6/3/82

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

NRC STAFF'S SECOND ROUND OF INTERROGATORIES
AND REQUESTS FOR ADMISSIONS TO INTERVENORS

Pursuant to 10 C.F.R. § 2.742, the NRC Staff requests admissions by NRDC et al., separately and fully, by June 18, 1982, to make the following admissions as to the truth of the specified matters of fact for the purposes of the captioned proceeding. For each of the following admissions which you deny, or state that you are unable to admit or deny, provide the following information:

a.) The portion of the statement which is not admitted. If the request involves a table, state what portions of the table is not admitted.

b.) The basis of your disagreement with the statement.

c.) The expert witnesses, if any, you are relying on in disagreeing with the statement.

d.) The document, if any, you are relying on in disagreeing with the statement.

e.) The articles, if any, you are relying on in disagreeing with the statement.

8206070129 820603
PDR ADOCK 05000537
Q PDR

Admissions Generally Related to All Contentions

G-1. The CRBR site consists of 1,364 land acres on a peninsula formed by a meander of the Clinch River.

G-2. The CRBR plant structures will be located at a grade elevation of 815 feet above MSL, or about 75 feet above the normal Clinch River level of 711 feet above MSL.

G-3. The CRBR proposed exclusion area will include the site property and portions of the Clinch River which are adjacent to the site, less 112 acres along the northern boundary which have been set aside for an industrial park.

G-4. The minimum exclusion area boundary distance is approximately 670 meters (2,200 feet), as measured from the containment building southwest to the nearest point on the exclusion area boundary.

G-5. No public highways or railroads traverse the proposed exclusion area.

Admissions on Contention 7(c)

7(c)-1. Other than wind speed, inversion conditions, population density, and co-location of CRBR with nuclear fuel cycle, and weapons processing facilities, there are no other environmental and safety characteristics which constitute "site selection criteria", and therefore be used in identifying and evaluating alternate sites.

7(c)-2. Other than the sites specifically identified by Intervenors in Contention 7(c), and TVA sites where LWR units have been cancelled or deferred, there are no other alternative sites which Intervenors contend must be evaluated.

7(c)-3. TVA has not cancelled, but rather has deferred construction of LWR units at its Hartsville and Yellow Creek sites.

7(c)-4. The Nevada Test Site is less favorable than the CRBR site, with regard to the following environmental and safety criteria:

(1) Estimated .75g design requirement for seismic ground motion at the Nevada Test Site, compared with a .25g design requirement for CRBR.

(2) Limited groundwater in Nevada

(3) Close proximity to the U.S. Air Force Nellis Bombing and Gunnery Range.

(4) Close proximity to current facilities and sites for research, development, and testing of nuclear weapons.

7(c)-5. To date, no Federally recognized endangered or threatened species are known to be on the CRBR site, or in the site vicinity.

7(c)-6. CRBR operation at full power will require 8 c.f.s. of water, which will be supplied by the Clinch river.

7(c)-7. The annual average flow of Clinch River is 5380 c.f.s. of the CRBR site.

7(c)-8. 8 c.f.s. of water represents .2 percent of the annual average flow for Clinch River.

7(c)-9. Nearly all monthly discharges from the Melton Hill Dam exceed 1000 c.f.s., except for periods of no flow.

7(c)-10. Periods of no flow have not exceeded 24 days.

7(c)-11. The Clinch River has experienced approximately 17 days per year of no flow in the vicinity of the CRBR site.

7(c)-12. The CRBR intake structure will not be located in a stretch of Clinch river that is uniquely important for the spawning or early life history of any fish.

7(c)-13. There will be minor and largely undetectable impacts to Clinch River and Watts Bar Lake fisheries due to impingement or entrainment.

7(c)-14. The vegetational association present at the CRBR site does not represent a unique type relative to the associations occuring on land in the vicinity of the site.

Admissions on Contention 5

5(a)-1. Other than wind speed and inversion conditions, there are no other meteorological factors or parameters that Intervenors believe must be utilized in evaluating site meteorology.

5(a)-2. Other than Section 9.2 of the CRBR FES, and an October 31, 1974 letter from Richard P. Denise to Peter S. Van Nort, the Intervenors do not have any basis for their contention that sites other than Clinch River have more favorable wind speed and inversion characteristics.

5(a)-3. Other than wind speed and inversion conditions, there are no other meteorological disadvantages of the Clinch River site.

5(a)-4. Other than population density, there are no disadvantageous population characteristics associated with the CRBR site.

5(a)-5. In 1980, the 10 mile radial population from CRBR was 52,040.

5(a)-6. In 1980, the 50 mile radial population from CRBR was 830,840.

5(a)-7. The wind speed and wind direction information presented in Figures 2.3-7 and 8 of Amendment 65 of the CRBR PSAR are representative of the Clinch River site.

5(a)-8. The information presented in Table 5 of NRC's Updated Answers to Intervenors' Ninth Set of Interrogatories to the NRC Staff, which includes the Design Basis X/Q values for LWR sites, is correct.

5(a)-9. The information presented in Table 1 of NRC's Updated Answers to Intervenors' Ninth Set of Interrogatories to the NRC Staff, which includes Design Basis X/Q values for the CRBR site, is correct and conservative.

5(a)-10. The Design Basis X/Q value at the FFTF exclusion distance of 2400 meters is 1.4×10^{-4} seconds per cubic meter, as stated in NRC's Answer to Interrogatory 2 of the Intervenors' Ninth Set of Interrogatories.

5(a)-11. The Design Basis X/Q values at the FFTF low population zone distance of 7200 meters are (a) 2.7×10^{-5} at 0-8 hours; (b) 1.4×10^{-5} at 8-24 hours; (c) 6.9×10^{-6} at 1-4 days; and (d) 3.0×10^{-6} at 4-30 days, in seconds per cubic meter, as stated in NRC's Answer to Interrogatory 2 of the Intervenors' Ninth Set of Interrogatories.

5(a)-12. Design Basis X/Q values at a 670 meter exclusion zone boundary for the Summer, Hartsville, and Watts Bar reactor plants (which were deemed to be licensable by the NRC), are approximately the same as that for the CRBR 670 meter exclusion zone boundary.

5(a)-13. Design Basis X/Q values at CRBR are at the same order of magnitude, and often are approximately the same as the Design Basis X/Q values for the following LWR sites in the general region which were deemed to be licensable by the NRC: Yellow Creek, Phipps Bend, Catawba, and Sequoyah.

5(a)-14. The Applicants' onsite meteorological measurements program meets or exceeds the Staff's requirements set forth in Regulatory Guide 1.23, "Onsite Meteorological Programs", (February, 1972).

5(a)-15. The nearest population center, as that term is defined in 10 C.F.R. Part 100, is Oak Ridge, Tennessee.

5(a)-16. The population center distance, based on the actual population distribution of 27,552 in 1980, is 7 miles north-northeast of the CRBR. This is greater than the minimum population center distance, as that term is defined in 10 C.F.R. Part 100.

5(a)-17. Regulatory Guide 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plant," (August 1979) sets forth the NRC Staff's criteria for calculating appropriate meteorological atmospheric dilution factors (X/Q) for use in determining the consequences of potential accidental releases.

5(a)-18. X/Q values for the CRBR were calculated by the Staff in accordance with the criteria and methodologies set forth in Regulatory Guide 1.145.

5(a)-19. The Staff performed two probabilistic analyses of CRBR site meteorological data for the period 2-17-1977 to 2-17-1978, with wind speed and direction data collected at the 33 foot level and temperature difference data collected at the 33 and 200 foot levels on the permanent CRBR tower.

5(a)-20. The first probabilistic analysis performed by the Staff for CRBR developed short term (up to 30 days) X/Q values for each of the 16 cardinal point sectors that is not exceeded more than .5% of the total time. The highest X/Q value for the 16 sectors is defined by the Staff as the "maximum sector X/Q value".

5(a)-21. The second probabilistic analysis performed by the Staff developed a short term (up to 30 days) X/Q value for the overall CRBR site that is not exceeded more than 5% of the total time. This X/Q value is defined by the Staff as the "overall site X/Q value".

5(a)-22. In the analysis referred to in Admission 5(a)-21, the Staff used a direction dependent atmospheric dispersion model with enhanced lateral dispersion during neutral and stable atmospheric conditions accompanied by low wind speeds.

5(a)-23. The lateral dispersion factors used in the Staff's analyses were based on diffusion studies performed at several locations including the CRBR site.

5(a)-24. The Staff's evaluation of the consequences of design basis accidental releases were based on the more conservative maximum sector X/Q value.

5(a)-25. The Staff's methodology for determining design basis meteorology, as described in Admissions 5(a)-17 through 24 is site-specific for the CRBR and is conservative.

5(b)-1. The radial distance between the CRBR reactor core and the furthest point on the Y-12 site is approximately 9 miles.

Admissions on Contention 8

8-1. Applicants have discussed decommissioning and dismantling in Amendment X of the Environmental Report ("ER") for CRBR, dated December, 1981.

8-2. At the end of the CRBR operating life, Ni-59 will be present in quantities equal to one (1) percent of the quantities of Ni-63.

8-3. The Staff's position with regard to compliance with 10 C.F.R. Parts 20 and 50, Appendix I in the decommissioning of nuclear reactors is contained in NRC Regulatory Guide 1.86.

8-4. Table 1 of Applicants' Second Updated Response to Intervenors' Ninth Set of Interrogatories, April 30, 1982, ("Applicants' Updates to Intervenors' Ninth Set of Interrogatories"), accurately presents the components, material types and RDT standards for the current CRBR design.

8-5. Table 2 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the chemical composition of permanent steel components for the current CRBR design.

8-6. Table 3 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the chemcial composition of the primary shield for the current CRBR design.

8-7. Table 4 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the principal activation products in permanent steel components.

8-8. Table 5 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the principal activation products in the CRBR primary shield.

8-9. Table 6 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the neutron flux and fluence at the CRBR reactor vessel inner surface at core midplane elevation.

8-10. Table 7 of the Applicants' Updates to Intervenors' Ninth Set of Interrogatories accurately presents the neutron flux and fluence at the CRBR primary concrete shield at core midplane elevation.

8-11. The half-lives for the following radionuclides are correctly stated:

a.	Nickel - 59	80,000 years
b.	Nickel - 63	100 years
c.	Niobium - 94	20,000 years
d.	Cobalt - 60	5.2 years

Respectfully submitted,

Geary S. Mizuno
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 3rd day of June, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S SECOND ROUND OF INTERROGATORIES AND REQUESTS FOR ADMISSIONS TO INTERVENORS" and "NRC STAFF'S THIRD SET OF INTERROGATORIES AND REQUEST FOR ADMISSIONS TO THE CITY OF OAK RIDGE" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 3rd day of June, 1982:

Marshall Miller, Esq., Chairman
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Mr. Gustave A. Linenberger
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Dr. Cadet H. Hand, Jr., Director
Administrative Judge
Bodega Marine Laboratory
University of California
P.O. Box 247
Bodega Bay, California 94923

Alan Rosenthal, Esq., Chairman
Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Dr. John H. Buck
Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

William M. Leech, Jr., Attorney General
William B. Hubbard, Chief Deputy Attorney General
Lee Breckenridge, Assistant Attorney General
450 James Robertson Parkway
Nashville, Tennessee 37219

William E. Lantrip, Esq.
City Attorney
Municipal Building
P.O. Box 1
Oak Ridge, Tennessee 37830

Lawson McGhee Public Library
500 West Church Street
Knoxville, Tennessee 37902

Warren E. Bergholz, Jr.
Leon Silverstrom
U.S. Department of Energy
1000 Independence Ave., S.W.
Room 6-B-256
Washington, D.C. 20585

DESIGNATED ORIGINAL

Certified By AS

D503

George L. Edgar, Esq.
Frank K. Peterson, Esq.
Gregg A. Day, Esq.
Thomas A. Schmutz, Esq.
Irvin A. Shapell, Esq.
Morgan, Lewis & Bockius
1800 M Street, N.W.
Washington, D.C. 20036

Project Management Corporation
P.O. Box U
Oak Ridge, Tennessee 37830

Barbara A. Finamore
Ellyn R. Weiss
Dr. Thomas B. Cochran
S. Jacob Scherr
Natural Resources Defense Council, Inc.
1725 Eye Street, N.W., Suite 600
Washington, D.C. 20006

Manager of Power
Tennessee Valley Authority
819 Power Building
Chattanooga, Tennessee 37401

Director
Clinch River Breeder Reactor Plant
Project
U.S. Department of Energy
Washington, D.C. 20585

Mr. Joe H. Walker
401 Roane Street
Harriman, Tennessee 37830

Atomic Safety and Licensing Appeal
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555 *

Geary S. Mizuno
Counsel for NRC Staff