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August 25, 1997

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

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

SUBJECT: Reply to Notice of Violation
(Inspection Report 50-247/97-07)

The attachment to this letter constitutes Con Edison's reply to the Notice of Violations (NOV) included with your July 16, 1997 letter concerning the six week inspection period ending June 16, 1997, at the Indian Point 2 facility.

Should you have any questions regarding this matter, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,

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PDR ADOCK 05000247
Q PDR

Attachment

cc: Mr. Hubert J. Miller
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ATTACHMENT

REPLY TO NOTICE OF VIOLATION

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
August 1997

NOTICES OF VIOLATION

The Notices of Violation in Inspection Report 50-247/97-07 are stated as follows:

A. Technical Specification Section 6.8.1 requires that written procedures be implemented covering activities referenced in Regulatory (Safety) Guide 1.33, November 1972. Appendix A of Regulatory Guide 1.33 recommends written procedures that govern procedure adherence. Station Administrative Order (SAO)133, "Procedure, Technical Specification and License Adherence and Use Policy," Section 5.1.1 states that procedures shall be followed. Procedure RW-S-4.510, "Crane Operation and Rigging for Radwaste," Rev. 0, step 6.1.2 states that "Hoisting of MORE THAN ONE load at a time is PROHIBITED."

Contrary to the above, on June 20, 1997, Radwaste workers on the Unit 1 fuel handling floor, attempted to hoist the Unit 1 cask pit cover while the # 21 reactor recirculation pump was already suspended by the crane.

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

B. Technical Specification Section 6.8.1 requires that written procedures be implemented covering activities referenced in Regulatory (Safety) Guide 1.33, November 1972. Appendix A of Regulatory Guide 1.33 identifies typical safety related activities that should be covered by written procedures, including procedures for the control of the auxiliary feedwater system and emergency power sources such as the emergency diesel generators. Regulatory Guide 1.33 also requires written procedures that govern procedure adherence. Station Administrative Order (SAO)-133, "Procedure, Technical Specification and License Adherence and Use Policy," Section 5.1.1, states that procedures shall be followed.

Contrary to the above:

1. On June 11, 1997, an operations supervisor closed valve CT-33, the suction valve to the #23 auxiliary boiler feed pump, absent procedure guidance, and at a time when the plant's configuration control system required the valve to be open.

2. On June 26, 1997, during the performance of PT-R84A-1, 21 EDG (emergency diesel generator) Alternate 24 Hour Load Test, an NRC review of a data sheet indicated that a temperature of 1110 °F was recorded for one of the cylinders. The procedure states that the maximum allowed value is 1100 °F and that if exceeded, reduce the EDG load and notify the senior watch supervisor; however, the 1110 °F reading was not recognized as being above the maximum value and the required actions, therefore, were not performed.

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

C. Technical Specification Section 6.8.1 requires that written procedures be implemented-covering activities referenced in Regulatory (Safety) Guide 1.33, November 1972. Appendix A of Regulatory Guide 1.33 identifies typical safety related activities that should be covered by written procedures, including procedures for the control of maintenance work. SAO-150, "Foreign Material Exclusion and Control," provides requirements for foreign material exclusion from plant systems during maintenance activities. Section 4.1.7 of SAO-150 states that verification of system cleanliness at system closure by at least two qualified persons shall be documented in the work package.

Contrary to this requirement, on May 16, 1997, two qualified technicians performed a verification of system cleanliness, following work on the internals of valve BFD-6-23, part of the auxiliary feedwater system. However, the verification was inadequate in that it failed to identify that a rag, introduced into the piping system during maintenance on BFD-62-3, had been left inside the system piping. As a result of flow anomalies during subsequent operation of the 23 auxiliary feedwater pump, boroscopic-examination of the system identified the rag lodged in the internals of a downstream flow control valve, FCV-406D.

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

RESPONSE

We acknowledge the concerns addressed in these Notices of Violation and have determined that the sequence of events and causes of these events were as follows:

Violation A.

In the first violation, two radwaste workers connected a load to the three ton hook while the 21 recirculation pump was connected to the 75 ton hook on the same crane. To remove an obstruction that prevented setting of the 21 recirculation pump in its designated location, workers lowered the recirculation pump until it came to rest in an alternate location. They then proceeded to use the three ton hook on the same crane to move the obstruction. Based on interviews with the workers it was determined that they did not consider the pump to be a crane load while it was at rest in the alternate location. Station procedure RW-S-4.510, Crane Operation and Rigging for Radwaste step 6.1.2 states that hoisting more than one load at a time on a crane is prohibited.

Violation B.

The second violation sets forth two instances of procedural noncompliance by operations personnel as follows:

In the first instance, the 23 auxiliary boiler feedwater pump (ABFP) suction valve, CT-33, was closed when the plant's configuration control system required it to be open. On June 11, 1997 an Operations Test Supervisor repositioned CT-33 upon hearing flow noises and check valve chattering as a result of separate operations that he was performing associated with 21 ABFP. Subsequent to the closure of CT-33 the noises subsided and the valve chattering stopped. The central control room (CCR) was not notified of this action nor was any formal procedural system used to control the change in position of CT-33. In addition, this action was performed without use of the guidance provided in OAD-6, Equipment Status Identification, which governs such action. The closure of CT-33 in this instance resulted in loss of configuration control for the 23 ABFP.

Subsequently on June 11, 1997, during preparations to run the 23 ABFP to fill 24 steam generator (SG) a Nuclear Plant Operator (NPO) was directed to determine the condition of the ABFP to ensure it was ready to operate. The NPO noted the closed position of the pump suction valve and immediately notified the CCR Senior Reactor Operator (SRO). The alert response by the NPO allowed the CCR SRO to direct that the proper positioning of CT-33 be reestablished.

The Operations Manager (OM) promptly initiated an investigation into the circumstances of the closure of CT-33. Reviews indicated that the auxiliary feedwater system (AFW) had been restored and CT-33 had been placed in the open position as required by system procedures in preparation for normal operation. During the investigation, the Operations Test Supervisor admitted that he performed the improper positioning of CT-33 based on his system concerns.

In the second instance, during performance of 21 emergency diesel generator (EDG) load testing, the temperature for one of the cylinders exceeded the stated limit of 1100 °F, and was not reported to the Senior Watch Supervisor (SWS) as required by the procedure. A one-half hour 2300 KW section of the load test was being performed. During the test the pyrometer reading for one cylinder was recorded at 1110 °F, but was not recognized by the NPO as requiring the engine load reduction and notification of the SWS. The temperature exceeded 1100 °F for approximately 10 minutes, and the system engineer was requested by operations to evaluate the consequences of the elevated engine cylinder temperature. The evaluation indicated that the temperature exceedance would not cause any adverse effect on the engine since it was close to the limit and not maintained for a significantly long period.

Violation C.

In the third violation, maintenance personnel were assigned to perform maintenance on BFD-62-3 a two inch gate valve just upstream of the auxiliary feedwater flow control valve FCV-406D, which feeds the 24 steam generator (SG) from 23 auxiliary boiler feedwater pump (ABFP). Maintenance procedures required the maintenance personnel to "blue" the valve internals. Additionally, these procedures required that the internals be maintained dry. Since there was a trickle of water, the technicians used two small dark colored rags to stop the flow to allow the "blueing" of the valve. During restoration from the job the maintenance personnel thought they had retrieved all of the rags used in performance of the work. The restoration of the system was performed by the technicians based upon recollection, without the enhanced Foreign Materials Exclusion (FME) as required by SAO-150, "Foreign Material Exclusion and Control." Though visual checks of the pipe were performed by several individuals prior to closure of the system, these inspections did not result in removal of the rag, which later prevented flow through FCV-406D. During the investigation of the flow blockage using boroscopic techniques, the rag was discovered lodged in the internals of FCV-406D and subsequently removed.

ANALYSIS

The root cause for these events was a failure to fully adhere to established plant procedures. It is Con Edison's policy that all workers at the Indian Point Station adhere to and comply with Station Administrative Orders (SAOs) and procedures. Deviations from approved procedures are authorized only where necessary to prevent injury to personnel, including the public, or damage to the facility. In these events, station personnel did not fully follow the appropriate procedures pertaining to their job responsibilities.

Violation A.

During the movement of the recirculation pump to the cask wash pit by two Rad Waste personnel, the pump which was on the 75 ton hook was lowered to a rest position but not disconnected from the hook. The workers then proceeded to lift another load using the three ton hook on the same crane. The individuals clearly misinterpreted the requirements of RW-S-4.510, Crane Operation and Rigging for Radwaste, when they did not consider that two loads were connected to the crane.

Violation B.

With respect to the first part of this violation, although clear procedural guidance exists in plant procedures, such as OAD-6, Equipment Status Identification and plant Check Off Lists, for the control of component status (configuration), and although operations management has reinforced its expectations for compliance with these guidelines, a change in plant configuration outside the procedure requirements was still made in this instance, resulting in the mispositioning of CT-33.

Based on post-incident investigation it was determined that the Operations Test Supervisor who mispositioned CT-33 was suffering from fatigue and distracted by operations test coordination issues and by personal concerns. As a result, poor judgement was exercised and CT-33 closed without operating crew permission and without the implementation of procedural guidance provided by OAD-6, Equipment Status Identification. The closure of CT-33 in this instance resulted in the valve being left in an unintended, uncontrolled and inappropriate position. Operations management did not anticipate or detect a decrease in the Operations Test Supervisor's ability to adequately perform his function as the outage progressed.

With respect to the second part of this violation, when the 21 EDG cylinder temperature exceeded the test limit of 1100 °F an operator missed relating a cylinder temperature recorded in the diesel test logs to the reporting and load reduction requirements imposed in the diesel test procedure. The procedure clearly directs the load on the EDG to be reduced if the cylinder temperature exceeds 1100 °F and to notify the SWS.

Violation C.

Pre-closure visual inspections by maintenance personnel, a peer, a QC inspector and a SWS designee were inadequate to detect a dark colored rag in three inch diameter piping on either side of the BFD-62-3 valve seat. The rag went unnoticed before valve reassembly and subsequently traveled to the inlet side of FCV-406D, where it blocked flow.

CORRECTIVE ACTIONS

Violation A.

The cranes and rigging qualifications for the two radwaste individuals were immediately suspended pending closure of the investigation. Subsequently one of the individuals has completed requalification, and the other individual, a contractor, has voluntarily moved and is no longer employed on site.

Procedure RW-S-4.510 will be revised to ensure that it clearly states that only one load may be attached to a crane at any one time. This revision to the Crane Operation and Rigging for Radwaste procedure will be implemented by October 31, 1997.

This rigging incident and lessons learned have been discussed within the Radwaste department during a normally scheduled radwaste safety meeting.

Violation B.

With respect to the first part of violation B to the Notice of Violation, the following corrective actions have or will be implemented as indicated for each action:

Strong disciplinary action was taken against the Operations Test Supervisor for the mispositioning of CT-33.

A 360 degree assessment profile of each operations first and second line supervisor shall be completed by December 31, 1997. The training to strengthen the areas in need of improvement identified in the assessments shall be completed during 1998. These assessments and the associated training should assist operations personnel in the understanding and practice of conflict resolution and information sharing that are needed to remove the barriers previously identified that led to this mispositioning.

The operator involved in the diesel engine cylinder temperature exceeding 1100 °F was counseled by operations management.

The closure of CT-33 event and the operations administrative directive procedure that directs plant status controls will be reviewed with all operations personnel by October 31, 1997. This review will be performed with emphasis on lessons learned, the expected outcomes of this and similar events and the rationale for configuration control, to reinforce operation management's policy and expectations for configuration management.

The diesel event will be reviewed with all operating shifts prior to October 31, 1997.

Violation C.

All personnel involved in the pre-closure inspection have been provided with procedural direction to question maintenance personnel on tool and material use in maintenance activities.

A program, including discussions with maintenance personnel and procedure changes, to reinforce the need and importance of careful Foreign Materials Exclusion (FME) work practices and self-checking with all on site maintenance personnel shall be completed by August 31, 1997. In addition to the current enhanced FME controls contained within station procedures for safety related equipment, the FME control procedure has been revised to incorporate implementation of a worker-controlled inventory control check list that is double verified after maintenance using foriegn materials, but before the system or component is closed. This inventory control check list is to be initiated for systems or components that are clearly not safety related, but may be sensitive to foreign material intrusion.