UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

DIRECT TESTIMONY OF JOSEPH P. JOYCE
CONCERNING COMMISSION QUESTION 1, CONTENTION 1.1

Q.1 Please state your name and your position with the NRC.

A.1 My name is Joseph P. Joyce. I am a Senior Engineer in the Instrumentation and Control Systems Branch (ICSB) of the Division of Systems Integration (DSI).

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

A. Yes. A copy of this statement is attached to this testimony.

Q.3 What is the purpose of your testimony?

A.3 The purpose of my testimony is to respond to Contention 1.1 bases 1.b--"Licensees have failed to provide instrumentation in accordance with Regulatory Guide 1.97, Rev. 2, thus compromising their ability to adequately monitor the course of accidents at Indian Point Units 2 and 3."

Q.4 What is the purpose of Regulatory Guide 1.97, Rev.2?

A.4 The purpose of the Regulatory Guide 1.97 is to provide the minimum design criteria for permanently installed instrumentation used to provide the operator with information that may be necessary to perform his role in bringing the plant to and maintaining it in a safe condition following the accidents indentified in the Design Basis.

Q.5 What is the status of Regulatory Guide 1.97, Rev. 2 as contained in SECY-82-111?

A.5 The Commission considered the Staff's proposed requirements for emergency response capability (including requirements for post accident monitoring) contained in SECY-82-111, "Requirements for Emergency Response Capability" dated March 11, 1982. The Staff was informed of the Commissions approval of the issuance of supplement 1 (SECY-82-111) to NUREG-0737 in a memorandum from Samuel J. Chilk dated November 22, 1982. Also the Commission approved the draft 10 CFR 50.54(f) letter to operating reactor licensees and holders of construction permits, requesting them to furnish a proposed schedule, no later than April 15, 1983, for completing and implementing the items in supplement 1 to NUREG-0737-"Requirements for Emergency Response Capability" (Generic Letter No. 82-33) were sent to all Licensees.

Q.6 Is it necessary for Indian Point Units 2 and 3 or any other licensee, to demonstrate compliance with Regulatory Guide 1.97, Rev.2?

A.6 Yes. Indian Point Units 2 and 3 must demonstrate compliance to Regulatory Guide 1.97, Rev. 2 but, the implementation plan and schedules from the Licensee is not required until April 15, 1983. Schedules are discussed on Page 2 of the December 17, 1982 generic letter:

> "You will note that the enclosure does not specify a schedule for completing the requirements. It has become apparent, through discussions with owners' groups and individual licensees, that our previous schedules did not adequately consider the integration of these related activities. In recognition of this and the difficulty in implementing generic deadlines, the Commission has adopted a plan to establish realistic plant-specific schedules that take into account the unique aspects of the work at each plant. By this plan, each Licensee is to develop and submit its own plant-specific schedule which will be reviewed by the assigned NRC Project Manager. The NRC Project Manager and Licensee willa reach an agreement on the final schedule and in this manner provide for prompt implementation of these important improvements while optimizing the use of utility and NRC resources."

Q.7 Are you prepared to state whether or not the Licensees meet the guidelines set out in Regulatory Guide 1.97, Rev. 2?

A.7 No. There is not sufficient information available at the present time for the Staff to make a decision with respect to the specific items listed in Regulatory Guide 1.97, Rev.2. Before a proper review can be made, additional details with regard to instrument criteria as well as Licensee's position will be necessary (see page 14 of Supplement 1 to NUREG-0737). Furthermore, it would be imprudent of the Staff to make independent decisions with respect to Regulatory Guide 1.97, Rev.2 on one specific plant without the benefit of a careful and orderly review.

Q.8 Please state how the Staff plans to review Indian Point for compliance with the Regulatory Guide in question.

A.8 The Staff plans to perform an audit review of the Indian Point plants to ascertain conformance with R.G. 1.97, Rev.2, in conjunction with the Staff's review of emergency response capability. This audit review is not a prerequisite for implementation of R.G. 1.97, Rev. 2 (see page 14 of Supplement 1 to NUREG-0737). The schedule for implementing basic requirements for Emergency Response Capability is shown on page 1 of Supplement 1 to NUREG-0737. There it is stated that:

> "The requirements for emergency response capabilities and facilities are being transmitted to Licensees by this supplement and are being promulgated to NRC Staff. The letter which forwards this supplement requests that Licensees submit a proposed schedule for completing actions to comply with the requirements.
>
> Each Licensee's proposed schedule will then be reviewed by the assigned NRC Project Manager, who will discuss the subject with the Licensee and mutually agree on schedules and completion dates. The implementaion dates will then be formalized into an enforceable document."

Use of existing documentation is addressed on Page 3 of Supplement 1 to NUREG-0737:

> "The following NUREG documents are intended to be used as sources of guidance and information, and the Regulatory Guides are to be considered as guidance or as an acceptable approach to meeting formal requirements. The items by virtue of their inclusion in these documents shall not be misconstrued as requirements to be levied on Licensees or as inflexible criteria to be used by NRC Staff reviewers."

R.G. 1.97, Rev.2 is included in the list of documents. Furthermore, pages 13 and 14 of Supplement 1 to NUREG-0737 discuss implementation of R.G. 1.97. Documentation and NRC Review is addressed on page 14 where it is stated that:

> "Deviations from the guidance in Regulatory Guide 1.97, Rev. 2 should be explicitly shown, and supporting justification or alternatives should be presented."

Q.9 Please explain why completion of the Staff's review of the Licensee's compliance with Reg. Guide 1.97, Rev. 2 is not a pre-requisite for continued operation of the Indian Point facilities.

A.9 It should be understood that the Staff has not completed its review of conformance to Regulatory Guide 1.97, Rev.2 for any plant - neither for any licensed plant nor for plants under licensing review. Indian Point, as well as other plants for which the licensing review has been completed, was reviewed in accordance with GDC 13 and GDC 19 to insure that sufficient indications are available for the operator to cope with Design Basis Events.

Q.10 Does this conclude your testimony?

A.10 Yes.

JOSEPH P. JOYCE

PROFESSIONAL QUALIFICATIONS

INSTRUMENTATION & CONTROL SYSTEMS BRANCH

DIVISION OF SYSTEMS INTEGRATION

I have been with the U.S. Nuclear Regulatory Commission (NRC) since September 1974. Since November 1981 I have been a Principal Reactor Engineer in the Instrumentation and Control Systems Branch. My primary responsibilities are to review and coordinate reviews of all operating reactors Multiplant and Plant Specific actions in the area of instrumentation and control systems. I have performed reviews and developed review criteria for computer based protection systems and the safety parameter display system.

From April 28, 1980, I was assigned to the Human Factors Engineering Branch as a Senior Reactor Engineer technical reviewer. My primary responsibilities included reviewing control rooms from a human factors standpoint and developing human factros review guidelines for use by licensees to conduct their interim and detail control room design reviews.

Following the TMI-2 accident, from May to December 1979, I was assigned to the Bulletins and Orders Task Force as a technical reviewer in the area of instrumentation and control.

From September 1974 to May 1979, I served as a technical reviewer in the Instrumentation and Control Systems Branch (ICSB). In the ICSB, my primary

responsibility was to perform technical reviews of the design, fabrication, and operation of electrical, instrumentation, and control systems for nuclear power plants. This review encompasses evaluation of applicants' safety analysis reports, generic reports, and other related information on the instrumentation and control designs.

From 1973 to 1974, I was a design engineer with NUS Corporation, where my duties included design responsibility in meteorological systems.

From 1969 to 1973, I was a system design engineer at Hydrospace Challenger Research, Inc. and was responsible for design, analysis, and preparation of electrical and wiring diagrams for the signal Converter and Switching Cabinet (SC) 2, which is the interface between the Simulation Computer AN/UYK-7 and the Central Computer Complex. In this position, using Fortran IV, I developed a working model of the hydrophone, cable, and preamplifier of the TRIDENT Sonar System.

I received a Bachelor of Science degree in electronic engineering in 1969 from Capital Institute of Technology. I am a member of the Institute of Electrical and Electronic Engineers (IEEE). I have authored and co-authored technical papers for presentations at conferences, hearings, review groups and publications.