

October 30, 2000

Mr. Michael J. Colomb  
Site Executive Officer  
New York Power Authority  
James A. FitzPatrick Nuclear Power Plant  
Post Office Box 41  
Lycoming, New York 13093

SUBJECT: NRC'S FITZPATRICK REPORT 05000333/2000-006

Dear Mr. Colomb:

On September 30, 2000, the NRC completed an inspection at the James A. FitzPatrick Nuclear Power Plant. The results of this inspection were discussed on October 12, 2000, with you and other members of your staff. The enclosed report presents the results of that inspection.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The NRC identified four findings that were evaluated under the risk significance determination process and were determined to be of very low safety significance (Green). These findings have been entered into your corrective action program and are discussed in the summary of findings and in the body of the attached inspection report. Furthermore, three of the four findings were determined to involve violations of NRC requirements, but because of their very low safety significance, the violations are non-cited.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room and will be available on the NRC Public Electronic Reading Room (PERR) link at the NRC home page, <http://www.nrc.gov/NRC/ADAMS/index.html>. Should you have any questions regarding this report, please contact me at 610-337-5211.

Sincerely,

**/RA/**

Glenn W. Meyer, Chief  
Projects Branch 3  
Division of Reactor Projects

Docket No. 05000333  
License No.: DPR-59

Enclosure: Inspection Report 05000333/2000-006

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G. Tasick, Licensing Manager  
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Supervisor, Town of Scriba  
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law  
P. Eddy, Electric Division, Department of Public Service, State of New York  
F. William Valentino, President, New York State Energy Research  
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 05000333

License No.: DPR-59

Report No.: 2000-006

Licensee: Power Authority of the State of New York,  
doing business as the New York Power Authority (NYPA)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Post Office Box 41  
Scriba, New York 13093

Dates: August 20, 2000 to September 30, 2000

Inspectors: R. A. Rasmussen, Senior Resident Inspector  
R. A. Skokowski, Resident Inspector  
T. A. Moslak, Health Physicist

Approved by: G. W. Meyer, Chief  
Projects Branch 3  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000333/2000-006, on 08/20-09/30/2000; New York Power Authority, James A. FitzPatrick Nuclear Power Plant; Surveillance Testing, Emergency Preparedness Drill Observations, Radiation Monitoring Equipment and other activities.

The report covers a six-week period of inspection by resident inspectors and an occupational radiation safety inspection by a regional specialist inspector. This inspection identified four green issues, three of which were noncited violations (NCVs). The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process (SDP) in Inspection Manual Chapter 0609 (see Attachment 1).

### **Mitigating Systems**

Green. During an unplanned reactor shutdown on August 27, 2000, NYPA was unable to complete the technical specification (TS) required calibration of certain intermediate range monitor (IRM) and average power range monitor (APRM) functions prior to changing plant operating modes. The cause of this event was poor planning for a rapid plant shutdown contingency; in that NYPA had not addressed an overly restrictive technical specification requirement that conflicted with a rapid plant shutdown. The failure to complete the calibration was evaluated using the SDP and determined to be Green (very low safety significance) because it did not result in a loss of a safety function. NYPA requested and was granted enforcement discretion prior to completing the shutdown. The failure to complete the TS-required calibration of the IRMs and APRMs prior to entering the startup mode is a non-cited violation of NRC requirements. (Section 1R22)

Green. NYPA reported in Licensee Event Report 50-333/00-009 that portions of the control circuits for the high pressure coolant injection (HPCI) and core spray (CS) systems minimum flow valves were not environmentally qualified as specified in 10 CFR 50.49. This issue was evaluated using the SDP and determined to be Green (very low safety significance) because the potential failures of the HPCI and CS systems due to the unqualified control circuits were only credible during certain high energy line break accident conditions, which have a low probability of occurring, and the consequences on system function were limited. The failure to environmentally qualify the HPCI and CS minimum flow valve control circuits is a non-cited violation of NRC requirements. (Section 4OA5.4)

### **Emergency Preparedness**

Green. Activities at the technical support center (TSC) during an observation of an emergency preparedness drill were not effective in monitoring plant conditions and providing recommendations and support to the control room. Further, the drill observers and participants did not identify this as a drill discrepancy. This issue was determined to be an inspection finding because if left uncorrected, an ineffective TSC could result in operators missing or complicating mitigating actions during an actual plant event. Using the SDP this finding was determined to be Green (very low safety significance) because it was not self identified during the drill. No violation of requirements was identified. (Section 1EP6)

### **Occupational Radiation Safety**

Green: NYPA failed to ensure that portable survey instruments in the radiation protection program were calibrated annually as required. NYPA used an instrument, whose calibration period had expired to perform neutron dose rate measurements for personnel entries into the drywell. The issue was screened using the Occupational Radiation Safety SDP and was determined to be Green (very low safety significance) because this finding did not result in exposure or reasonable potential for exposure in excess of regulatory limits, and did not compromise NYPA's ability to assess individual exposure. This failure to maintain portable survey instruments within the required calibration frequency was a non-cited violation of NRC requirements. (Section 2OS1)

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## Report Details

### **SUMMARY OF PLANT STATUS**

The plant began this inspection period operating at 94% power in the process of returning to full power following repairs to the B feedwater pump seal; full power was achieved on August 21, 2000. During this inspection period, the plant operated at essentially full power with the following four unplanned power reductions.

- On August 24 operators reduced power to 50% in response to a fire in the vicinity of the B feedwater pump. On August 26 operators raised power to 55% while repairs to the B feedwater pump were in progress.
- On August 27 operators commenced a controlled reactor shutdown in response to an oil leak on the electro-hydraulic control (EHC) system and a steam leak on a feedwater pump instrument line. After repairs were completed the operators commenced a reactor startup on August and achieved full power on September 3.
- On September 27 operators reduced power to approximately 15% and removed the turbine generator from service to repair another EHC oil leak. Following the repair, the turbine generator was returned to service and full power was achieved on September 30.
- On September 30 power was reduced to 43% following the loss of power to reactor water recirculation (RWR) pump A. Following repairs the operators returned RWR pump A to service and power was restored to 100% on October 2.

#### **1. REACTOR SAFETY**

##### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R04 Equipment Alignments

##### a. Inspection Scope

The inspectors performed the following partial system walkdowns:

- Reactor core isolation cooling (RCIC) while high pressure coolant injection (HPCI) was inoperable for planned maintenance.
- Emergency core cooling equipment and the associated power sources while Division A of the residual heat removal (RHR) system was inoperable for planned maintenance.

##### b. Issues and Findings

There were no findings identified.

#### 1R05 Fire Protection

##### a. Inspection Scope

The inspectors focused on fire protection equipment during tours of the emergency diesel generator (EDG) rooms and safety-related (emergency service water and RHR service water) pump rooms.



b. Issues and Findings

There were no findings identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed licensed operator performance in the simulator during a plant emergency preparedness drill, as part of requalification training.

b. Issues and Findings

There were no findings identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the implementation of the Maintenance Rule (MR) as related to the following:

- Two B reactor feedwater pump seal failures.
- Hydrogen leak on a current transformer.
- EHC system oil leak.
- Steam leak on an instrument line for reactor feedwater pump A.

b. Issues and Findings

There were no findings identified.

1R13 Maintenance Risk Assessment and Emergent Work

a. Inspection Scope

The inspectors reviewed the maintenance risk assessments associated with the following emergent work activities:

- Wire and splice replacement for the core spray (CS) and HPCI minimum valve differential pressure switches.
- Feedwater pump B seal failure and fire in the vicinity of the pump.
- Reactor shutdown to repair an oil leak in the EHC system and steam leak on a feedwater pump instrument line.
- Failure of a relay in the control circuit for the drywell equipment and floor drain sump isolation valves, while both divisions of the drywell continuous atmospheric monitoring system (CAMS) were inoperable.
- Turbine generator shutdown to repair an oil leak in the EHC system.

Additionally, the inspectors observed portions of the work activities associated with the wire and splice replacement for the CS and HPCI minimum valve differential pressure switches, and with the repair for the second EHC system leak.

b. Issues and Findings

There were no findings identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

a. Inspection Scope

The inspectors reviewed operators' performance during the following nonroutine events:

- August 27 plant shutdown to repair an EHC oil leak and a steam leak on a feedwater pump instrument line.
- August 30 plant startup with a positive temperature coefficient of reactivity for coolant temperatures less than 350°F.
- September 27 turbine shutdown to repair an EHC system oil leak.

b. Issues and Findings

There were no findings identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed operability determinations associated with the following plant equipment challenges:

- Increasing pilot valve leakage on safety relief valve (SRV) F.
- Identification of unqualified wires and splices in the control circuits for the CS and HPCI systems minimum flow valves.
- Identification of incorrect relay size used in the battery voltage drop analysis.
- Failure of the primary containment sump monitoring system while both divisions of the CAMS were inoperable.
- Identification of wall thinning on a main steam line drain pipe.

b. Issues and Findings

There were no findings identified.

#### 1R16 Operator Work-Arounds

##### a. Inspection Scope

The inspectors evaluated the current operator work-arounds with a focus on the cumulative effect of the work-arounds. This evaluation included a review of the last three completed surveillance test procedures, ST-99H, "Operator Work-Arounds Assessment," Revision 5, and discussion with NYPA outage management personnel regarding NYPA's plans to correct the existing work-arounds.

##### b. Issues and Findings

There were no findings identified.

#### 1R19 Post Maintenance Testing

##### a. Inspection Scope

The inspectors reviewed the post maintenance testing associated with the following:

- Replacement of an SRV.
- Troubleshooting and repairs to the drywell CAMS.

##### b. Issues and Findings

There were no findings identified.

#### 1R20 Refueling and Outage Activities

##### a. Inspection Scope

The inspectors reviewed a problem identified by NYPA's nuclear fuel vendor in which a small percentage (<5%) of the fuel rods in several recently delivered new fuel assemblies were not of the proper U-235 enrichment.

NYPA and the vendor determined that the impact of this small enrichment deviation on future fuel performance would have been minor and would not have resulted in fuel parameters outside of design limitations. Nonetheless, the discrepant fuel was replaced with fuel of the proper enrichment.

##### b. Issues and Findings

There were no findings identified.

## 1R22 Surveillance Testing

### a. Inspection Scope

The inspectors reviewed procedures and observed portions of testing related to the following surveillance tests:

- ST-24J, RCIC Flow Rate and Inservice Test (IST).
- ST-2HA, Low Pressure Coolant Injection System Logic Functional Test

The inspectors also evaluated the circumstances associated with NYPA's inability to complete the Technical Specification (TS) required calibration of certain intermediate range monitor (IRM) and average power range monitor (APRM) functions prior to changing plant operating modes during the August 27, 2000, unplanned reactor shutdown.

### b. Issues and Findings

During an unplanned reactor shutdown on August 27, 2000, NYPA was unable to complete the TS-required calibration of certain IRM and APRM functions prior to changing from the operating mode to the startup mode. The cause of this event was poor planning for a rapid plant shutdown contingency; in that NYPA had not addressed an overly restrictive technical specification requirement that conflicted with a rapid plant shutdown. The inability to complete the calibration was evaluated using the SDP and determined to be Green (very low safety significance) because it did not result in a loss of a safety function. NYPA requested and was granted enforcement discretion prior to entering the startup mode. There were no issues identified with the other tests reviewed.

Specifically, on August 27, 2000, NYPA commenced an unplanned reactor shutdown to repair an oil leak that developed on the EHC system and a steam leak that developed on a feedwater pump instrument line. Due to the degraded condition of the EHC system, NYPA wanted to shutdown the plant as quickly as possible; however, NYPA did not want to scram the plant because of the possible impact on the EHC system. (The rapid changes in EHC system flow caused by a plant scram could have caused the leak to get worse, and could have effected the ability of the turbine bypass valves to be used to control reactor pressure. Having the turbine bypass valves available allows the use of the main condenser as the normal heat sink.) As NYPA progressed through the shutdown procedure they determined that the performance of some TS-required calibrations would inappropriately delay the shutdown. Specifically, NYPA determined that they were not capable of completing the TS-required calibrations associated with the following reactor protection system (RPS) trip functions:

- IRM high flux.
- IRM inoperative.
- APRM neutron flux-startup.

NYPA was unable to complete the calibration of the IRM and APRM instruments for two reasons. First, the test equipment needed to complete the calibrations was off-site for

calibration. Additionally, the borrowed replacement test equipment had not been calibrated. Second, even if the equipment had been available, the calibrations would have added a minimum of six hours to the shutdown. Consequently, prior to changing plant operating modes, NYPA notified the NRC and requested enforcement discretion to enter the startup mode without completing the required calibrations. The NRC verbally granted the enforcement discretion on August 27, 2000, and NYPA completed the plant shutdown without incident. NYPA completed the calibration of the IRMs and APRMs on August 28, 2000, and the instruments were found to be within the allowable tolerances.

In review of this event, NYPA concluded that the cause of the event was an overly restrictive requirement in the technical specifications. The implications of this requirement had not been recognized by NYPA prior to the event necessitating this urgent shutdown. The inspectors noted several prior opportunities that NYPA had to identify this issue. These included:

- Operator training.
- Periodic procedure reviews.
- Detailed review of this specific technical specification in 1996.
- Revision to a technical specification interpretation in 1997 that was plant operations review committee (PORC) reviewed.

The inspectors concluded that the cause of the event was poor planning for a rapid plant shutdown contingency.

The failure to complete the required calibrations of the IRMs and APRMs is a violation of TS 3.0.D. This issue was evaluated using the SDP and determined to be Green (very low safety significance) because it did not result in a loss of a safety function. This violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65FR25368). The issue associated with this violation is in the NYPA corrective action system as DER 00-03926. **(NCV 05000333/2000-006-001)**

#### 1R23 Temporary Modifications

##### a. Inspection Scope

The inspectors reviewed documentation associated with temporary modification 00-057, which allowed operation of drywell equipment and floor drain sump isolation valves following the failure of a relay in the control circuit for these valves.

##### b. Issues and Findings

There were no findings identified.

## 1EP6 Emergency Preparedness Drill Observation

### a. Inspection Scope

The inspectors observed a site emergency plan training drill conducted on September 14, 2000. The inspectors observed the drill from the simulator control room and from the technical support center (TSC). This drill was chosen for observation due to recent retirements and an increased number of personnel filling new emergency response positions.

### b. Issues and Findings

Activities at the TSC during an observed emergency preparedness (EP) drill were not effective in monitoring plant conditions and providing recommendations and support to the control room. Further, the drill observers and participants did not identify this as a drill discrepancy. This issue was determined to be an inspection finding because if left uncorrected an ineffective TSC could result in operators missing or complicating mitigating actions during an actual plant event. Using the SDP this finding was determined to be Green because it was not self identified during the drill.

One of the key functions of the TSC is to monitor the plant conditions and actions being implemented by the control room staff to minimize the accident consequences, and to evaluate the effectiveness of the emergency actions. The requirements for the TSC were developed following the 1979 accident at Three Mile Island and are described in the FitzPatrick Emergency Plan. The TSC is staffed with plant engineers and has a detailed assortment of technical references to aide in this function.

The inspectors had the following observations regarding the performance of TSC personnel during the drill. During the drill the inspectors noted that engineers assigned to the TSC were not apprized of the details of the plant conditions and were not actively evaluating the situation. Some details of the plant conditions were available, but no effort was made by the responding engineers to develop critical questions or diagnose the problems. Some engineers brought reading materials and routine work to keep busy during the drill. Once specifically assigned, the inspectors did note several engineers performing technical research; however, this effort resulted from direct questions by the control room and was not proactive. Midway through the drill the inspector questioned the TSC director regarding the current and planned plant conditions regarding reactor level control and temperature control. The TSC director and his technical staff did not have an awareness of these details and had to call to the control room to get information.

During the drill critique the inspectors' concerns regarding the lack of technical awareness and support by the TSC to the operating crew were not identified. The inspectors acknowledged that drills are performed for training purposes and performance issues can occur, but the expectation is that performance issues will be identified by the licensee and entered into the corrective action program. This NRC identified issue was determined to be a Green finding (very low safety significance) using the SDP for EP, because it was not self identified during the drill but there were no actual consequences. However, this finding was not considered a violation of NRC

requirements. This issue has been entered into the NYPA corrective action system as DER 00-04259.

## 2. **RADIATION SAFETY** **Cornerstone: Occupational Radiation Safety**

### 2OS1 Radiation Monitoring Instrumentation

#### a. Inspection Scope

During the period September 11-15, 2000, the inspector conducted the following activities to evaluate the operability and accuracy of radiation monitoring instrumentation that is used for the protection of workers.

The inspector reviewed the associated procedures and observed the calibration of a spent fuel pool area radiation monitor, a personnel contamination monitor, and a portable ion chamber instrument (RSO-50).

The inspector observed technicians performing radioactive source and functional checks on a variety of instrumentation including a high range gamma survey meter (teletector), personnel contamination monitors (IPM 7/8 & RM-14), interim radwaste area radiation monitor, whole body counter, contamination survey instruments (MS 2&3, SAC-4), and a portable ion chamber (RSO-50E). The inspector also observed a technician obtaining the daily air sample from the A drywell air monitor.

The inspector reviewed the calibration records for selected electronic dosimeters (DMC-100), the whole body counting system, and a scintillation alpha counter (SAC-4).

Additionally, the inspector evaluated the adequacy of NYPA's respiratory protection program regarding the issuance of self-contained breathing apparatus (SCBA) to licensed operators. Training and qualification records for operators required to wear SCBAs in the event of an emergency were reviewed. SCBAs staged for use at various locations within restricted plant areas were physically checked, and the maintenance records of selected SCBAs were reviewed.

The inspector reviewed the following radiological incidents DERs relating to the monitoring of plant radiation levels to determine if the issue was identified in a timely manner and that appropriate corrective actions were taken to resolve the issue.

DER-00-0112, RCIC LCO delayed due to radiation protection instrument question.

DER-00-0379, Out of calibration electronic dosimeter.

DER-00-1447, High area radiation alarm.

DER-00-3899, AMS-3 calibration overdue.

DER-00-0836, Area radiation monitor calibration potentially exceeded.

DER-00-0286, Instruments found with expired calibration dates.

b. Issues and Findings

The inspector determined that NYPA failed to ensure that portable survey instruments in the radiation protection program were calibrated annually as required. NYPA used an instrument, whose calibration period had expired, to perform neutron dose rate measurements for personnel entries into the drywell. The issue was screened using the Occupational Radiation Safety SDP and was determined to be Green (very low safety significance) since this finding did not result in exposure or reasonable potential for exposure in excess of regulatory limits, and did not compromise NYPA's ability to assess individual exposure.

In reviewing calibration records for a portable neutron survey instrument (serial no. 169) and drywell radiation survey records, the inspector determined that NYPA had used an instrument, whose calibration period had expired on January 28, 2000, to perform neutron dose rate measurements to support personnel entries into the drywell on January 28, 2000, February 25, 2000, March 28, 2000, and April 2, 6, and 7, 2000. The inspector identified that the maintenance of the instrument was not in conformance with NYPA's neutron survey instrument calibration procedure, RP-INST-215, Revision 0, which requires such instruments be calibrated annually as described by ANSI-323-1978, to meet the requirements of 10 CFR 20.1501(b), which specifies periodic calibration of radiation monitoring instruments.

Upon notification, NYPA entered this finding into the corrective action system as DER-00-4232. Subsequently, in determining the extent of this condition, NYPA identified that there were other portable survey instruments available for use in emergency response kits that were not calibrated within the current annual period. Consequently, NYPA removed these instruments from service.

Based on discussions with NYPA, the inspector ascertained that the cause for not maintaining current annual calibration of the affected instruments was a misapplication of TS 4.0B to portable survey instruments. TS 4.0B permits extending the test interval of TS-related equipment by 25% of the stated test frequency in certain conditions. NYPA rationalized that such variance was also applicable to instrument calibration requirements, but failed to develop any technical justification or supporting basis demonstrating that the established calibration frequency could be extended without compromising the accuracy and effectiveness of the radiation measurements.

This issue affects the Occupational Radiation Safety Cornerstone. If left uncorrected, the matter could become a more significant concern since radiation measurements to assure radiological control effectiveness could be considered inaccurate or invalid if the instrumentation used was not maintained calibrated in accordance with established procedures.

The issue was screened using the Occupational Radiation Safety SDP and was considered to be Green (very low safety significance) since this finding did not result in exposure or reasonable potential for exposure in excess of regulatory limits, and did not compromise NYPA's ability to assess individual exposure. Further, none of the affected personnel received any unplanned exposure; the affected instrument was confirmed to be properly operating prior to use by successful functional and source checks; and all



personnel relying on the affected instrument were also provided with appropriate dosimetry devices. Additionally, the inspector confirmed that when the instrument was subsequently calibrated on May 10, 2000, the as-found condition was within an acceptable tolerance. Accordingly, there was no actual safety consequence or ineffectiveness in radiological controls associated with the instances in which this instrument was used beyond the specified calibration period.

Notwithstanding, the failure of NYPA to ensure that portable survey instruments in the radiation protection program were calibrated periodically as required by 10 CFR 20.1501, and in accordance with written calibration procedures (i.e., RP-INST-215) established as required by Technical Specification 6.8 (A) 2 and described in Appendix A of Regulatory Guide 1.33, November 1978, is considered a Non-Cited Violation (NCV) consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000 (65 FR 25368). The issue associated with this violation is in the NYPA corrective action system as DER 00-04232. **(NCV 05000333/2000-006-002)**

#### 4. OTHER ACTIVITIES

##### 4OA2 Performance Indicator Verification

###### a. Inspection Scope

The inspectors reviewed the data related to unplanned scrams and scrams with a loss of normal heat removal for the period November 22, 1999 through July 1, 2000.

###### b. Issues and Findings

There were no findings identified.

##### 4OA5 Other

- .1 (Closed) LER 50-333/00-004-02: RCIC System Inoperable for Greater than Seven Days and Inoperable During two Plant Start-up Evolutions. The technical and regulatory review of this issue were provided in NRC Inspection Report (IR) 05000333/2000-008. The additional information provided in the supplemental LER was reviewed and the LER was closed during an in-office review.
- .2 (Closed) LER 50-333/00-007: Failure to Satisfy Technical Specification Table 4.2-8 Torus Bulk Water Temperature Calibration Requirement Due to Procedure Inadequacy. This LER pertained to a minor finding and was closed during an in-office review.
- .3 (Closed) LER 50-333/00-008: Reactor Water Recirc Speed Control Mechanical Stops Set Higher Than Value Assumed in Core Operating Limits Report. The technical and regulatory review of this issue was provided in NRC IR 05000333/2000-01. This LER was reviewed and closed during an in-office review.

.4 (Closed) LER 50-333/00-009: HPCI and A&B Core Spray Systems Inoperable Due to Lack of Proper Environmental Qualification on the Minimum Flow Valve Control Circuits.

a. Inspection Scope

The inspectors performed an onsite review of the event documented in LER 50-333/00-009.

b. Issues and Findings

LER 50-333/00-009 reported that portions of the control circuits for the HPCI and CS systems minimum flow valves were not environmentally qualified (EQ) as specified in 10 CFR 50.49. This issue was evaluated using the SDP and determined to be Green (very low safety significance), because the failures to the HPCI and CS systems due to the unqualified control circuits were only credible during certain high energy line break (HELB) accident conditions, which have a low probability of occurring, and the consequences on system function were limited.

On August 23, 2000, as part of a review of an unrelated EQ issue that occurred at another facility, NYPA engineers identified that both divisions of the CS system and the HPCI system contained wires and splices of unknown environmental qualification. These wires and splices were installed in the control circuits for the minimum flow valves, and were installed during the initial construction of the plant. Upon identification NYPA declared the systems inoperable. The wires and splices were replaced with qualified materials, successfully tested, and the systems declared operable.

An NRC Senior Reactor Analyst (SRA) evaluated the issue using phase 3 of the SDP and determined that the risk due to the environmentally unqualified splices was dominated by HPCI and CS system failures associated with a HELB in the area where these systems are located. Using a bounding analysis with the necessary assumptions so that the failure of the minimum flow valves would cause the worst case impact on the HPCI and CS systems, the SRA determined that it was unlikely that a failure in the valve motor operator control circuit would result in a system failure. Furthermore, it is also conservative to assume that a HELB rupture would cause a control system failure.

In addition, the frequency of HELBs that affect the emergency core cooling pump area for which the pipe break isolation system fails is very small, approximately  $4.0E-09$  per reactor year. Therefore, this pipe rupture frequency will have very little contribution to either the initiating event frequencies or to mitigating system failure probabilities. This calculation used the Idaho National Engineering Laboratory component failure data base, EGG-SSRE-8875, dated February 1990, and FitzPatrick plant isometric pipe drawings.

Based on the above assessment, the risk associated with this issue was determined to be Green (very low safety significance). Nonetheless, the failure to environmentally qualify the wires and splices for the HPCI and CS minimum flow valve control circuits is a violation of 10 CFR 50.49, "Environmental qualification of electric equipment important to safety for nuclear power plants." This violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued on May 1, 2000

(65FR25368). The issue associated with this violation is in the NYPA corrective action system as DER 00-03202. **(NCV 05000333/2000-006-003)**

- .5 (Closed) LER 50-333/00-010: Departure From Technical Specifications to Facilitate Controlled Shutdown Under Notice of Enforcement Discretion (NOED). The technical and regulatory review of this issue was provided in Section 1R22 of this report. This LER was reviewed and closed during an onsite review.

#### 4OA6 Meetings

##### Exit Meeting Summary

On October 12, 2000, the inspectors presented the inspection results to Mr. Colomb and other members of NYPA's management, who acknowledged the findings presented and did not contest any of the inspectors' conclusions. Additionally, the inspectors confirmed that none of the information reviewed by the inspectors was considered proprietary.

During the exit, four findings of very low safety significance were discussed, of which three of the four findings were determined to be non-cited violations (NCVs). Should NYPA elect to contest these NCVs, a written response within 30 days of the date of this Inspection Report, with the basis for the denial, should be sent to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, and the NRC Resident Inspector at the FitzPatrick facility.

## PARTIAL LIST OF PERSONS CONTACTED

### Licensee

M. Anderson, Supervisor, Health Physics Instrumentation/Respiratory Protection  
 M. Colomb, Site Executive Officer  
 R. Devercelly, Operations Training Manager  
 J. Flaherty, Quality Assurance Manager  
 D. Kieper, General Manager Maintenance  
 D. Lindsey, Plant Manager  
 R. Locy, Nuclear Training Manager  
 W. O'Malley, General Manager Operations  
 K. Pushee, Radiological Protection Supervisor  
 P. Reynolds, Radiation Protection, Chief Technician P. Russell , Operations Manager  
 D. Ruddy, Manager Design Engineering  
 G. Tasick, Licensing Manager  
 G. Thomas, Director Design Engineering  
 A. Zaremba, General Manager Support Services

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Opened and Closed

NCV 05000333/2000-006-001: Failure to complete TS-required calibration of IRMs and APRMs prior to changing operating modes.

NCV 05000333/2000-006-002: Failure to maintain radiation survey instruments calibrated in accordance with 10 CFR 20.1501.

NCV 05000333/200-006-003: Failure to environmentally qualify the minimum flow valve control circuits for the core Spray and High Pressure coolant injection systems.

### Closed

LER 50-333/00-004-02: RCIC System Inoperable for Greater than Seven Days and Inoperable During two Plant Start-up Evolutions.

LER 50-333/00-007: Failure to Satisfy Technical Specification Table 4.2-8 Torus Bulk Water Temperature Calibration Requirement Due to Procedure Inadequacy.

LER 50-333/00-008: Reactor Water Recirc Speed Control Mechanical Stops Set Higher Than Value Assumed in Core Operating Limits Report.

LER 50-333/00-009: HPCI and A&B Core Spray Systems Inoperable Due to Lack of Proper Environmental Qualification on the Minimum Flow Valve Control Circuits.

LER 50-333/00-010: Departure From Technical Specifications to Facilitate Controlled Shutdown Under Notice of Enforcement Discretion (NOED).

### LIST OF ACRONYMS USED

ANSI	American National Standards Institute
APRM	Average Power Range Monitors
CAMS	Continuous Atmospheric Monitoring system
CFR	Code of Federal Regulations
CS	Core Spray
DER	Deficiency and Event Report
EDG	Emergency Diesel Generator
EHC	Electro-hydraulic Control
EP	Emergency Preparedness
EQ	Environmental Qualifications
ESW	Emergency Service Water
FSAR	Final Safety Analysis Report
HELB	High Energy Line Break
HPCI	High Pressure Coolant Injection
IR	Inspection Report
IRM	Intermediated Range Monitors
IST	Inservice Test
LER	Licensee Event Report
MR	Maintenance Rule
NCV	Non-Cited Violation
NOED	Notice Of Enforcement Discretion
NRC	Nuclear Regulatory Commission
NYPA	New York Power Authority
PI	Performance Indicator
PIM	Plant Issues Matrix
PORC	Plant Operations Review Committee
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RPS	Reactor Protection System
RWR	Reactor Water Recirculation
SCBA	Self-contained Breathing Apparatus
SDP	Significance Determination Process
SRA	Senior Reactor Analyst
SRV	Safety Relief Valve
TS	Technical Specification
TSC	Technical Support Center

## APPENDIX 1

# NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

### Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

### Radiation Safety

- Occupational
- Public

### Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margins.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margins and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margins but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.