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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

AFFIDAVIT OF THOMAS B. COCHRAN

I, Thomas B. Cochran, being duly sworn, do hereby state as follows:

1. My name is Thomas Brackenridge Cochran. I reside at 4836 North 30th Street, Arlington, Virginia 22207. I am presently a Senior Staff Scientist at Natural Resources Defense

Council, Inc., and a co-director of the NRDC Nuclear Nonproliferation Project.

2. I am a member of the Department of Energy's Energy Research and Advisory Board; the Three Mile Island (TMI) Public Health Fund Advisory Board; the Nuclear Regulatory Commission's TMI Advisory Board; and the American Nuclear Society.

3. I have a B.S. degree in electrical engineering and M.S. and Ph.D. degrees in physics, all from Vanderbilt University. I have held the positions of Assistant Professor of Physics, U.S. Naval Postgraduate School, and Senior Research Associate, Resources for the Future.

4. I have been a consultant to numerous government agencies and testified before Congress on numerous occasions on matters related to nuclear energy generally and liquid metal fast breeder reactors (LMFBRs) in particular. I was a member of DOE's Nonproliferation Advisory Panel and ERDA's LMFBR Review Steering Committee. I am the author of The Liquid Metal Fast Breeder Reactor, An Environmental and Economic Critique, (Johns Hopkins Univ. Press, 1974).

5. With regard to matters of LMFBR safety, I was also a member of the NRC's Advisory Group on Reactor Safety Goals and NRC's Advisory Group on Operator Training. I have had extensive hands-on experience with systems modeling and computer programming, both in relation to my Ph.D. dissertation in high energy physics and while serving as a Modeling and

Simulation Group Supervisor at Litton Scientific Support Laboratory at Fort Ord, California.

6. I was one of two U.S. citizens invited to testify on safety aspects of the SNR-300, the Federal Republic of Germany's demonstration breeder, before the Enquete-Kommission "Zukunfftige Kernenergie-Politik," Deutscher Bundestag, FRG (June 3, 1982).

7. With regard to radiation protection, my M.S. thesis was in Radiation Chemistry. I was an AEC Health Physics Fellow at Vanderbilt University between 1962 and 1964, during which period I had 3 months of on-the-job training at Oak Ridge National Laboratory. I was the campus Radiation Safety Officer while pursuing my Ph.D. degree at Vanderbilt University.

8. While at NRDC I co-authored with Dr. Arthur Tamplin two radiation standards petitions to the NRC, "Petition to Amend 10 CFR 20.101, Exposure of Individuals to Radiation in Restricted Areas," September 1975 (PRM-20-6), and "Petition to Amend Radiation Protection Standards as They Apply to Hot Particles," February 1974 (PRM-20-5).

9. I have been a member of the Health Physics Society for the past 18 or so years.

10. My statement of professional qualifications is attached.

11. Because of my scientific and technical training and experience, I am familiar with many aspects of the Clinch River

Breeder Reactor, and its proposed fuel cycle facilities, that are discussed in Intervenor's Contentions.

12. I have participated actively in all phases of the NRC Clinch River Breeder Reactor licensing proceedings since 1975, including assisting in the preparation of Intervenor's contentions.

13. I prepared substantial portions of NRDC's comments on the 1977 CRBR Final Environmental Impact Statement and the 1982 Draft Supplement to the 1977 CRBR Final Environmental Impact Statement.

14. I testified before the NRC Advisory Committee on Reactor Safeguards on several occasions regarding the Clinch River Breeder Reactor and related issues.

15. I have attended numerous meetings held by Staff and Applicants to discuss the NRC licensing review of the Clinch River Breeder Reactor.

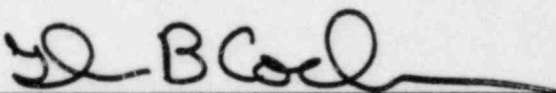
16. I have participated actively in discovery proceedings related to CRBR licensing from 1975-1977, and from March 1982 to the present, including the preparation of interrogatory questions and responses, and requests for admissions and responses, and have conducted several depositions of witnesses for Applicants and Staff.

17. I have read or examined many of the documents upon which Applicants and Staff purport to rely for their positions on Intervenor's Contentions.

18. I fully intend to read all written testimony submitted by Staff and Applicants on which I intend to cross examine, and any documents to be used or referred to in the course of the cross-examination.

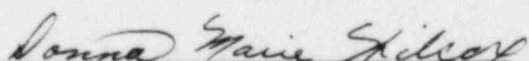
19. I have prepared myself, and will continue to prepare myself to conduct a meaningful and expeditious cross-examination.

20. I intend to limit my cross-examination to areas within my expertise.


Thomas B. Cochran

Date: October 20, 1982

Sworn and subscribed to before me
this 20th day of October, 1982.


Notary Public

My Commission Expires 7/31/87 .