

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CONSOLIDATED EDISON COMPANY OF NEW)	Docket Nos. 50-247 SP
YORK INC. (Indian Point, Unit No. 2))	50-286 SP
)	
POWER AUTHORITY OF THE STATE OF NEW)	
YORK, (Indian Point, Unit No. 3))	

TESTIMONY OF SHELDON A. SCHWARTZ,
DEPUTY DIRECTOR DIVISION OF EMERGENCY PREPAREDNESS
AND ENGINEERING RESPONSE, U.S.N.R.C.
CONCERNING EMERGENCY PLANNING CONTENTIONS
RELATED TO COMMISSION QUESTIONS 3 & 4

March 8, 1983

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

A.1 Sheldon A. Schwartz. I am the Deputy Director, Division of
Emergency Preparedness and Engineering Response, Office of
Inspection and Enforcement.

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

A.2 Yes, it is attached to this testimony.

Q.3 What is the purpose of this testimony?

A.3 The purpose of this testimony is to address Contention 3.6, in part,
and Contention 4.1 related to emergency preparedness for Indian
Point-Unit 2 and 3.

Q.4 Describe your current role in the Division of Emergency Preparedness and Engineering Response, Office of Inspection and Enforcement.

A.4 I am the Deputy Director of the Division of Emergency Preparedness and Engineering Response in the Office of Inspection and Enforcement. In this position my role includes responsibilities for development of policy and program requirements for licensee emergency preparedness; review and evaluation of emergency plans; support for the regions and the conduct of site appraisals, inspections and emergency planning exercises; review and evaluation of FEMA findings and determinations concerning off-site preparedness; and determinations of the overall NRC evaluation of emergency preparedness.

Contention 3.6 - The emergency plans and proposed protective actions do not adequately take into account the full range of meteorological conditions for Indian Point, Units 2 and 3.

Q.5 Describe the extent to which emergency preparedness for Indian Point Units 2 and 3 accounts for a range of accident scenarios and meteorological conditions.

A.5 The NRC staff position is that the emergency plans and proposed potential actions for Indian Point take into account both fair and adverse weather conditions, and a range of accident conditions that include Class 9 accidents. The planning basis elements needed to scope the planning effort are (1) the distance to which planning for the initiation of predetermined protective actions is warranted; (2) the time dependent characteristics of potential releases and

exposures and (3) the kinds of radioactive materials that can potentially be released to the environment. The technical basis for each specific planning element is described in NUREG-0396, Planning Basis for the Development of State and local governments, Radiological Emergency Response Plans in support of Light Water Nuclear Power Plants, December 1978.

Contention 4.1 - The plume exposure pathway EPZ should be expanded from its present 10-mile radius in order to meet local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries.

- Q.6 Describe the basis for NRC's use of a plume exposure pathway EPZ of about 10 miles for emergency planning around nuclear power plant sites.
- A.6 Because of discussions during the seventies with respect to class 9 accidents and particularly the WASH-1400 document, questions arose concerning the basis for off-site emergency planning.

An NRC/EPA task force was formed in 1976 which addressed questions from State groups as to what accidents should be used to prepare emergency plans. In December, 1978, this task force issued its report, NUREG-0396/EPA 520/1-78-016, "Planning Bases for the Development of State and Local Government Radiological Emergency Response Plans in Support of the Light Water Nuclear Power Plants." The principal recommendations of this report were that a spectrum of accidents, including core melt accidents should be considered and that the task force consideration of this accident spectrum led it

to recommend the establishment of Emergency Planning Zones around each nuclear power plant. The conclusion of the task force was that no single accident should be singled out as the planning bases because of the wide variety of conditions and various accident possibilities. If one picked a single accident, even two or three accidents, one could well miss relevant points of other accidents.

The consensus of the task force was as indicated above, that a planning basis would cover a spectrum of accidents, and in this were considered all of the design basis accidents that were then used in the licensing process. All of the WASH-1400 scenarios, including the core melt sequences, were also considered. This is discussed in an Appendix to NUREG-0396.

The task force identified the emergency planning zones, and also gave some guidance on time frames and types of radionuclides which should be considered in developing plans.

Though this report was issued prior to TMI, the TMI accident was considered by the task force when they considered the comments received on NUREG-0396. The TMI accident was judged to reinforce the initial determination of the task force both with respect to the need for planning for a spectrum of accidents and with respect to the concept of and sizes of the emergency zones.

The basis for the establishment by NRC of a plume exposure pathway EPZ of about 10 miles is described in NUREG-0396; EPA 520/1-78-016 "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Power Plants," December 1978 and summarized in NUREG-0654, Revision 1, "Criteria For Preparedness and Evaluation of Radiological Emergency Response Plans and Preparedness In Support of Nuclear Power Plants," November 1980.

The size (about 10-mile radius of the plume exposure EPZ was based on the following considerations:

- a. projected doses from the traditional design basis accidents would not exceed Protective Action Guide levels outside the zone;
- b. projected doses from most core melt sequences would not exceed Protective Action Guide levels outside the zone;
- c. for the worst core melt sequences, immediate life threatening doses would generally not occur outside the zone;
- d. detailed planning within 10 miles would provide a substantial base for expansion of response efforts in the event that this proved necessary.

The NUREG-0396 report also illustrates the relative effectiveness of shelter versus evacuation at various distances, and indicates that shelter with subsequent relocation after cloud passage may be as effective as evacuation even in severe accident sequences at distances greater than about 10 miles.

- Q.7 In your opinion do you believe the present plume exposure pathway EPZ of about 10 miles is appropriate for emergency planning in the vicinity of the site for Indian Point Units 2 and 3?
- A.7 Yes. The selection of a radius of about 10 miles for the plume exposure pathway EPZ was made in the Commission's final emergency preparedness regulations published August 19, 1980, which reference NUREG-0396. I conclude that the rationale for selection of the plume exposure pathway EPZ described above holds for the Indian Point site.

PROFESSIONAL QUALIFICATIONS
SHELDON A. SCHWARTZ
U.S. NUCLEAR REGULATORY COMMISSION

I am Sheldon A. Schwartz, Deputy Director of the Division of Emergency Preparedness and Engineering Response in the Office of Inspection and Enforcement. My role in this position relating to nuclear reactors includes responsibilities for development of policy and program requirements for licensee emergency preparedness: review and evaluation of emergency plans associated with construction permits, operating licenses and amendments; support for the regions and the conduct of site appraisals, inspections and exercises to assure that licensee plans can be implemented review and evaluation of FEMA findings and determinations relating to offsite preparedness by State and local governments; and, determinations of the overall NRC evaluation of onsite/offsite emergency preparedness.

I am a member of the NRC/FEMA Steering Committee which is responsible for developing of policy and guidance to assure that onsite and offsite emergency preparedness is adequate.

From January to November 1980 I was on detail as the Acting Director of Radiological Emergency Preparedness Division at FEMA to carry out a number of tasks relating to upgrading of offsite radiological emergency preparedness around nuclear facilities. This detail was in response to the assignment by the President on December 7, 1979 of responsibility to FEMA for these activities. During this period I was responsible for the development of the basic regulations, policies and procedures for the radiological emergency preparedness program with State and local government. Additionally, I participated as a member of the NRC/FEMA Steering Committee that developed NUREG-0654/FEMA-REP-1, Rev. 1.

From September 1972, when I joined the Commission, to January 1980, my responsibilities in the Office of State Programs were to participate in formalization of policies involving NRC/State cooperation and liaison; development and direct administrative contactual programs for coordinating and integrating Federal and State regulatory activities; providing guidance and support to State, interstate, Regional, and quasi-governmental organizations, NRC Offices and other government agencies on regulatory matters; and, planning, directing and coordinating activities of State Liaison Officers located in the five NRC Regional Offices.

From June 1971 to August 1972 I was the Senior Consultant to the California Legislature Joint Committee on Atomic Development and Space. My primary responsibilities were to: maintain contact with appropriate public and private organizations in California, nationally and internationally, to assure that the Committee was kept informed of the latest developments in the nuclear and aero space field; prepare legislation and reports for the legislatures on current factual information regarding nuclear and aero space related subjects; and, recommend to the Committee subject matters for study.

Prior to joining the California legislature, I spent 8½ years with Aero Jet General Corporation as a designer, project manager, program manager, and senior engineer for various aero space and nuclear programs. I was specifically involved in the Nuclear Engine Program (Nerva) as well as the company's programs with commercial nuclear power plants.

I received my Bachelor Of Science Degree in Mechanical Engineering from Pennsylvania Military College (Widener's University) in 1960 and have taken advance courses at Drexel Institute of Technology and Sacramento State College. I have completed the boiling water reactor and pressurize water reactor manager courses at the NRC Training Center at Chattanooga, TN.