agreements, letter agreements, diaries, desk calendars, charts, schedules, appointment books, punchcards and computer printout sheets, computer data, telecopier transmissions, directives, proposals, and all drafts, revisions, and differing versions (whether formal or informal) of any of the foregoing, and also all copies of any of the foregoing which differ in any way (including handwritten notations or other written or printed matter of any nature) from the original.

INTERROGATORIES

These interrogatories all relate to the June 1982 Site Suitability Report in the Matter of Clinch River Breeder Plant (Revision to March 4, 1977 Report), NUREG-0786 (the "1982 SSR"). The specific page number(s) referred to are indicated in parentheses at the beginning of each interrogatory.

I. General Questions

1. For each principal Staff contributor responsible for reviewing any portion of the 1977 SSR, indicate
  - a) which portion of the SSR was reviewed by such person;
  - b) who was responsible for making each revision to the 1977 SSR, as indicated by a vertical bar in the right hand margin of the pages of the 1982 SSR.
  
- 2) Please update every Staff response to Intervenors' interrogatories, requests for admission, requests for production of documents, and deposition questions to reflect additional Staff review and analysis performed in revising the 1977 SSR or in continuing the Staff's safety review.

- 3) a) Would any of the conclusions reached by Staff in the 1982 SSR remain valid, in Staff's opinion, if the CDA were demonstrated to be of sufficiently high probability that it should be included within the design basis of the CRBR?
- b) If the answer is yes, identify and provide the analysis upon which Staff relies for its answer.
- c) If the answer is no, identify each conclusion in the SSR which Staff would have to revise if the CDA were a DBA.
- d) If Staff's answer is that it does not know whether a particular conclusion would need revision, describe what additional information Staff would need in order to decide whether revision is necessary.

## II. Section I

- 1) (I-2) Are the 1982 SSR conclusions still valid, to Staff's knowledge, if one assumes the reactor will be fueled by reactor-grade plutonium? If the answer is yes, describe in detail the analyses and data (including numerical results) that support Staff's conclusion that the site is suitable for a reactor using reactor-grade plutonium in its fuel assemblies. If not, explain in detail why such analyses have not been conducted.

- 2) (I-4) Identify each "design parameter that impacts upon the question of site suitability" that is not specifically identified in the 1982 SSR.
  
- 3) Intervenors would like an explanation of which aspects or parameters of the present CRBR design Staff currently believes are adequate for purposes of site suitability; which aspects or parameters require more Staff review before their adequacy can be determined; and which aspects or parameters are not adequate as presently designed. Please identify and describe each aspect or parameter of the present CRBR design which Staff currently believes:
  - a) is adequate for purposes of determining site suitability;
  - b) will require further technical or design information to complete the safety analyses and for which information will not be available until after the Staff completes the SER;
  - c) is not adequate for purposes of determining site suitability as presently designed, and cannot feasibly be made adequate; and
  - d) is not adequate for purposes of determining site suitability as presently designed, but which may be redesigned adequately, given the current state of technology.

If Staff is unable to answer any of these questions because its review is not complete, please provide any tentative or preliminary conclusions Staff may have. If Staff has no preliminary or tentative conclusions at this time for one or more of the above questions, indicate whether Staff intends to develop, or expects to reach any such conclusions before commencement of the LWA-1 hearings.

- 4) (I-4) Specify each and every statement in the May 6, 1976 letter, by sentence, which Staff presently considers a "requirement" with which Applicants must specifically comply. For each statement in the letter which Staff does not consider to be a "requirement," explain in detail why compliance with such statement will not be required.
  
- 5) (I-4) Identify and describe each Staff requirement with which Applicants must comply in order to demonstrate site suitability, other than the requirements indicated in response to Interrogatory 4 above, and those in 10 CFR Part 100.

### III. Section II

- 1) (II-1) Explain in detail why Staff no longer describes the CRBRP Design Criteria (SSR Appendix A) as "minimum requirements acceptable to the staff for the principal



design criteria of the CRBRP," but now describes them as "an example of the kinds of requirements acceptable to the staff for the principal design criteria of the CRBRP."

- 2) (II-1) Describe in detail the effect of the change described in Interrogatory 2 above on Staff's CRBR site suitability review and what role, if any, the CRBRP Design Criteria will play during the LWA-1 hearings.
- 3) (II-2) Explain in detail why Staff will no longer require Applicants to demonstrate compliance with the CRBRP Design Criteria, at the construction permit stage, but will instead "evaluate the applicants' specific engineering criteria and will require that any necessary modifications be made to these specific criteria to achieve satisfactory conformance with each of the principal criteria."
- 4) (II-1) Has Staff reached any preliminary, tentative, or final conclusions regarding the acceptability of any of the CRBRP Design Criteria included in SSR Appendix A? If so, identify and describe each such conclusion, and provide the basis for such conclusion. If the answer is no, indicate whether Staff intends to develop, or expects to reach, any such conclusions before commencement of the LWA-1 hearings.

- 5) For each CRBR Design Criterion included in SSR Appendix A, and for each requirement included in the May 6, 1976 Denise-Caffey letter, indicate whether it is Staff's current assessment that such criterion or requirement,
- a) is necessary in order to comply with 10 CFR 100;
  - b) is sufficient in order to comply with 10 CRR 100;
  - c) is necessary in order to assure a level of safety comparable to current generation light water reactor plants;
  - d) is sufficient to ensure a level of safety comparable to current generation light water reactor plants.

- 6) (II-2) Explain the present basis for Staff's statement that:

The Commission's regulations require that an applicant design, manufacture, and operate the plant to minimize the likelihood of accidents.

Does Staff believe that this requirement applies to the CRBR? If so, why does Staff require only two redundant and diverse shutdown systems?

- 7) (II-9) The Staff states that "applicants have submitted the results of their analysis regarding the integrity of the hot leg, which is part of the current evaluation for the SER."

- a) Identify, describe, and provide each analysis regarding the integrity of the hot leg piping that has been submitted by Applicants since January 1977, and any and all documents related thereto.
- b) Describe in detail the pre-service and in-service inspection program, material surveillance program and verification of each leak detection system performance for the CRBR referred to by Staff.
- c) Describe in detail the nature of the research and development to verify material degradation processes referred to by Staff.
- d) Describe in detail why Staff believes a mere 20-25% difference in temperature prevents Staff from considering the cold leg pipe rupture to be a design basis even in the same manner as it considers a hot leg pipe rupture.
- e) Describe in detail the analysis and documentation relied upon by Staff for its conclusion that double-ended rupture of the CRBR primary cold leg piping could potentially lead to a CDA unless otherwise mitigated. Identify and provide all documents relied on by Staff for its answer.

- 8) (II-10) Describe in detail
- (i) all the analytical work, and
  - (ii) all the experimental work
- performed at EBR-II concerning conditions that might arise during plant operations and that potentially affect fuel pin failure propagation. Identify and provide all documents related to such analytical or experimental work.
- a) With regard to each analytic and experimental work described above, identify the specific document(s) that form(s) the basis for Staff's current statement that:
- The results of this work thus far indicate that there should not be a significant potential for failure propagation beyond a few fuel-pins under the anticipated operation conditions and limitations.
- 9) (II-10) Identify and describe in detail
- a) all the experimental work, and
  - b) all the analytical work that has been conducted on the effects of blockages within a pin bundle.
- Identify and provide any and all documents related to such analytical or experimental work.
- 10) (II-10) With regard to each analytical and experimental work described in response to Interrogatory 9 above, identify the specific document(s) that form(s) the basis for Staff's current position that:

- a) the results, thus far, indicate that substantial blockages at the non-fuel inlet or outlet regions do not cause overheating;
  - b) inert planar blockages covering a few coolant subchannels in the fuel region do not cause any significant overheating;
  - c) small heat-producing (fuel material) blockages do not cause significant overheating of adjacent areas;
  - d) there is a substantial basis to anticipate that local faults affecting single or a few pins within a subassembly will not rapidly propagate to adjacent pins.
- 11) (II-11) Describe in detail the basis for Staff's conclusion that "fuel pin failures which might occur under various plant operating conditions, including design transients, are unlikely to create conditions under which significant fuel failure propagation within a subassembly would occur."
- 12) (II-10, II-11) Explain in detail how Staff was able to reach the conclusion described in Interrogatory 12 above in light of the fact that "the current staff position is that of not being yet convinced that the staff requirements regarding subassembly propagation have been satisfied."

- 13) (II-10) Explain in detail whether Staff believes that the "more sensitive and faster response monitoring systems" that Staff may require
- a) are feasible to design, install, and maintain;
  - b) will be sufficiently numerous adequately to detect subassembly faults;
  - c) will be sensitive and quick enough adequately to detect subassembly faults.
- 14) (II-20) Explain in detail the basis for Staff's revision of the 1977 SSR Table I (p. II-38) by removing the section entitled "Additional Features Proposed for Accommodation of Core Melt and Disruptive Accidents" (II.D.4).
- a) Are Applicants still proposing these additional features for accommodation of core melt and disruptive accidents?
  - b) If so, have Applicants revised these proposals in any way? Identify and provide all such revised proposals, and any and all documents related thereto.
  - c) If applicants are no longer proposing the features as described in the original Table I, explain in detail what features Applicants propose to accommodate core melt and disruptive accidents. In particular, describe in detail the features described in 1982 SSR, p. II-19 (first full paragraph). Identify and provide all documents related to Applicants' proposal(s) and Staff's review to date of such proposal(s).

- 15) (II-19) Describe in detail and provide the documentation upon which Staff relies at the LWA-1 stage for its conclusion that "other feasible design features... separately or in combination could reduce the probability of containment failure to an acceptable level."
- 16) (II-18) Identify each "alternative criterion for evaluating core melt accidents, in lieu of the 24-hour criterion" currently under evaluation by Staff.
- a) Explain in detail why Staff believes such an evaluation is necessary.
  - b) Explain whether each alternative criterion under evaluation by Staff is more or less stringent than the 24-hour criterion, and give the basis for your answer.
  - c) Staff has based its 24-hour criterion on the WASH-1400 conclusion that "most LWR core melt accidents do not result in early (less than one hour) containment failure, but may involve such failure within 24 hours." To what extent, if any, is this conclusion consistent with the recent analysis performed by Oak Ridge National Laboratory concerning the probability of severe LWR core-melt accidents (see Nucleonics Week, July 8, 1982, pp. 1-2)?
- 17) (II-17) Explain fully the basis for Staff's view that a technically feasible solution to accommodate sodium pipe breaks is to increase the RCE design pressure to 50 psig.

- a) Identify all LWR containments that use 50 psig or larger pressures as a design basis.
  - b) To what extent does this solution depend on the incorporation of other features (e.g., filtered vent systems, containment purge, core catcher)?
- 18) (II-19) Staff indicates that the "technology exists to design and build such devices" to accommodate excessive mechanical loads.
- a) Does Staff believe this statement applies to work energies (to 1 atm) up to 1200 mj?
  - b) Does Staff believe this statement applies to work energies (to 1 atm) exceeding 1200 mj?
  - c) If the answer to (b) is yes, at approximately what CDA energetic level does Staff no longer have confidence that it is technically feasible to design and build a primary containment to withstand such an accident for the CRBR or a reactor of the general size and type as the CRBR?
- 19) (II-19) Describe as fully as possible each "reactor head design" examined by Staff with regard to whether it was a "potentially workable design" which could "be used to implement the Staff's containment protection requirements." Identify and produce all documents examined by Staff where these alternative head designs are



- (i) described and
  - (ii) analyzed.
- 20) (II-19) Identify each alternate head design that is a "potentially workable design."
- 21) (II-19) When Staff refers to a "potentially workable design," what is the largest CDA energetic level that the design must be able to accommodate and still be considered potentially workable?
- 22) Identify and produce any and all analyses examined and relied upon by Staff for purposes of establishing the energetics of the CDA, in order to establish the benchmark or criteria for judging whether the CRBR head design, or alternate head designs, are "potentially workable designs."
- a) If no analyses were relied upon, explain fully how Staff can conclude that a particular head design is "potentially workable" without knowing what mechanical loads it might be required to accommodate.

IV. The following interrogatories are related to the dose calculations appearing in Table IV (III-11).

1. Intervenors wish to reproduce the results in Table IV, but Table IV does not present all the assumptions used to calculate the dose consequences for the exclusion area and

low population zone. Identify each and every assumption, including a) each model equation and b) each input parameter, together with the basis for the choice of each assumption (equation and input value). Provide the source of each equation and each input parameter cited (PSAR, ER, Regulatory Guide, etc., with the appropriate page numbers). If a computer code is utilized (e.g., CRAC or TRAC), provide a printout of the code and all input and output data, together with a detailed description of the input and output format, and any documentation of the computer model.

2. With regard to each model assumption and input datum identified in 1 above, is Staff aware of any alternative model(s) or source(s) of input data or other assumptions that could result in higher dose consequence results? If so, please identify and explain the basis for rejecting these models or data. Intervenors are seeking to determine whether newer models, such as the ICRP lung model or alternative meteorological data, were considered by Staff, as well as the basis for their rejection.
3. What is the basis for the choice of the primary containment leak rate (0.1%/day) and the bypass fraction (0.001%/day)? What is the source for these assumptions; i.e., where are they documented? Identify and provide all such documentation.

4. Will Applicants be required to demonstrate the primary containment leak rate (0.1% vol/day) and the bypass fraction (0.001% vol/day) through testing alone (see p. II-15, which refers to technical specifications and testing)? If so, explain how this requirement will be applied. How does Staff determine whether this value is correct or conservative? Does Staff consider these rate and bypass fraction values to be firm requirements? If not, explain why not.
  
5. Does Staff consider the bypass fraction (0.001%/day) to be conservative? Explain in detail the basis for Staff's answer.
  
6. Has Staff conducted any analysis of
  - a) the CRBR containment design
  - b) the containment design of a reactor of the general size and type as the CRBRto assure itself that the bypass fraction assumption is appropriate?  
If so, please document fully the nature of such analyses and identify all documents (cite appropriate pages) considered in each analysis.
  
7. Has Staff conducted or examined any sensitivity analyses to determine how the dose consequences vary with changes

in the primary containment leak rate and bypass fraction? If so, identify and provide all such analyses and results and all documents related thereto.

8. What is the basis for Staff's choice of the values for the annulus filtration system flowrates (3,000 cfm and 11,000 cfm)? a) Why were these values increased over the values presented in the 1977 Site Suitability Report? b) What is the source for these new assumptions; i.e. where are they documented? Identify and provide all such documentation.
9. Will Applicants be required to demonstrate these flow rates through testing? If so, explain in detail how this requirement will be applied. How does Staff assure itself that these values are correct, or conservative? Are these flow rates firm requirements? If not, why not?
10. Does Staff consider these flow rate values to be conservative? Explain in detail the basis for Staff's answer.
11. Has Staff conducted or examined any sensitivity analyses to determine how the dose consequences vary with changes in the exhaust and recirculation filtration system flowrates? If so, identify and provide all such analyses and results and all documents related thereto.

12. Explain in detail the basis for Staff's choice of the values for the aerosol fallout coefficients in containment. Identify and provide all documents used by Staff in forming these assumptions.
13. Does Staff consider the aerosol fallout coefficients to be conservative? Explain in detail the basis for Staff's answer.
14. Explain in detail the basis for Staff's choice of atmospheric dispersion parameters.
  - a) What is the source for these new values?
  - b) Identify and provide all documents used by Staff in developing these values.
  - c) Why were the values increased over the values utilized in the 1977 Site Suitability Report?
15. What period of time (initial day/mo/yr to final day/mo/yr) is represented by the atmospheric dispersion parameters?
16. Have Applicants collected meteorological data during other periods of equal length (e.g., 1 year) that Staff believes would be adequate for purposes of calculating atmospheric dispersion parameters for the CRBR site?

17. Over what period does Staff believe Applicants have collected meteorological data that would be adequate for purposes of calculating atmospheric dispersion parameters for the CRBR site?
18. Does Staff take the position that Staff or Applicants are free to choose the time interval (i.e. beginning and ending dates) which gives the smallest X/Q values, provided the length of the time interval and all other considerations meet Regulatory Guide 1.145 requirements? Explain in detail the basis for Staff's answer.
19. Does Staff believe the X/Q values in Table IV are conservative in light of Applicants' choice of the time interval (i.e. beginning and ending dates) for analyzing meteorological data? Explain in detail the basis for Staff's answer.
20. Why doesn't Staff require or utilize an analysis of the entire time interval during which adequate meteorological data is available for purposes of calculating X/Q values?
21. Approximately how many years of site meteorological data does Staff believe one would need in order to have reasonable confidence that the derived atmosphere

dispersion parameters are representative of future meteorological conditions expected for the site? Explain in detail the basis for Staff's answer and identify and provide all documents upon which Staff relies for its answer.

a) Does this answer represent, in Staff's view, the expert opinion of meteorologists? Explain the basis for Staff's answer, and identify and provide all documents upon which Staff relies for its answer.

22. What model(s) were used by Staff to calculate the organ doses (in rems) per curie of activity inhaled and for external and exposures? Identify and provide all documents upon which Staff relies for its answer.

23. What plutonium isotopic content did Staff assume would be used to fuel the CRBR? a) Did Staff examine the effect on oxygen dose calculations of switching from fuel-grade to reactor-grade plutonium? If the answer is yes, provide the results of that analysis in full, and any and all documents related thereto.

24. Does Staff consider its assumptions regarding the Pu isotopic concentration to be conservative in light of the possible future use of reactor-grade plutonium in CRBR fuel? Explain in detail the basis for Staff's answer.

25. What assurance, if any does Staff have that reactor-grade plutonium

a) will not be used as fuel for the CRBR;

b) will be used as fuel for the CRBR.

Identify and provide any and all documents relied upon by Staff for its answer.

26. What assumptions were made with regard to the delay time between initiation of the event (i.e., source term release to the reactor containment building) and the activation of the confinement annulus filtration system? What is (are) the basis (bases) for the assumption(s)?

27. What assumptions were made with regard to whether the by-pass leakage fraction escapes directly to the environment or to the reactor service building (RSB)?

a) What assumptions were made regarding the extent to which this leakage component is processed through the RSB filters before escaping to the environment?

28. What assumptions were made with regard to the attenuation mechanisms inside the containment for

a) iodines;

b) solid fission products; and

c) plutonium?



29. What assumptions were made with regard to the attenuation mechanisms outside the containment for
- a) iodines;
  - b) solid fission products; and
  - c) plutonium?
30. Are the same aerosol fallout coefficients cited in Table IV applied to each of these assumed core fractions and those indicated in Interrogatories 28 and 29?
31. Why were transuranic elements, other than plutonium, excluded from the site suitability source term?
- a) What is the basis for excluding transuranic elements?
  - b) What is the basis for Staff's belief that plutonium would adequately serve as a surrogate for americium, curium, etc.?
  - c) How would the doses change if the SSST included 1% of the transuranics as well as 1% of the plutonium?
  - d) What sensitivity analyses has Staff conducted to determine the effect of excluding these other transuranic elements? Identify and provide all such analyses and results.
32. What assumptions were made in Table IV, if any, with regard to wind meander?
- a) How is wind meander treated (implicitly or explicitly) in the X/Q calculations?

- b) Was a wind meander factor applied? If so, identify and describe this factor.
33. What assumptions are made with regard to LPZ dose commitments beyond 30 days?
- What is the basis for these assumptions?
  - Did Staff arbitrarily assume that all the remaining plutonium in containment is released as a puff at 30 days?
  - What fraction of the total LPZ lung and bone 50-year dose commitments are due to releases in the first 30 days, where total dose commitment implies integration of the release for a period much greater than 30 days (e.g., until essentially all of the plutonium aerosol is released or otherwise unavailable because of fallout)?
  - How does the over-30-day exposure compare to the 0-30 day contribution?
34. What assumptions are made with regard to dose commitments via pathways involving exposure following ground contamination? Explain in detail the basis for Staff's answer.
- Has Staff conducted any analysis in this regard? If so, identify and provide all such analyses and any and all documents related thereto.

35. What breathing rates were assumed for Table IV?
36. How were the inhalation dose factors (rem/Ci Inhaled) calculated for
  - a) thyroid;
  - b) whole body;
  - c) lung;
  - d) bone surfaces?
37. For the whole body and each organ considered, provide a table showing the dose (commitment) contribution to each due to each separate source term contribution (noble gases, halogens, solid fission products, plutonium, and sodium). Provide separate tables for the exclusion area dose and the low population zone dose commitment.
38. Provide a table of the CRBRP heavy metal inventory (all U, Np, Pu, Am, Cm, and Cx isotopes) in curies for EOEC conditions.
39. Provide a table of the aerosol depletion factor (fraction/sec) as a function of time for the various SSST core fractions.

V. Section III

1. (III-9, 10) In application of the ICRP 26 methodology:
  - a) Explain fully the basis for Staff's rejection of the weighting factors proposed by EPA in favor of those recommended by ICRP.
  - b) Explain fully the basis for Staff's decision to use a mortality risk equivalent whole body dose rather than a morbidity risk equivalent whole body dose.
  - c) Explain fully the basis for Staff's decision not to incorporate the concept of organ dose "caps" to protect against non-stochastic effects.
  - d) Explain fully the basis for Staff's decision not to utilize the recommendations by EPA in EPA 520/4-77-016, "Proposed Guidance on Dose Limits for Persons Exposed to Transuranium Elements in the General Environment," to protect against risks associated with accidental ground contamination by transuranic elements.
  - e) In the 1977 SSR, Staff accounted for uncertainties noted in Section B of Regulatory Guides 1.3 and 1.4 by reducing the lung and bone dose guidelines by a factor of 10 for use at the CP review stage (1977 SSR, p. III-16). In the 1982 SSR (p. III-9), much smaller factors are applied to account for uncertainties regarding lung and bone (surface) doses. Isn't the

effect of the new Staff methodology to reduce the lung and bone factor (i.e., the factor to account for uncertainties at the CP stage) from 10 to approximately 2?

- f) Explain fully the underlying basis for constructing a methodology that has the effect of reducing the factors of conservatism to account for these uncertainties.
  - g) In application of the "ICRP 26 methodology" doesn't Staff's use of 34 rem at the OL stage and 24.5 rem at the CP stage have the effect of accounting for the whole body and thyroid dose uncertainties and ignoring completely the uncertainties associated with lung and bone surface doses? If Staff disagrees, explain fully the basis for such disagreement.
2. (III-10) What is the basis for Staff's conclusion that "an effectively coordinated site, state and local radiological emergency response plan can be achieved for the Clinch River Site?"
3. (III-10) Explain fully the basis for Staff's statement that ORGDP, ORNL, and Y-12 can be effectively evacuated without undue risk to national or energy security?
4. (III-10) To what extent, if any, are Staff's conclusions on this page dependent on the assumed SSST and dose consequence analysis?

5. (III-10) How long could the Y-12 facility remain evacuated without adversely affecting national security?

Respectfully submitted,

*Ellyn R. Weiss (B.A.E.)*

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Dated: July 13, 1982  
Washington, D.C.

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OFFICE OF SECRETARY

CERTIFICATE OF SERVICE

I hereby certify that copies of NATURAL RESOURCES DEFENSE COUNCIL, INC. AND THE SIERRA CLUB TWENTY-SIXTH SET OF INTERROGATORIES TO STAFF and LETTER TO THE COMMISSIONERS DATED JULY 12, 1982 REGARDING CLINCH RIVER BREEDER REACTOR PLANT DOCKET NO. 50-537 were served this 13th day of July 1982 on the following:

- \* Marshall E. Miller, Esquire  
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U.S. Nuclear Regulatory Commission  
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\* Denotes hand delivery.