JUL 24 1986

Docket No. 50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. Murray Selman
Vice President, Nuclear Power
Indian Point Station
Broadway and Bleakley Avenue
Buchanan, New York 10511

Gentlemen:

Subject: Inspection No. 50-247/86-08

This refers to your letter dated June 4, 1986, in response to our letter dated April 21, 1986.

Thank you for informing us of the corrective and preventive actions regarding the violations identified as A and B in the Notice of Violation accompanying Inspection Report 50-247/86-08. These actions will be examined during a future inspection of your licensed program.

Based on the new information provided in your June 4, 1986 letter and verified by our inspector during an inspection of your facility on June 16-20, 1986, Violation C is being withdrawn. Our records will be updated to reflect closure of this item.

Your cooperation with us is appreciated.

Sincerely,
Original Signed By:

Thomas T. Martin, Director
Division of Radiation Safety
and Safeguards

cc:
J. D. O'Toole, Vice President, Nuclear Engineering, Quality Assurance and Reliability
M. Blatt, Manager of Regulatory Affairs
R. L. Spring, Nuclear Licensing Engineer
P. Kokolakis, Director, Nuclear Licensing
Brent L. Brandenburg, Assistant General Counsel
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New York

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bcc:
Region I Docket Room (with concurrences)
DRP Section Chief
Robert J. Bores, DRSS

RI:DRSS	RI:DRSS	RI:DRSS	RI:DRSS
Waadock/mjd AW	Shanbaky MS	Bellamy MS	Martin
7/16/86	7/16/86	7/16/86	7/23/86

OFFICIAL RECORD COPY

Murray Selman
Vice President

Consolidated Edison Company of New York, Inc.
Indian Point Station
Broadway & Bleakley Ave.
Buchanan, NY 10511
Telephone (914) 737-8116

June 4, 1986

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

Mr. Thomas T. Martin, Director
Division of Radiation Safety and Safeguards
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. Martin:

This refers to inspection 50-247/86-08 conducted by Mr. J. White of your office February 24-28, 1986 at Indian Point Nuclear Generating Station, Unit 2.

Your April 21, 1986 letter stated that it appeared that certain activities were in apparent violation of NRC requirements as set forth in the Notice of Violation enclosed therewith as Appendix A. Pursuant to the provisions of 10 CFR 2.201, our response to the notice is presented in Attachment A to this letter.

In our response we request that the events associated with Violation C be reconsidered and, for the reasons presented, that the violation be withdrawn.

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

Very truly yours,

Murray Selman

Attachment

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

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June 4, 1986
Re: Indian Point Unit 2
Docket No. 50-247

ATTACHMENT A

RESPONSE TO NRC INSPECTION 86-08

VIOLATION A

Section 6.12.1a of the Unit 2 Technical Specifications states, in part, that "Each High Radiation Area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a High Radiation Area...."

Contrary to the above, on February 25, 1986, whole body radiation dose rates in excess of 100 mR/hr were present in the area directly above the containment sump on the 46 foot elevation of the Vapor Containment and this area was neither posted nor barricaded.

This is a Severity Level IV violation (Supplement IV).

RESPONSE

During the initial survey of the Vapor Containment, the area around the moat was posted as a High Radiation Area (HRA) (1-17-86). After the decontamination of the area, the exposure rates were measured and found to be less than the requirements for a HRA and the posting was removed.

The higher exposure measured on February 25, 1986 appears to be due to a lower water level in the moat and radioactive material being moved down the moat due to decontaminating and the fan coolers draining to the floor.

The area was immediately re-posted and the event was reviewed with all of the HP Technicians. In order to prevent reoccurrence of this event, shielding will be planned for the moat for all periods during future outages when there is a likelihood that the moat is a HRA.

To prevent a reoccurrence of a similar event, HP Technicians have been directed to obtain concurrence from a Radiation Protection Supervisor prior to de-classifying a High Radiation Area to a Radiation Area. This change in postings will be noted on the normal survey sheet which receives a review by a Radiation Protection Supervisor.

Date of full compliance: February 25, 1986.

ATTACHMENT A

VIOLATION B1 and B3

B1

Licensee Procedure EHS-SQ-2.008, "Radiation Work Permit," requires in section 5.3.2.c that personnel making an entry under a RWP obtain the protective clothing and equipment required by the RWP.

Contrary to the above, on February 7, 1986, three workers performed work on the Reactor Vessel Upper Internals Lift Rig without wearing the protective equipment specified by the controlling RWP #01-2026. Specifically, the workers failed to wear full-face respirators as required. Additionally, no radiation protection personnel were present at the start of the job as required by the RWP.

Also contrary to the above, on February 27, 1986, a worker performed work on the #21 CCW pump without wearing the protective clothing specified by the controlling RWP #01-0926. Specifically, the worker failed to wear a full set of protective clothing as required by the RWP.

B3

Licensee Procedure EHS-3.001, "Radiological Posting Requirements," requires in section 5.2.8 that all areas where loose contamination equal to or greater than 1000 dpm/100 cm^2 be posted with a sign marked: "Caution" or "Danger," and "Contaminated Area."

Additionally, the above section requires that areas where the general area contamination levels are equal to or greater than 100,000 dpm/100 cm^2 be posted with the words: "Respiratory Protection Required for Entry," and "ALARA Briefing Required Prior to Entry."

Contrary to the above, on February 7, 1986, the licensee failed to post the Reactor Vessel Upper Internals Lift Rig as required. Surveys of the Reactor Vessel Upper Internal Lift Rig indicated loose contamination levels greater than 100,000 dpm/100 cm^2.

RESPONSE

The events surrounding the noncompliance associated with the workers on the lifting rig were investigated and the following corrective actions were taken:

1. Prior to the upper internal lifting rig being placed on the 23 RCP grating, the HP Technicians mistakenly

thought the posting for 23 RCP, which requires respirators, was part of the posting for the lifting rig. A separate preposted area was not established prior to setting the lift rig down. When the upper internal lifting rig was landed, the technician realized the area was not completely posted as requiring respiratory protection. He then went to a storage cabinet which was on that elevation for signs to post the area. During those few minutes the decontamination personnel approached the area and started to wipe down the upper internal lifting rig. The HP Technician was returning to the area with the signs and ropes when he detected "a puff or cloud of rust" and stopped the job as discussed in the inspection report.

2. All of the groups working on Westinghouse-related outage tasks were reinstructed that they must contact the HP Technicians prior to starting a job.

3. HP Technicians were reinstructed that if any workers were found in the area in violation of their RWP, they were to be stopped and directed to leave the area.

4. The ALARA briefings were previously being performed at the start of a shift outside of the radiation areas. In order to enhance worker understanding of the conditions on the refueling floor at that time, ALARA briefings were thereafter performed by the Senior HP Technician on the job and in the field.

The mechanic and HP Technician associated with the Component Cooling Water pump event were both interviewed to find out why the mechanic was in the area without the hood and high shoe covers required by his RWP. The mechanic had been in the area twice before that day and had completed his assignment. The HP Technician had surveyed the area and observed the mechanic was dressed in accordance with his RWP previously. At the time the inspector observed the mechanic, he was removing a chain fall as part of the cleanup of his assignment. He was interviewed by his management and disciplined for not complying with his RWP.

VIOLATION B2

Licensee Procedure SAO 304, "Radiologically Controlled Area Access," requires in section 2.2.7.d that all personnel exiting Contaminated Areas shall remove protective clothing as specified by posted instructions or standard practice, prior to stepping on the step-off-pad.

ATTACHMENT A

Contrary to the above, on February 27, 1986, two workers were observed to leave the New Chemical Sampling Room, a posted Contamination Area, without fully removing their protective clothing as specified by posted instructions.

RESPONSE

The workers in the New Chem Sample Cell asked the Junior HP Technician in the area if they could remove their low shoe covers and outer gloves and go directly to the Pipe Pen, where he would log them into the High Radiation Area.

The Junior HP Technician believed the two workers were operators and thus allowed them to cross the step-off-pad per our procedures.

He failed to verify they were with Operations, at which time he would have instructed them to remove their protective clothing. The Technicians and the two workers were reinstructed in the requirements for exiting contaminated areas.

VIOLATION B4

Licensee Administrative Order SAO-313, "Radiological Occurrence Reports," requires in section 2.1 that the events listed in Attachment A to the procedure require the generation of a Radiological Occurrence Report. Attachment A to SAO-313 includes the following events: i) Violation of procedure or RWP requirements, and ii) Failure, during the course of work, of engineering controls such as portable ventilation units.

Contrary to the above, the licensee did not generate a Radiological Occurrence Report as required for an RWP violation occurring on February 7, 1986, as described in paragraph B.1 of this Notice of Violation, and for a failure of the containment ventilation used to control airborne radioactivity on February 10, 1986. These events resulted in the internal deposition of radioactive material in several workers.

These multiple instances of procedural violations collectively constitute a Severity Level IV violation (Supplement IV).

RESPONSE

A more detailed discussion of the February 10, 1986 event surrounding this violation is set forth in response to Violation C below.

ATTACHMENT A

We agree that the events described in this violation could have caused Radiological Occurrence Reports to be initiated. Future events will be reviewed more fully to determine when an ROR should be initiated.

Management is currently reviewing the sufficiency of the guidance in SAO-313 for initiating an ROR.

VIOLATION C

10 CFR 20.201 requires that each licensee make or cause to be made surveys as may be necessary to comply with 10 CFR Part 20 and are reasonable under the circumstances. A survey is defined, in part, in 10 CFR 20.201 as an evaluation of the radiation hazards incident to the presence of radioactive materials and may include measurements of the concentrations of radioactive materials present.

10 CFR 20.103(a)(3) requires, in part, that "... the licensee shall use suitable measurements of concentrations of radioactive materials in air for detecting and evaluating airborne radioactivity ... as may be necessary for timely detection and assessment of individual intakes of radioactivity by exposed individuals..."

Contrary to the above, on February 10, 1986, reasonable surveys of airborne radioactivity concentrations, necessary to comply with the provisions of 10 CFR 20.103, were not made during reactor cavity decontamination work during the time period 1230 to 1630. As a result, about 35 individuals sustained unplanned intakes of airborne radioactive material.

This is a Severity Level IV violation (Supplement IV).

RESPONSE

Containment Airborne Activity

Consolidated Edison agrees with the concern shown by the NRC on the events involving the Primary Containment becoming an airborne area on February 10, 1986. We recognize that the tasks may have been conducive to better anticipation. However, we do not agree that the events described in Inspection 86-08 alleged Violation C constituted a violation of 10 CFR 20.201 or 20.103, which states "... the licensee (is) to use suitable measurements of concentration of radioactive materials in air for detecting and evaluating airborne radioactivity ... as may be necessary for timely detection and assessment of individual intakes of radioactivity by exposed individuals ..."

June 4, 1986
Re: Indian Point Unit 2
Docket No. 50-247

ATTACHMENT A

On February 10, 1986, two separate tasks contributed to the airborne concentrations increasing above 25% of Maximum Permissible Concentration (MPC) in the primary containment.

The first peak in activity involved the No. 24 SG manway cover being removed. At 0645 the diaphragms were removed and the airborne concentrations started to increase.

By 0830 the following mitigating actions had been taken:

1. Eleven air samples had been drawn at different locations in the containment (#25-32 and 34-36) and

2. The ventilation damper on the refueling floor was located and closed. This was the damper that when open, allowed the airborne radioactive material to be vented to the refueling floor (95' elevation). Airborne concentrations on the refueling floor peaked between 0655 and 0750 at 1.7 MPCs. Once the damper was closed, airborne concentrations on the 95' elevation decreased. Eight air samples were taken on the 95' elevation between 0700 and 1200 to track and trend the airborne concentrations. By 1100, the concentrations had dropped to less than 25% of MPC.

The second event that caused the airborne concentrations to increase that day involved the hydrolazing of the reactor cavity for decontamination. This task had been performed the previous two days with no problems. Air samplers were set up on both sides of the cavity and in the reactor cavity itself. Additionally, an AMS2 Continuous Air Monitor (CAM) was on the refueling elevation. During the prior two days, airborne activity in the cavity increased to several MPC. However, the decontamination personnel were in full face respirators and the activity on the Refueling Floor (95' Elev.) remained below 25% MPC (refer to samples 28 and 29, for example, on February 10, 1986).

During the morning of February 10, 1986 when the airborne activity initially increased, the hydrolazing of the reactor cavity was suspected to be a contributing cause. Hydrolazing of the cavity was in progress around 0700-0800.

Air samples in the cavity indicated airborne levels of several MPC. However, the air sample that was taken on the refueling floor and on the far side from the vent damper yielded a concentration of 5.8×10^{-10} uCi/cc (less than 0.1 MPC) and was drawn at 0650 when the first peak occurred. Thus there was no indication during the first peak that the hydrolazing was the main cause of the problem.

ATTACHMENT A

At 1230 that afternoon hydrolazing began again in the lower cavity. Air samples were obtained at the west and east sides of the cavity and on the floor at 1243, 1250, and 1315 hours respectively. These yielded concentrations of 0.22 MPC, 0.11 MPC, and 0.23 MPC, slightly higher than before the hydrolazing started but within the concentrations expected and that which had been observed during the previous two days of the job. At approximately 1530 hours, three routine low volume air samplers that had been started between 1230 to 1300 hours were stopped and sent to the counting room for analysis. At 1630, the Radiation Protection Supervisor received results that indicated the airborne levels were 1.87 MPC on the west side of the cavity wall and 0.94 MPC on the east side. By 1650, the VC was cleared of "Non-Respirator Protection Personnel" and the area was posted airborne.

The AMS-2 Continuous Monitor (CAM) that was on the refueling floor did not alarm as expected. This is suspected to be due to an electrical or mechanical failure. However, the malfunction of this one instrument, when five CAMs altogether were deployed in containment, should not constitute a violation of 10 CFR 20.

Nasal smears were taken from Health Physics Personnel and positive indications were obtained. All workers that had been in the area were sent for whole body counts and obtained them as required by procedure.

At 1720 hours the Control Room was contacted to start a second primary containment exhaust fan. At 1800 hours the primary containment radiation exhaust monitors were checked by a Radiation Protection Supervisor to determine when the increase in airborne activity actually started. The monitors showed no increase as would have been expected.

At that time, it was suspected that the ventilation system was not turning over the volume as it should be. The Personnel Airlock (80' elev.) was closed on the assumption that the exhaust fans on the 95' elev. were drawing from the clean air outside of the airlock on 80' elev. which would account for the radiation monitor on the exhaust system not increasing.

During the course of the day, one hundred and eighteen air samples were taken at all locations and at various times in the containment. Five different CAMS were also set up during the initial coverage of the containment. The individuals who did receive a small uptake of radioactive material were identified and assessments were made in a timely manner under our procedure. The workers in the primary containment were all under RWPs, and the area was evacuated within twenty minutes of a determination that it was an airborne area. Although thirty-eight individuals did show an intake of radioactive material,

ATTACHMENT A

follow up analysis by whole body counts showed no detectable radioactive material in any worker by the end of the second week. This equates to a dose commitment of less than 1 mrem for any individual.

During the inspection, this event was discussed with the Radiation Protection Manager and the Senior Inspector. At the time of the exit meeting, it was Consolidated Edison's understanding that this event would not result in a violation.

In conclusion, we respectfully submit that the air sampling program and other instrumentation in use during the period of the supposed violation was in accordance with good radiation protection practices and complied with 10 CFR 20.103 and 20.201. Accordingly, we request the events be reconsidered and the Notice of Violation be withdrawn.