John D. O'Toole Vice President

Consolidated Edis 4 Irving Place, Ne Telephone (212) 4

Consolidated Edison Company of New York, Inc. 4 Irving Place, New York, NY 10003 Telephone (212) 460-2533

October 26, 1984

Re:

Indian Point Unit No. 2 Docket No. 50-247

Mr. Richard C. DeYoung, Director Office of Inspection and Enforcement U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Dear Mr. DeYoung:

This refers to the Notice of Violation (NRC Inspection Nos. 50-247/84-13 and 50-247/84-22) transmitted with your September 27, 1984 letter. Provided herewith as Attachment A is our response to this Notice.

Your letter also transmitted an Order Modifying the License which requires a response that will be provided within the time specified in the Order, but no later than November 26, 1984.

Should you or your staff have any questions, please contact us.

Very truly yours,

Mul. L. J. O'Tole

cc:

Dr. Thomas E. Murley
Regional Administrator
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pa. 19406

Senior Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 38
Buchanan, New York 10511

JEO!

STATE OF NEW YORK
COUNTY OF NEW YORK

Min L. Lee, being duly sworn, deposes and says: That he is a duly authorized representative of John D. O'Toole, a Vice President of CONSOLIDATED EDISON COMPANY OF NEW YORK, INC., Licensee of Indian Point Unit 2 herein; that the foregoing Statement in Reply to Notice of Violation dated September 27, 1984 has been prepared under his supervision and direction; that he knows the contents thereof; and that to the best of his knowledge and belief said reply and the facts contained therein are true and correct.

DATED: New York, New York October, 1984

Min L. Lee

Subscribed and sworn to before me this 26 day of October, 1984.

Notary Public

THOMAS LOVE

A Qualified in New York Dennity
Commission Expires March 30, 1995

ATTACHMENT A

RESPONSE TO NOTICE OF VIOLATION

Violations A and B

A. Technical Specification 6.12, "High Radiation Area", specifies that areas greater than 1000 mrem/hour be controlled by conspicuously posting the area as a High Radiation Area, by the issuance of a Radiation Work Permit, by providing individuals (or groups of individuals) with continuously indicating dose rate instrumentation, and by providing locked doors for each area with the key administratively controlled by the Watch Supervisor on duty.

Contrary to the above, on June 19, 1984, two workers were permitted to enter a High Radiation Area in the Unit 2 Vapor Containment where radiation levels were between 2000 and 4000 mrem/hour, without the entry being controlled by the issuance of a Radiation Work Permit, and without being provided with continuously dose rate indicating instrumentation.

B. 10 CFR 19.12 requires, in part, that individuals working or frequenting any portion of a restricted area be kept informed of radiation in such portions of the restricted area and precautions or procedures to minimize exposure.

Contrary to the above, on June 19, 1984, two workers who entered the crane wall of Unit 2 Vapor Containment (a restricted area) were not informed of the radation dose rates or precautions and procedures to minimize their exposures. No surveys, maps, diagrams, or other means were used to instruct the workers as to the location of a low background area that they were supposed to wait at, and instead they waited near the Regenerative Heat Exchanger which had radiation levels between 2000 millirem/hr and 4000 millirem/hr.

Response to Violations A and B

1. Information concerning the above occurrence was provided to the Resident NRC Inspector by Consolidated Edison. Our findings indicated a briefing concerning staging location and waiting areas was provided to the workers prior to entry behind the crane wall. However, the instructions were not clearly presented to

the workers which resulted in the workers making a right turn, as opposed to a left, inside the crane wall. The workers then proceeded through posted barriers to the regenerative heat exchangers under the mistaken belief that the lead shielding in the area would provide a low dose rate staging location.

Additionally, RWP 7964 was utilized to provide radiological control for entry into and work on the steam generators. Consolidated Edison does agree with the Commission's assertion that the controls for entry were insufficient and the events described in Sections A and B of the Notice occurred.

2. The event occurred due to:

- a. Failure to provide adequate instructions to the workers on the location of their staging area. This was due to insufficient use of visual aids that could have increased the workers' understanding of the radiological conditions and illustrated the physical layout of the staging area.
- b. Failure of the workers to recognize and understand the significance of the postings, barriers and exposure rate information on the postings within the staging area. This was due to either training inadequacies or lack of worker diligence.

- c. Failure to provide a positive means of restricting access to areas within the crane wall that have greater than 1P/hr exposure rates. This was due to the use of a temporary barrier which proved inadequate as a means of access control.
- d. Failure to provide a device that would indicate the dose rate variations in the staging area. Audible-dose indicating devices were not issued to each member of the work party as the job was being monitored by a qualified monitor. Review of the procedure indicated the absence of continuous personnel monitoring during transit, thru the inside crane wall, to the steam generator platform.
- 3. The immediate corrective actions taken and the results achieved were:
 - a. The individuals involved in the occurrence and their supervisors were briefed, and the need for following verbal instructions and recognizing posting and barriers stressed.
 - b. All Radiation Protection technicians and their supervisors were briefed to further emphasize the significance of this occurrence, the importance of the Technical Specifications exposure minimization requirements and insuring that verbal instructions are clear and understood by workers.

- c. A memorandum highlighting radiological protection program individual responsibilities, including the importance of obeying posted, written, and oral radiation protection instructions and procedures, was distributed to Nuclear Power personnel and contractors reporting to them.
- d. Enhanced use of audible-dose indicating devices was implemented in selected plant areas, accompanied by increased training in the use of such devices, and maintained for the duration of the outage.
- e. Photographs and color coded maps depicting the physical layout and radiological conditions are now being used for documented pre-work briefings of individuals working behind the crane wall.
- f. Increased Health Physics Section surveillance of High Radiation

 Areas within containment were scheduled.
- 4. The following long term corrective steps will be taken to prevent recurrence of this type of violation:
 - a. The training lesson plans and presentation methods will be reviewed and revised to ensure individuals entering radiologically controlled areas understand the significance of

barriers, posting and associated radiation levels. The general radiological condition of pertinent plant areas will also be presented in the training sessions.

- b. Those areas or tasks where additional verbal radiological controls instructions are deemed appropriate will be defined and pre-work briefing sheets developed and used for work in those area.
- c. Personnel assigned to provide access control or radiological monitoring for those areas determined in 4-b above will be qualified prior to assignment.
- 5. The long term corrective actions specified in 4 a,b and c above will be completed by July 1, 1985.

Violation C

Technical Specification 6.11, Radiation Protection Program, states that "Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure." Procedure No. EHS 3.403, Revision 0, "Steam Generator Channel Entry," developed pursuant to the above, requires an SAO-134 be prepared for the entry of personnel into the Steam Generators. The SAO-134 prepared for the Steam Generator entry on August 7, 1984, required tht self reading dosimeters be worn on the head, chest and the uppper arms, and the highest reading on these dosimeters be used in controlling the worker's whole body exposure.

Contrary to the above, on August 7, 1984, an entry was made into the Steam Generator by a worker, and a Health Physics Technician did not adhere to Procedure No. EHS 3.403 in that he did not utilize the highest reading indicated by the dosimeter located on the upper arm of the worker to control the workers whole body exposure.

Response to Violation C

The initial review of the potential violation was performed by Consolidated Edison EH&S personnel and the information provided to the Resident NRC Inspector.

• Our findings indicate the preparation for the steam generator entry was performed in accordance with all procedural requirements and, as stated in SAO-134, provided specific instructions on placement of personnel monitoring devices and which dosimeter should be utilized for exposure control. The execution of the procedural requirements were incomplete because the Health Physics Technician did not recognize that exposure of the upper arm constituted a whole body exposure. The technician controlled the entry using the highest reading dosimeter for those location he thought constituted the whole body. Consequently the intent of the procedure was not followed and ultimately resulted in an unplanned exposure of 2900 mR for the third quarter of 1984.

- 2. This exposure occurred because:
 - a. The Health Physics Technician assigned to the steam generator did not und cand that the "upper arm" is considered part of the whol body.
 - b. The procedure and training provided to the technician did not provide adequate instructions which would enable the technician to control exposure in the desired manner.
- 3. The immediate corrective actions taken and the results achieved were:
 - a. The exposed individual was restricted from the radiologically controlled area until the film badge and TLD's were processed. The results of this exposure in addition to prior quarterly exposure work were confirmed to be 2900 mR for the calendar quarter. The individual was accordingly restricted from further work within the radiologically controlled area for the remainder of the calendar quarter.
 - b. The Health Physics Technician was re-instructed on the requirements of EHS Procedure 3.403, "Steam Generator Channel Entry" and the appended SAO-134 and informed why the upper arm is considered part of the whole body.
 - c. All Radiation Protection Technicans and their Supervisors were briefed concerning: 1) What constitutes whole body exposure, and

- 2) The importance of dosimetry placement on the body relative to the highest exposure field.
- d. A procedure change to EHS 3.403 was instituted to ensure doses and dosimetry placement were controlled for the region of the whole body with the highest exposure, and additional instruction for the procedure change was given to all Radiation Protection Technicians and Supervisors.
- 4. The following correcgive steps will be taken to prevent recurrence of an event of this type:
 - a. The Technician training and qualification program will be reviewed and revised to ensure all qualified technicians understand the portions of the body that constitute the "whole body", as defined in 10 CFR 20.
 - b. Technicians assigned to steam generator radiological work surveillance and control will be further qualified by specific training provided by Consolidated Edison.
 - C. EH&S Procedures for all major exposure jobs such as Steam

 Generator Entry will be reviewed to ensure that checklists,

 forms and other similar devices can provide a mechanism for

 preventing deviation by the technician from the procedure intent.

5. The long term corrective actions specified in 4 a,b, and c above will be completed by July 1, 1985.

The personnel who failed to follow the requirements of the procedure received appropriate disciplinary action.