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New York Power Authority

Joseph E. Russell
Resident Manager

September 14, 1989
IP3-89-068
RAL-89-108B

Docket No. 50-286
License No. DPR-64

Mr. Bruce A. Boger, Acting Director
Division of Reactor Safety
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

SUBJECT: Inspection No. 50-286/89-80 and Associated Maintenance Weaknesses

Dear Mr. Boger:

This letter and Attachment I provide the Authority response to the Maintenance program weaknesses identified within Inspection Report 89-80.

Should you or your staff have any questions concerning this matter, please contact Mr. M. Peckham of my staff.

Sincerely,

Joseph E. Russell
Resident Manager
Indian Point Unit 3
Nuclear Power Plant

JER:RAL/rl

Attachment

cc: Document Control Desk (original)
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Resident Inspector's Office
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ATTACHMENT I
MAINTENANCE TEAM INSPECTION NO. 89-80
WEAKNESSES RESPONSE

WEAKNESS 1

"SMOKING MATERIALS BEING DISCARDED THROUGHOUT THE PLANT INCLUDING IN NO SMOKING AREAS":

Directive 3-MD-21, "Plant Cleanliness Inspection Program," provides a means to ensure that plant cleanliness and housekeeping deficiencies are identified and corrected. This directive addresses plant cleanliness, housekeeping practices, painting requirements, and re-lamping requirements. During walkdown inspections of plant systems and maintenance in progress, the inspection team noted that cleanliness and housekeeping deficiencies were being corrected; however, smoking materials were routinely found on floors throughout the facility, including in the no-smoking areas of the control room.
NRC PARAGRAPH 1, Page 1, (WEAKNESS)

NYPA RESPONSE

Housekeeping continues to be a priority for the Authority and constant improvement is expected and required. The smoking materials concern is part of that process. Additional areas designated as no-smoking areas include all levels of the control building with the exception of the Control Room.

WEAKNESS 2

"NONPERFORMANCE OF MATERIAL CONDITION INSPECTIONS DURING THE CURRENT OUTAGE":

"Material condition inspections in accordance with AP-43 were not being conducted during the outage."
NRC PARAGRAPH 1, Page 1, (WEAKNESS)

NYPA RESPONSE

The Authority has revised AP-43,"Material Condition Inspections", to reflect a realistic Material Condition Inspection schedule. This schedule was developed to take into consideration the condition of the plant during an outage and to recognize the need to focus man-power and resources more effectively during both outage and non-outage periods.

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WEAKNESSES RESPONSE

WEAKNESS 3

"UNLABELED COMPONENTS":

"Although component labeling and identification were incomplete..."
NRC PARAGRAPH 1, Page 2, (WEAKNESS)

NYPA RESPONSE

Component labeling and identification is an on going program at Indian Point 3 (IP3). A commitment to INPO, to have specific systems fully tagged by July 1989, was met. Some additional minor systems are currently being tagged. Maintenance of tagged systems continues along with tagging of new systems. Three staff members under the direction of an Assistant Shift Supervisor are assigned full time to the labeling and tagging effort.

WEAKNESS 4

"UNRECOGNIZED MATERIAL DEFICIENCIES IN THE PLANT":

"The inspection team identified over 30 material deficiencies that had not been previously identified by the licensee."
NRC PARAGRAPH 1, Page 2, (WEAKNESS)

NYPA RESPONSE

The Authority has revised AP-43, to more accurately reflect those plant items which fall into the category of material deficiencies. This revision was completed using actual examples and explanations of plant material deficiencies. The Authority believes that this revision will provide the clarification necessary to decrease the number of unrecognized material deficiencies within the plant.

WEAKNESS 5

"INCREASING NUMBER OF DEFICIENCY TAGS PLACED THROUGHOUT THE PLANT":

"It was noted that the total number of deficiency tags placed throughout the plant at any given time have been steadily increasing during the past several months"
NRC PARAGRAPH 1, Page 1-2, (WEAKNESS)

NYPA RESPONSE

An increased awareness and heightened standard of material condition at IP3, has resulted in the increase of the number of deficiency tags.

The number of deficiency tags normally increases following a major outage. A trend downward in the number of tags is then experienced as maintenance activities are redirected to this area and as plant material condition improves.

WEAKNESS 6

"LACK OF PRESTOCKING SOME SPARE PARTS":

"Pre-outage planning had identified the major projects and had provided for the stockpiling of known repair parts although for some jobs the necessary parts were not in stock"
NRC PARAGRAPH 2.2.1, Page 8, (WEAKNESS)

NYPA RESPONSE

Maintenance Procedure MD-28, "Planning Directive" has been revised to include and delineate the steps necessary to prestage material for planned Maintenance Department work on a weekly basis. Prestaging is performed for all planned work requests associated with the unscheduled outage list. A number of the jobs noted by the NRC Team were those that were unanticipated repairs, where the parts were ordered after the problem was discovered. This situation was particularly applicable to the I&C Department were work is primarily performed after field calibration or troubleshooting. Additionally some jobs were on hold awaiting parts due to extremely long lead times or the completion of commercial dedication packages.

WEAKNESS 7

"FAILURE DETERMINATION ANALYSIS":

"However, the licensee's erroneous conclusion that there was no degradation of the service water pipe opposite the weld channel socket at the bottom of penetration ME represents a weakness in failure determination analysis."
NRC PARAGRAPH 2.3.1, Page 14, (WEAKNESS)

NYPA RESPONSE

The Authority agrees that the initial conclusion of the failure determination analysis was inaccurate. However, the Authority believes that this case was not a programmatic weakness warranting restructuring the existing failure determination analysis program. The Authority will use this occurrence as an example for future analysis of events under the existing program.

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WEAKNESSES RESPONSE

WEAKNESS 8

"PRA NOT PRESENTLY USED FOR MAINTENANCE":

"However, the ability to use PRA in planning, scheduling, and priorization of maintenance work is not presently available and is a weakness."
NRC PARAGRAPH 2.3.2, Page 14, (WEAKNESS)

NYPA RESPONSE

In response to Generic Letter 88-20, which requires licensees to perform evaluations of their plants, the Authority is developing an in-house program to complete an updated PRA for IP3. This effort is scheduled for completion in 1992. Upon completion of the updated PRA the Authority will evaluate the results and factor where applicable the relevant PRA concerns into the Maintenance programs at IP3.

WEAKNESS 9

"FAILURE OF A QC INSPECTOR TO IDENTIFY MISWIRING":

During performance of Procedure 3-CM-ES-7, Rev. 0, on CH-LCV-112C, VCT outlet valve, the maintenance mechanic stated that the motor operator appeared to be wired incorrectly. Subsequent investigation by the licensee verified that electrical leads Nos. 2 and 5C were reversed and incorrectly installed. Procedure 3-CM-GEN-14, Rev. 2 was reviewed and QA/QC Hold 5.12, "OC to Verify Electrical Leads Are Properly Connected Per Step 6.23," was signed off on March 21, 1989. The rewiring of the motor operator was performed on March 21, 1989 under Work Request 15005, Maintenance/Work Steplist #: 2, "Rewiring of Two Train Limit Switches for Four Train Operation. " The QA/QC inspector had incorrectly verified that the wires were properly connected.
NRC PARAGRAPH 2.3.3, Page 15, (WEAKNESS)

NYPA RESPONSE

A meeting was held with the Quality Control Inspection staff to re-emphasize the significance of conducting accurate, independent inspections of work. The importance of verification to drawings and installation documents along with strict adherence to procedures was stressed. A revision to the existing Quality Assurance Instruction (QAI 10.10) will assure that contract inspection personnel have been made aware of the importance of inspections in this area. This QAI will be revised by January 1, 1990.

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WEAKNESSES RESPONSE

WEAKNESS 10

"UNTIMELY INITIATION OF CORRECTIVE ACTION":

While reviewing the licensee's Outage Response Due Report, the team reviewed DCAR 89-212, "SOV-120B Flex Conduit Unapproved Manufacturer," to verify that unapproved conduit had not been installed on CH-LCV-112C. Subsequent investigation verified that approved sealtight conduit was installed on CH-LCV-112C; however, a spool of the unapproved flexible conduit identified in DCAR 89-212 was found in the turbine building. The spool of unapproved conduit was stored in an area containing other conduit being installed during the outage, but the spool lacked identification that the conduit was unapproved. When informed of this, licensee, representatives stated the condition would be corrected.
NRC PARAGRAPH 2.3.3, Page 16 (WEAKNESS AND COMMITMENT)

NYPA RESPONSE

Although the material in question was identified on two separate DCARs (89-199 and 89-212), Hold Tags had not been affixed to the main spool located in the Turbine Storage Area. A tool box training session for the Quality Control Staff providing guidance on the use of Hold Tags associated with non-conforming material as outlined in Quality Assurance Procedure QAP 15.2, Rev. 3 has been completed.

WEAKNESS 11

"INSTANCES OF POOR HP PRACTICES":

In general, the team found HP support to be adequate. However the team observed instances of poor HP practices. Among these are the following examples:
inconsistent assignment of face protection to workers on job 890D at the 46' VC EL-accumulator

the use of an incorrectly worded step-off pad (SOP) in the PAB residual heat removal pump room

worker insensitivity to the location of a "hot spot" near SI-MOV-856 C on 46' VC

poor location of contaminated trash receptacles in relation to the SOP on 68'VC
NRC PARAGRAPH 2.3.4, Page 17, (WEAKNESS)

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NYPA RESPONSE

As noted in the inspection report, "all concerns were promptly corrected by IP3 staff after NRC Team identification". In order to further strengthen the H.P. Program and prevent the occurrence of such instances in the future, the following actions were undertaken:

1. Daily surveillances (walkdowns) of the Radiologically Controlled Areas were conducted by IP3 staff during the Steam Generator Replacement Outage (SGRP). These surveillances provided an effective means of assuring adequate and appropriate equipment, controls, and procedures were in place and being implemented. Where possible, immediate corrective actions were implemented when concerns were noted. In addition, the IP3 RES staff implemented an Activities Review Program where Departmental Management reviews field activities to minimize the occurrence of poor practices.

2. A Radiological Program Assessment was performed during the Outage by an outside contractor. This assessment was quite extensive and provided a means of identifying areas where improvements could be made. A number of the recommendations resulting from this assessment have been implemented with others under review.

WEAKNESS 12

"FAILURE TO DOCUMENT CLEARANCES TO PERFORM WORK":

The licensee's work controls include a prerequisite step in the maintenance procedures that contain provisions for recording the work clearance number, the radiation exposure authorization number, and work request number. The applicable maintenance supervisor documents completion of the prerequisites by recording the appropriate numbers on the procedure and signing completion of the step. The prerequisite work authorizations were completed for all observed maintenance except for work being performed on motor-operated valve SI-MOV-880E. This work was being performed under Procedure 3-CM-ES9, Rev. 1; however, the inspector noted that neither the clearance number nor the Maintenance Supervisor's signature/date had been entered on the field or master copy of the procedure. Work on the valve had been authorized under blanket clearance number 000095.
NRC PARAGRAPH 3.1.1, Page 20, (WEAKNESS)

NYPA RESPONSE

The Authority's requirements for documentation of clearances and controls have been reaffirmed to the Maintenance Staff and Mechanics.

WEAKNESS 13

"LACK OF DOCUMENTED REPAIR TIMES IN EQUIPMENT HISTORIES AND MANUAL RETRIEVAL SYSTEM FOR EQUIP HISTORIES":

"The team concluded the licensee had adequately implemented a program for maintaining equipment history and records, However, the lack of documented repair time in equipment history records and the manual retrieval system were weaknesses."
NRC PARAGRAPH 3.1.3, Page 22, (WEAKNESS)

NYPA RESPONSE

The Authority has instituted controls to assure that work packages will not be accepted unless work time is documented within the package. The Authority is improving its computerization of maintenance work history records which should ease the retrieval of equipment histories.

WEAKNESS 14

"FAILURE TO NOTIFY HP OF SCHEDULED WORK":

However, there was one instance when HP had not received notification of scheduled work on volume control tank (VCT) outlet valve CH-LCV-112C and work was not started as scheduled. Specifically, mechanics were assigned to replace the sealtight conduit on CH-LCV-112C, but when they reported to HP to describe the assigned work task, HP said that valve CH-LCV-112C was not on the list of authorized work in the primary auxiliary building (PAB). Work was delayed until HP was able to survey the VCT room and authorize the work.
NRC PARAGRAPH 3.1.5, Pages 23 &24, (WEAKNESS)

NYPA RESPONSE

Periodic station meetings are conducted to discuss and plan maintenance activities at IP3 where Health Physics staff attendance is required. The Authority believes that communication channels are well established to disseminate any information required to assure ALARA on all applicable Maintenance work activities. Our review of the situation described has lead to our conclusion that this event was atypical.

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WEAKNESSES RESPONSE

WEAKNESS 15

"PROCEDURES OVERDUE FOR BIENNIAL REVIEW":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

To address this concern the Authority is implementing a centralized tracking center for all plant procedures. This tracking system is scheduled for implementation in the first quarter of 1990.

WEAKNESS 16

"TEMPORARY PROCEDURE CHANGE PRACTICES(E.G. CHANGES MORE COMPREHENSIVE THAN BASIC PROCEDURE)":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

The Authority agrees that in some instances TPCs have been more comprehensive than the basic procedures and should have been procedural revisions. The Authority is evaluating the TPC process to incorporate improvements necessary to address this concern.

WEAKNESS 17

"LACK OF ADMINISTRATIVE CONTROL FOR TRACKING TPCS":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

To address this concern the Authority is implementing a centralized tracking center for all plant TPCs. TPCs will be tracked and notifications made for TPC incorporation when required. This tracking system is scheduled for implementation in the first quarter of 1990.

WEAKNESS 18

"LACK OF DETAILS IN I&C PROCEDURES":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

The I&C Preventative Maintenance (PM) procedures are currently being revised. Standard industry guidelines are being utilized which will result in detailed procedures. This effort is scheduled for completion by February of 1990.

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WEAKNESSES RESPONSE

WEAKNESS 19

"DIFFERENT FORMATS BETWEEN I&C AND MAINT PROCEDURES":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

I&C and Maintenance Department procedures have been developed within the requirements of AP-3,"Procedure Preparation, Review, and Approval", and meet standard industry guidelines. The different formats allow the flexibility necessary for each department to respond to separate work environments.

WEAKNESS 20

"NON COMPLETION OF THE PROCEDURE UPGRADE PROGRAM":
NRC PARAGRAPH 3.1.6, Page 25 (WEAKNESS)

NYPA RESPONSE

The Authority has recognized the need for improvement in both I&C and Maintenance Department procedures. In accordance with previous NRC inspection findings and Authority commitments (SSOMI Inspection Report 50-286/87-15), a two year program to enhance procedures was begun. This program was scheduled for completion in February of 1990 (see Letter IPN-88-004, February 11, 1988, J.C. Brons to NRC, SSOMI Inspection 87-015) and is currently ahead of schedule.

WEAKNESS 21

"SIGN OFFS AND DATE DIFFERENCES BETWEEN MASTER AND WORKING COPIES OF PROCEDURES":

A potential problem existed with the licensee's use of field and official copies of maintenance procedures. The system is set up so that official maintenance procedures remain in the maintenance office and working of field copies are distributed to the mechanics and used in the field. The sign offs on the working copies for steps completed in the field are then transcribed to the official test procedure in the maintenance office to ensure a clean copy is maintained. It is the licensee's policy that this be done the same day that the work is performed; however, the inspectors identified examples of where this did not take place. In several cases discrepancies were noted whereby the dates when steps were signed off on an official copy of a procedure differed from the actual date when the work was performed. Also, QC witness points were found signed off on official copies of

procedures, but not the working copy. The team discussed with the licensee the possibility of personnel not transcribing dates and sign offs on the same day on which the work was performed and the potential, based on observed errors, for confusion with traceability of steps or events. The licensee indicated its intention to continue the policy of using official and field copies of maintenance procedures, but stated it would emphasize to maintenance personnel the need to make transcriptions the same day work is performed.
NRC PARAGRAPH 3.2.1, Pages 30&31, (WEAKNESS)

NYPA RESPONSE

AP-22, "Conduct of Maintenance", has been revised. The procedure currently requires craftsmen (and QC inspectors for hold points) to sign off completed steps when the step is performed. The intent of this requirement is to ensure that steps are not missed or performed out of sequence. For work in high radiation/contamination areas, confined spaces, or other areas adversely affected by environmental conditions (ie, high temperature or water) or work requirements (ie, welding helmets, respirators, fall protection and air-fed hoods), it may not be practical to sign off steps immediately. In these cases, sign-offs will be performed as soon as reasonably achievable. The use of an official copy and a field copy will continue. The official copy is maintained as a station record and should not be subject to conditions encountered in the field (contamination, dust, grease, oil, etc.). Data and sign-offs on the field copy are to be transcribed exactly into the official copy as soon as is practical. The step in the official copy will be dated with the date on which the work was performed.

WEAKNESS 22

"OPERATIONS/MAINTENANCE INTERFACE ON VALVE THROTTLED POSITION REQUIREMENTS":

The inspector observed the testing of two safety injection hot/cold leg injection stop valves, SI-MOV-856 series, by the MOVATS company. The testing was performed using 3-PM-GEN-8, Rev. 2, "Testing of Limitorque Motor Operated Valves Using MOVATS," following PM work performed under 3-PM-GEN-1, Rev. 6, "Limitorque MOV PM," and modifications made using steplists and 3-CM-GEN-24, Rev.2, "Limitorque MOV Disassembly/Reassembly." MOVATS and the maintenance personnel completed a design data form for each valve worked on. The inspector was informed that after a couple of high-head valves of the SI-MOV-856 series had been set, operations noted that these valves are to open to a throttled position-- not full open-- to prevent SI pump run out and equalize supply to all hot-leg headers. TPC 89-153-M was issued on

March 22, 1989, to correct and retest valves that had been set to fully open.NRC PARAGRAPH 3.2.1, Page 30, (WEAKNESS)

NYPA RESPONSE

The Authority believes that this event was a situation which resulted from an error made by the Maintenance planning staff. The correct settings for these valves were provided in the documentation available for review during the planning process. The retest for these valves would have identified the error had not the Operations Staff noted the valve settings as incorrect.

WEAKNESS 23

"INSTALLATION OF UNDOCUMENTED GAUGES":

During the observation of Procedure IC-PM-P-1190 (calibration check of pressure transmitter PT-1190), the inspector noted that the attached pressure gauge did not receive a calibration check. The gauge was not included in the procedure. Further investigation revealed that the gauges installed on PT-1190 and on Pressure Transmitter PT-1191 had been installed by the Operations Department and were the responsibility of operations. Licensee personnel informed the inspector that I&C, Operations, and Performance Departments have gauges installed in the plant. Each department is responsible for the calibration of their respective gauges. Flow Diagram, "Service Water System, Nuclear System Supply Plant," Drawing 9321-F-27223, Rev. 27 showed that the system was designated as a seismic Class I system. However, the installed gauges do not appear on the flow diagram.
During a plant tour of the auxiliary feed pump building, the inspector observed that gauge PI-1361 was inoperative. Further investigation revealed that the gauge was mounted to the gauge board with tie wraps and the copper instrument tubing run was supported with tie wraps. The inspector then noted that gauge PI-1450 (OPS-1001A) was supported by the approximately 20-inch run of 1/2 inch copper tubing that is attached to PI-1361 and PI-1450, both of which indicate steam generator (SG) N2 blanket header pressure. A review of Drawings 9321-F-22553-1, 9321-F-27233-17, and 9321-F-70123-9 indicated that only PI-1361 appears on the drawings and that the system is seismically mounted. Drawing 9321-F-70123-9 shows a tubing run from isolation valve SGN-37 to the position controller on nitrogen reducer, instead of PI-1450 attached to SGN-37.

QA wrote CAR No. 366 dated March 23, 1989. The CAR identified numerous devices that did not have plant procedures for calibration and 10 devices that were past due for calibration. The CAR addresses those Technical Specification (TS) tests that were surveilled by QA

since the start of the S/G replacement outage. Some TS tests may be invalid (as evidenced by the QA finding) and some seismic systems may have undocumented modifications installed because of the policy of I&C,Operations, and Performance Departments having individually installed gauges. This is an unresolved item pending licensee review of the need, use and control of these gauges; and, determination whether seismic or other requirements were compromised (50-286/89-80-03).
NRC PARAGRAPH 3.2.3, Pages 33&36, (REQUIRED RESPONSE)

NYPA RESPONSE

A walkdown has been completed of all plant gauges to determine acceptability, calibration status, and documentation. Those gauges found to be undocumented have been removed from the plant. Gauges found uncalibrated have been recalibrated. For those gauges found uncalibrated an evaluation was performed to address the acceptability of any testing performed using those gauges. The results of this evaluation were satisfactory. Gauges with mounting or support deficiencies have been identified and work requests issued for their repair.

WEAKNESS 24

"EXISTENCE OF OLD-STYLE PROCEDURES":
NRC PARAGRAPH 3.2.3, Page 36, (WEAKNESS)

NYPA RESPONSE

The Authority agreed to upgrade the I&C and Maintenance procedures in response to the SSOMI Inspection 50-286/87-15 of 1987. The schedule for this project was based on the time necessary to upgrade all procedures during the regular biennial review process. This two year period will be complete in February of 1990. Once a new procedure is developed reviewed, and approved it replaces its "old style" counterpart. This phased-in approach requires the maintenance of the "old style" procedures but is the most expeditious way of getting the new procedures into the field promptly as they are developed.

ATTACHMENT I
MAINTENANCE TEAM INSPECTION NO. 89-80
WEAKNESSES RESPONSE

WEAKNESS 25

"COMPUTER LISTING OF M&TE STATUS NOT UPDATED":

"The I&C, Performance, and Electrical maintenance departments showed a weakness in the area of updating the computer M&TE listings with the current status of their respective M&TE. The policy of removing M&TEs on or before calibration due date is a strength."
NRC PARAGRAPH 3.3.3, Page 39, (WEAKNESS)

NYPA RESPONSE

All M&TE lists (I&C, Maintenance, and Performance) have been updated. Program requirements have been reviewed and reemphasized to assure updated status is maintained.

WEAKNESS 26

"ANNOUNCED DRUG SCREENING":

NYPA RESPONSE

The NRC's final rulemaking on fitness-for-duty is expected to correct this situation when fully implemented in January of 1990.