

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CONSOLIDATED EDISON COMPANY	)	Docket Nos. 50-247-SP
OF NEW YORK (Indian Point, Unit 2)	)	50-286-SP
	)	
POWER AUTHORITY OF THE STATE	)	
OF NEW YORK (Indian Point, Unit 3)	)	

TESTIMONY OF JOHN R. SEARS OF THE NRC STAFF  
ON CONTENTION 1.1 UNDER COMMISSION QUESTION 1

Q.1. State your name and position with the NRC.

A.1. John R. Sears. I am employed by the U.S. Nuclear Regulatory Commission (NRC) as a Senior Reactor Safety Engineer in the Emergency Preparedness Licensing Branch, Division of Emergency Preparedness, Office of Inspection and Enforcement.

Q.2. Have you prepared a statement of professional qualifications?

A.2. Yes. A copy of my statement of professional qualifications is attached to this testimony.

Q.3. State the nature of the responsibilities that you have had concerning Indian Point, Units 2 and 3.

A.3. I have been responsible for reviewing and evaluating the Emergency Plan for Indian Point Unit No. 2 and Unit 3 for conformance with the planning standards and requirements of 10 CFR Part 50, Appendix E to Part 50 and the evaluation criteria of NUREG-0654, FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG-0654). As part of my responsibilities in reviewing and evaluating the Emergency Plans for Indian Point Unit No. 2 and Unit No. 3, I am also responsible for addressing bases 1(a) of Contention 1.1 under Commission Question 1.

Q.4. What is the purpose of this testimony?

A.4. The purpose of this testimony is to address basis 1(a) of contention 1.1. My testimony will address the licensees' standard emergency classification and action level scheme, the basis of which include facility system and effluent parameters.

Q.5. Have the licensees established an emergency classification and emergency action level scheme? Explain.

A.5. Yes, Section 4 of both licensees' Emergency Plans and provisions of their Implementing Procedures describe the methods and techniques for assessment of each of the four classes of emergency, Notification of Unusual Event, Alert,

Site Emergency and General Emergency. The tables of initiating conditions in the procedures specify measureable and observable conditions in the plant instrumentation readings which are the initiating conditions for declaring an emergency.

Q.6. What are the criteria for licensees emergency action levels schemes?

A.6 The criteria for the licensees' emergency action level schemes are set forth in NUREG-0654, II.D and Appendix 1.

Q.7. Do the licensees' emergency procedures show the instruments, parameters or equipment for establishing each emergency class? Explain.

A.7. Yes, the procedures show the instruments by their identification number, e.g. ARM R-10, or equipment by its operating mode, e.g. RHR pump not operating.

Q.8. Have you examined the licensees' radiological emergency plans to determine whether the plans identify the parameter values and equipment status for each emergency class? Explain.

A.8. Yes, the procedures identify specific values for specific instruments, e.g. ARM R-10 greater than 330 mr/hr, or status lights show RHR pumps not operating.

Q.9. Does the licensees' emergency action levels include initiating conditions that are consistent with Appendix I of NUREG-0654? Explain.

A.9. Yes, the emergency plan implementing procedures for both licensees list the conditions in NUREG-0654, Appendix 1 with the corresponding Indian Point 2 and 3 conditions. I have compared the lists and they are consistent.

Q.10. Do the initiating conditions established by the licensees for emergency action levels include the postulated accidents in the Final Safety Analysis Report (FSAR) for Indian Point, Units 2 and 3?

A.10. Yes, for each plant the postulated accidents analyzed in the Final Safety Analysis Report are encompassed within the emergency classification scheme.

Q.11. Do the licensees' emergency action level schemes account for lead times necessary to activate emergency response plans and implement protective action decisions? Explain.

A.11. Yes, the licensees' emergency action level schemes described in the answer to Question 5 account for lead time necessary to implement protective action decisions in that emergencies are declared on the basis of control room instrumentation readings

rather than on the results of down wind surveys and consequently the emergency would be declared before there would be a release of radioactivity from the plant.

Q.12. Do the emergency classification and action level schemes established by the licensees meet the planning standard of 10 C.F.R. Section 50.47(b)(4) and the requirements of Appendix E, Section IV.B and C of 10 C.F.R. Part 50?

A.12. Yes, the licensees' emergency action level classification system and procedures which I have examined meet the planning standard of 10 C.F.R. Section 50.47(b)(4) and the requirements of Appendix E.IV.B and C of the 10 C.F.R. Part 50.

JOHN R. SEARS

RESUME

Prior to 1952, I was employed in field jobs in various aspects of mechanical engineering. In 1952, I joined Brookhaven National Laboratory as a Reactor Shift Supervisor on the Brookhaven Graphite Reactor. While at Brookhaven, I completed a series of courses given by the Nuclear Engineering Department in nuclear engineering. These courses were patterned on the ORSORT programs. In 1956, I was appointed Project Engineer on the Brookhaven Medical Research Reactor. I was a member of the design group, participated in critical design experiments, wrote specifications, coauthored the hazards report, was responsible for field inspection and contractor liaison, trained operators and loaded and started up the reactor. About three months after start-up, in 1959, following the successful completion of proof tests and demonstration of the reactor in its design operating mode for boron capture therapy of brain cancer, I accepted a position as reactor inspector with the Division of Inspection, U. S. Atomic Energy Commission. In 1960, I transferred, as a reactor inspector, to the newly-formed Division of Compliance. I was responsible for the inspection, for safety and compliance with license requirements, of the licensed reactors and the fuel fabrication and fuel processing plants, which use more than critical amounts of special nuclear material, in the Eastern United States.

In September 1968, I transferred to the Operational Safety Branch, Directorate of Licensing. My responsibility included development of appropriate guides for evaluation of operational aspect of license applications and staff assistance in review of power reactor applicants submittals in the areas of Organization and Management.. Personnel Qualifications, Training Programs, Procedures and Administrative Control, Review and Audit, Start-up Testing Programs Industrial Security and Emergency Planning

The Branch was reorganized as the Industrial Security and Emergency Planning Branch in April 1974 to place increased emphasis and attention upon areas of physical security and emergency planning.

In 1976 I transferred to the Division of Operating Reactors as the sole reviewer responsible for review of emergency planning for all the operating reactors in the United States.

New York City College, 1950 - Mechanical Engineering

Argonne International School of Reactor Technology, 1961 - Reactor Control Course  
GE BWR System Design Course, 1972

Popo-U.S. Army, 1974 - Course in Industrial Defense and Disaster Planning

Instructor at DCPA , 1976, 1977 - Course in Emergency Planning

Director, 1962 - Reactor Program, Atoms for Peace Exhibit, Bangkok, Thailand

Director, 1966 - Atoms for Peace Exhibit, Utrecht, Holland