December 29, 1999

EA 99-325
EA 99-318

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 INTEGRATED INSPECTION REPORT 05000333/99009; WHITE FINDING

Dear Mr. Colomb:

On November 29, 1999, the NRC completed an inspection at the James A. FitzPatrick Nuclear Power Plant. The results of this inspection were discussed on December 14, 1999, with Mr. Lindsey 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 report discusses three issues of very low risk significance as well as one of a low to moderate risk significance. The issues of very low safety significance 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. These issues, (1) the failure to identify conditions adverse to quality associated with the high pressure coolant injection (HPCI) system, (2) the failure to perform a 50.59 analysis for long-term operations with the reactor water level control system in single element control mode vice three element control mode as specified in the final safety analysis report, and (3) inadequate test control associated with the post maintenance testing of the HPCI system, were determined to involve violations of NRC requirements, but because of the low safety significance the violations were not cited.

The issue of a low to moderate risk significance involving HPCI system test inadequacies appears to be an apparent violation of NRC requirements. As described in Section 1R03.2 of this report, your surveillance testing for the HPCI system was inadequate for monitoring HPCI governor control system performance due to the failure to incorporate some important vendor recommendations. This failure allowed HPCI governor control system degradation to go unnoticed until an actual failure of the HPCI system occurred during the October 14, 1999, plant scram. This issue was assessed using the applicable SDP and was preliminarily determined to be White, i.e., an issue with some increased importance to safety, which may require additional NRC

inspection. The issue has a low to moderate risk significance because HPCI is an important mitigating system during a loss of offsite power event, and it is likely that the system would not have been able to perform the intended function during a period greater than 30 days. Although we believe that we have sufficient information to make our final significance determination for the HPCI system issue, we are giving you the opportunity to send us your position on the finding=s significance and the bases for your position in writing. Also, please inform us if you would like to schedule a regulatory conference to discuss your evaluation and any differences with the NRC evaluation. Accordingly, no enforcement is presently being issued for this inspection finding. Please contact John Rogge at 610-337-5146 within 10 days of the date of this letter to inform the NRC of your intentions. If we have not heard from you in writing or regarding a conference within 14 days, we will continue with our significance determination and enforcement decision, and you will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.790 of the NRC=s ARules of Practice,@ a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Sincerely,

Original Signed by:

A. Randolph Blough, Director
Division of Reactor Projects

Docket No. 05000333

Enclosure: Inspection Report 05000333/99009

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	05000333
License No.:	DPR-59
Report No.:	99009
Licensee:	New York Power Authority
Facility:	James A. FitzPatrick Nuclear Power Plant
Location:	Post Office Box 41 Scriba, New York 13093
Dates:	October 18 to November 29, 1999
Inspectors:	R. A. Rasmussen, Senior Resident Inspector R. A. Skokowski, Resident Inspector F. J. Arner, Reactor Engineer J. E. Carrasco, Reactor Inspector P. R. Frechette, Physical Security Inspector E. H. Gray, Senior Reactor Inspector G. W. Morris, Reactor Inspector T. A. Moslak, Radiation Specialist G. C Smith, Senior Physical Security Inspector
Approved by:	J. F. Rogge, Chief Projects Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

James A. FitzPatrick Nuclear Power Plant
NRC Inspection Report 05000333/99009

The report covered a six-week period of resident inspection, and the results of announced inspections by regional engineering, physical security and radiation safety inspectors.

The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in draft Inspection Manual Chapter 0609 (see Attachment 1).

Initiating Systems

- Green. The reactor water level control system has been operated in single element control mode, vice three element control mode as specified in the final safety analysis report, since approximately 1984. An evaluation as required by 10 CFR 50.59, Changes, Tests, and Experiments, was not performed for this change in the operation of the facility. The failure to perform the evaluation was determined to have very low risk significance because the reactor level control system is a reactor trip transient initiator that does not impact barrier or mitigation equipment. The failure to perform a safety evaluation is a violation of NRC requirements. This issue was determined to be a non cited violation. (Section 1R04)

Mitigating Systems

- White. The surveillance testing of the high pressure coolant injection (HPCI) system was inadequate for monitoring HPCI governor control system performance due to the licencee=s failure to incorporate vendor recommendations. The inadequate test controls for monitoring HPCI governor control system performance allowed system degradation to go unnoticed until an actual failure of the HPCI system occurred during the October 14, 1999, plant scram. This issue was determined to have low to moderate risk significance because HPCI is an important mitigating system during a loss of offsite power event, and it is likely that the system would not have been able to perform the intended function during a period greater than 30 days. The failure to have adequate test controls for determining HPCI operability is an apparent violation of NRC requirements. (Section 1R03.2)

- Green. Three examples were identified where NYPA failed to identify conditions adverse to quality. Specifically, (1) during the post transient evaluation of the August 3, 1998, plant scram, NYPA failed to identify that the HPCI system experienced an overpressure condition; (2) NYPA failed to identify repeated failures of the HPCI electronic speed limiter setpoint to meet the as-found calibration acceptance criteria; and (3) during their 10 CFR 50.54 Final Safety Analysis Report (FSAR) validation review, NYPA failed to identify that the FSAR description of the HPCI injection valve operations was incorrect. The failure to identify these issues was determined to have very low risk significance because there was no impact on HPCI system operability. Nonetheless, the failure to identify conditions

adverse to quality is a violation of NRC requirements. These issues were three examples of a non cited violation. (Section 1R03.2)

! Green. The post maintenance test requirements for the high pressure coolant injection (HPCI) system troubleshooting and maintenance were inadequate. Following the completion of the post maintenance test (PMT) on October 26, 1999, operations declared HPCI operable. Approximately 20 hours later, system engineering completed an evaluation of additional system parameters, which were not required by the PMT, and identified that problems with the control system existed. The licensee declared HPCI inoperable from the time of the PMT completion. Therefore, the inadequate PMT resulted in an approximately 20-hour delay in determining that HPCI was inoperable. The inadequate post maintenance test was determined to have very low risk significance using the phase 1 SDP (Green) because HPCI inoperability remained within the technical specification allowable outage time. The failure to develop an adequate written test procedure is a violation of NRC requirements. This issue was determined to be a non cited violation. (Section 1R19)

Report Details

SUMMARY OF PLANT STATUS

The inspection period began with the unit in cold shutdown following the October 14, 1999, reactor scram, which was due to a faulty wire in a main generator protective circuit. Following repairs to the generator protection circuit and to the high pressure coolant injection (HPCI) system, which failed to operate properly during the scram, operators restarted the plant on October 23. Full power was achieved on October 29. On October 30, an unplanned power reduction to approximately 60% was conducted to plug condenser tubes. The plant was returned to full power on November 1; however, on November 4, a second unplanned power reduction to approximately 60% for plugging additional condenser tubes occurred. On November 5, during the return to full power, the plant scrammed, due to high water level in the moisture separator/reheater (MSR) caused by an instrument line failure. Following the scram the plant was maintained in a hot shutdown condition. During the shutdown period, the New York Power Authority (NYPA) repaired the MSR and feedwater heater level control systems, and injected noble metals as a corrosion inhibitor for the reactor coolant system. The plant was returned to operations on November 10, however, later that day, a problem occurred with the electrohydraulic (EHC) system causing the startup to be aborted and the plant was returned to hot shutdown. Following repair to the EHC system the plant was returned to operations on November 11, and achieved full power on November 14. The unit remained essentially at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R03 Emergent Work

.1 Containment Isolation Valve Test Failures

a. Inspection Scope

The inspectors reviewed emergent work completed as a result of the reactor building closed loop cooling (RBCLC) system containment isolation valve local leak-rate test (LLRT) and inservice test (IST) failures.

b. Observations and Findings

There were no findings identified and documented during these inspections.

.2 High Pressure Coolant Injection System Overspeed Trip

a. Inspection Scope

Following the reactor scram on October 14, 1999, the HPCI turbine tripped on overspeed. The inspectors reviewed the licensee=s actions in response to this event.

b. Observations and Findings

Overview

The inspectors identified an apparent violation of test control requirements regarding inadequate surveillance test for monitoring HPCI governor control system performance due to the failure to incorporate vendor recommendations. This failure allowed system degradation to go unnoticed prior to the actual failure of the HPCI system occurred during the October 14, 1999, plant scram. In addition, the inspectors identified three examples of a non cited violation of the corrective action requirements associated with NYPA=s failure to identify conditions adverse to quality.

Background

On October 14, 1999, FitzPatrick scrammed due to a turbine trip caused by a failure in the generator protection circuit. During the ensuing transient, the HPCI system received a signal to start due to low-low reactor water level. However, due to swell and feedwater injection, water level was restored prior to HPCI injecting. The HPCI turbine tripped during the transient. Initially, NYPA concluded that the HPCI turbine tripped, as designed, on high reactor vessel water level. Approximately five days later they determined that the HPCI system had experienced an overpressure condition during the time it was running, and that the HPCI turbine had tripped on mechanical overspeed before the high reactor vessel water level occurred.

NYPA evaluated the impact of the overpressure condition on the components within the HPCI system, and determined that the condition did not affect the operability of the system. The inspectors reviewed this evaluation and considered it to be reasonable.

NYPA=s initial troubleshooting efforts concluded that the overspeed condition was caused by contaminates found in oil located within the remote servo portion of the speed control system. The servo was replaced and the remaining portions of the oil system were inspected and sampled with no additional problems identified. Post maintenance testing (PMT) of HPCI was completed during the plant startup.

During the plant startup, a test at a reactor pressure of approximately 150 pounds per square inch (psi) was completed satisfactorily and all indications showed that the problem had been repaired. The HPCI test at 1000 psi, indicated that the system adequately met the technical specification (TS) requirements. However, after review of other data not evaluated as part of the PMT, NYPA determined that the speed control system was not functioning properly. As a result, the HPCI system was declared inoperable as of the time of the PMT completion.

NYPA installed additional system instrumentation and performed additional testing. These tests, although not conclusive, identified several components that could be a potential cause of the overspeed problem. These components were replaced and the system tuned and calibrated. Finally, the HPCI system was retested and met all the TS requirements

and indications were that the speed control problem was corrected. The system was declared operable on November 2, 1999. Based on the number of components replaced, and the various calibrations and system tuning completed by the licensee, no definite root cause would be determined.

Licensee Performance

While inspecting the circumstances associated with the HPCI failure, the inspectors identified several licensee performance issues. The most noteworthy issues are described below.

Based on a review of industry information, the inspectors identified that NYPA failed to incorporate guidance from the December 8, 1989, General Electric (GE) Service Information Letter (SIL) 336, Revision 1, ASurveillance Testing Recommendations for HPCI and RCIC Systems,@ into their testing program. Specifically, the SIL provided recommendations regarding monitoring of governor control system performance for determining HPCI system operability. As documented in NYPA=s Operating Experience Review Report associated with SIL 336 Revision 1, they concluded the recommendations should be incorporated into their HPCI system performance monitoring program. However, they never incorporated the recommendations. Furthermore, the inspectors considered the failure to incorporate the vendor recommendations as the reason for not identifying the HPCI governor control system degradation prior to the actual system failure that occurred during the October 14 scram.

In addition to the issue described above, the following licensee performance issues although not directly related to the cause of the event, were identified during review of the event.

1. During NYPA=s post transient evaluation of the August 3, 1998, scram, they failed to identify that the HPCI system piping and attached instrumentation were subjected to pressures in excess of the design pressure. This was not identified until NYPA=s evaluation of the October 14, 1999, scram. (DER 99-2249)

2. The as-found setpoint for the electronic speed limiter within the HPCI governor control circuit had regularly failed to meet the calibration acceptance criteria since 1984. This condition was not addressed by NYPA=s corrective action program until after the October 1999 scram. (DER 99-2409)

3. During NYPA=s review of the Final Safety Analysis Report (FSAR) in response to the Nuclear Regulatory Commission=s (NRC=s) 10 CFR 50.54f validation request, they failed to identify that the FSAR description for the operation of the HPCI injection isolation valve (23MOV [motor-operated valve]-19) was incorrect. Specifically, the FSAR Section 7.4.3.2.5 describes that, 23 MOV-19 will remain open upon receipt of a turbine trip signal until closed by operator action in the control room. Contrary to this statement, 23MOV-19 will close without operator action upon a turbine trip. (DER 99-2520)

Significance Determination

The inspectors reviewed the licencee=s performance issues through the significance determination process (SDP). With respect to NYPA=s failure to incorporate the vendor recommendations for monitoring the HPCI governor control system performance, this was considered a barrier that should have identified the HPCI system failure prior to the actual failure on October 14, 1999. The risk associated with this issue was reviewed by the resident inspectors and the NRC Senior Reactor Analysts. Using the phase 2 SDP the inspectors determined that the risk significance of this issue would result in a potentially yellow finding. Subsequently, a more detailed phase 3 evaluation was performed using information from the licensee=s PRA model. The result of this evaluation is a detailed probabilistic risk assessment (PRA). In general, this issue was considered to have some increased risk to safety (White) because, HPCI is an important mitigating system during a loss of offsite power event, and it is likely that the system would not have been able to perform the intended function during a period greater than 30 days. Specifically, the results of the detailed PRA were based on HPCI not being able to perform the intended safety function for one-half the time since the last successfully completed surveillance test of HPCI, which was completed on July 10, 1999. This would result in an increase in core damage frequency (CDF) of 2.64E-06 per reactor year. Therefore, the failure to incorporate the vendor recommendations resulted in a low to moderate risk significant issue.

With respect to the other licensee=s performance issues, these issues were considered to have very low risk significance using the SDP phase 1 evaluation (Green) because, there was no impact to the operability of the system.

Requirements

10 CFR 50 Appendix B, Criterion XI, ATest Control,@ requires, in part, a test program be established to assure all testing required to demonstrate that a system will perform satisfactorily in service is identified and performed in accordance with written procedures. Contrary to the above, NYPA failed to assure all testing required to demonstrate that HPCI would perform in service when they failed to incorporate the vendor recommendations for monitoring HPCI system governor performance as part of their testing requirements for determining system operability. The failure to have an adequate surveillance test for determining HPCI system operability is an apparent violation of 10 CFR 50 Appendix B, Criterion XI, ATest Control.@ **(AV 50-333/99-09-01, EA-325)**.

NYPA failed to identify the following:

- Overpressure condition of the HPCI system experienced following the August 3, 1998, scram.

- Repeated failures of the HPCI electronic speed limiter setpoint to meet the as-found calibration acceptance criteria,

- Incorrect FSAR description of the HPCI injection valve operation.

The failure to identify these conditions is a violation of 10 CFR 50 Appendix B, Criterion XVI, ACorrective Action,@ which requires, in part, that conditions adverse to quality be promptly identified. This violation is considered a non cited violation, consistent with the Interim Enforcement Policy for pilot plants. The issues associated with this violation are in the licensee=s corrective action program as listed above. **(NCV 50-333/99-09-02)**.

1R04 Equipment Alignments

a. Inspection Scope

Following the reactor scram on October 14, 1999, the inspector reviewed various equipment alignments related to the event. One item reviewed was the status of the reactor water level control system, and the longstanding practice of operation in single element water level control.

The inspectors also performed a partial system walkdown of the reactor core isolation cooling (RCIC) system while HPCI was unavailable for maintenance activities.

b. Observations and Findings

The inspectors identified a non cited violation for not performing an analysis for long -term operation of the facility with the reactor vessel water level control system in single element control mode.

The reactor feedwater control system at FitzPatrick has historically been operated in single element control, vice three element control. In single element control the system reacts only to changes in sensed reactor water level. In addition to sensing changes in reactor water level, three element control also compares steam flow to feedwater flow, which provides an anticipatory function allowing better response to dynamic conditions.

The FSAR, Section 7.10, describes the operation of the feedwater control system and states that three element control is the normal mode of operation. However, FitzPatrick has operated in the optional single element mode for approximately 15 years. NYPA was concerned that a greater number of system failures was likely because three element control is more complex than single element control. Therefore, the potential for reactor water level control system related transients was greater in three element control. However, no engineering analysis was performed to evaluate this departure from the FSAR.

The operation of the reactor feedwater control system affects the initiating events cornerstone as a transient initiator contributor. However, because the reactor level control system is a potential reactor trip transient initiator that does not impact barrier or mitigation equipment, this issue screens out of the significance determination process in phase one as an issue with very low risk significance (Green).

The FitzPatrick FSAR, Section 7.10.3.4.1, Normal Automatic Operation, states that three element control is the normal mode of operation for the reactor water level control system. 10 CFR 50.59, Changes, Tests, and Experiments, allows licensees to make changes to the facility as described in the safety analysis report, unless the change represents an unreviewed safety question, and a written safety evaluation which provides the bases for the determination that the change does not represent an unreviewed safety question has been performed. Contrary to the above, in approximately 1984, FitzPatrick changed the normal operating mode of the reactor water level control system from three element control to single element control without a written safety evaluation providing the bases for the determination that the change does not represent an unreviewed safety question. This violation is considered a non cited violation, consistent with the Interim Enforcement Policy for pilot plants. This violation is in the licensee=s corrective action program as Deviation Event Report (DER) 99-02650. **(NCV 50-333/99-09-03, EA 99-318)**.

1R05 Fire Protection

a. Inspection Scope

The inspectors focused on fire protection equipment during tours of the reactor building.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R09 Inservice Testing

a. Inspection Scope

The inspectors reviewed inservice testing associated with HPCI turbine, pumps and valves, and containment isolation valves in the RBCLC system.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R12 Maintenance Rule (MR) Implementation

a. Inspection Scope

The inspectors reviewed the licensee=s implementation of 10 CFR 50.65 regarding the Maintenance Rule as related to the following:

- Maintenance rule scoping with respect to the failure of the main generator anti-motoring circuit that resulted in a reactor scram.

- Maintenance rule scoping with respect to the MSR level control system that resulted in a reactor scram.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R14 Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors assessed operators= performance following the November 5 reactor scram, and their performance in response to the spurious closure of a bypass valve during the subsequent plant startup.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R15 Operability Evaluations

a. Inspection Scope

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

- Operability of low pressure emergency core cooling systems (ECCS) due to actual system response to a high energy line break (HELB) different from that described in the FSAR.

- Operability of HPCI and automatic depressurization system (ADS) due to inadequate cable separation.

- Operability of containment isolation due to a LLRT failure of a RBCLC air-operated valve.

- Operability of HPCI due to the operation of the injection valve logic not in accordance with the FSAR description.

- Operability of the HPCI system following exposure to pressures in excess of design pressure.

- Operability of HPCI following indications of degraded speed control capability.

- Operability of the control room bridge and doors to withstanding a tornado due to discrepancies identified within the design calculations.

- **!** Operability of the standby gas treatment filters due to exposure to paint fumes.

- **!** Operability of the control rod system, due to excessive rod withdrawal speed.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspector reviewed an operator work around related to the reactor building ventilation system. During a reactor building system isolation, a brief positive pressure occurs in the reactor building. This positive pressure required operators to enter emergency operating procedure (EOP)-5, Secondary Containment Control. The operators considered the routine entry into EOP-5 an unnecessary workaround. As part of this operator work around inspection, the inspector reviewed a technical evaluation of the reactor building pressure response, the EOP-5 basis, and the system design basis as described in the final safety analysis report.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed portions of nine permanent plant modifications from the initiator, mitigating systems and barrier cornerstones as listed below.

Mitigation Systems:

F1-97-031	ECCS Strainer (residual heat removal (RHR) and Core Spray) - Effect on pumps
D1-99-047*	Motor replacement - drywell tank room exhaust fan
D1-99-118*	Motor replacement - radwaste, east pipe tunnel air handling unit (AHU)
JD-99-085	RHR pressure release

Barrier Integrity:

M1-98-127**	Add fusing for primary containment protection.
M1-98-150**	Add fusing - Electrical Penetration Protection
M1-97-111	Noble Metals Addition to the reactor coolant system

M1-97-030 Cycle 14 Reload Core.

Initiators:

F1-91-270 Reactor Building Crane Upgrade

Note: * or ** indicates related modifications

The plant modifications reviewed were installed in 1998 or 1999 and were selected for their risk significance and represented engineering input from various specialities. These modifications included equivalency evaluations, minor modifications and major modifications. The inspectors directed their review to selected portions of the design, implementation, post-modification testing and closeout documentation. The inspectors held discussions with the responsible design engineers and others familiar with the modifications. Observations of the modification and conditions were made where the location of the modification was accessible.

NYPA=s identification and resolution of problems related to the program for, and implementation of, permanent plant modifications were also examined.

b. Observations and Findings

There were no findings identified and documented during these inspections.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspector reviewed and observed portions of the testing performed following troubleshooting and repair activities for the HPCI system.

b. Observations and Findings

The inspectors identified a non cited violation due to inadequate PMT of the HPCI system. The inadequate PMT resulted in an approximately 20-hour delay in determining that HPCI was inoperable.

HPCI initiated during a reactor scram on October 14, 1999, and subsequently tripped on overspeed. The licensee investigation into the HPCI system malfunction determined that a degraded control system remote servo was a probable cause of the condition. To correct the condition, the remote servo was replaced and control system components were calibrated. The retest of the HPCI system was conducted during the subsequent plant restart because steam is required for testing. During plant startups, HPCI is tested twice, once at 150 psi of plant steam pressure, and once at full plant pressure.

The retest document, Work Request 99-09540-01, specified that Surveillance Test Procedure ST-4N, AHPCI Quick-Start, Flow Rate and Inservice Test (IST)@ be performed to satisfy the post maintenance requirements. The surveillance test only monitored system parameters on control room instrumentation, and did not require data collection in enough detail to identify performance similar to that which was noted following the reactor scram. To identify the proper operation of the HPCI throttle system, data with increased resolution was required to be captured on the plant computer.

Following the completion of the PMT on October 26, 1999, operations declared HPCI operable. Approximately 20 hours later, the system engineering completed an evaluation of additional system parameters, which were not required by the PMT and identified that problems with the control system existed. The licensee declared HPCI inoperable from the time of PMT completion. Therefore, the inadequate PMT resulted in an approximately 20-hour delay in determining that HPCI was inoperable.

The inadequate post maintenance test was determined to have very low risk significance using the phase 1 SDP (Green) because HPCI inoperability remained within the technical specification allowable outage time. The failure to develop an adequate written test procedure is a violation of 10 CFR 50, Appendix B, Criterion XI, Test Control, which requires, in part, that testing be identified and performed in accordance with written test instructions. This violation is considered a non cited violation, consistent with the Interim Enforcement Policy for pilot plants. This violation is in the licensee=s corrective action program as Deviation Event Report (DER) 99-2326. **(NCV 50-333/99-09-04)**.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed HPCI testing, RBCLC containment isolation valve testing.

b. Observations and Findings

There were no findings identified and documented during these inspections.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2OS2 ALARA Planning and Controls

1. Inspection Scope

ALARA performance was reviewed for radiologically significant activities performed during 1999 and the SDP was used to evaluate the collective exposure data. Included in this review were the noble metal injection project, reactor water cleanup pump seal replacements, condenser tube cleaning, reactor building crane trolley replacement, and cleanup/repair activities for a radwaste system piping failure.

b. Observations and Findings

For 1999, the collective exposure for activities performed during the operating cycle and forced outages was 59.434 person-rem (through November 12, 1999). During this year, rework, emergent work resulting from equipment failures, and decontamination activities has challenged the licensee in achieving the year-end exposure goal of accumulating less than 65 person-rem.

There were no findings identified and documented during these inspections.

2OS4 Radiation Worker Performance

1. Inspection Scope

Plant tours were conducted and jobs-in-progress were observed to evaluate the effectiveness of worker practices in keeping exposures as low as reasonably achievable (ALARA). Activities observed included the hand rotation of decay heat removal pumps, preparations for seal replacement of the waste neutralizer tank desludging pump, and cleanup of a spill that resulted during flushing of a concentrated waste transfer pump.

2. Observations and Findings

There were no findings identified and documented during these inspections.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP3 Response to Contingency Events

a. Inspection Scope

The inspectors reviewed the licensee=s current contingency response strategy, procedures, training and target set analysis. The protected area perimeter intrusion detection and alarm assessment systems were evaluated for vulnerabilities. Three table top exercises with security supervisors and response team members were observed and four response team members demonstrated tactical firing at the onsite firing range with handguns and contingency weapons. Drill critiques for prior contingency response drills were also reviewed.

b. Observations and Findings

There were no findings identified and documented during these inspections.

3R02 Change to License Conditions (Physical Protection)

a. Inspection Scope

The inspectors conducted an in-office review of Revision 19 of the licensee=s Security Plan and Revision 5 of the licensee=s Security Contingency Plan, which were submitted to the NRC by licensee letter dated April 7, 1999. The revisions were submitted in accordance with 10 CFR 50.54(p) and the review was to verify that the changes did not decrease the effectiveness of the plans.

b. Observations and Findings

There were no findings identified and documented during these inspections.

4. OTHER ACTIVITIES [OA]

4OA1 Identification and Resolution of Problems

Findings regrading the identification and resolutions of problems were identified and described in Section 1R03.2 of this report.

4OA2 Performance Indicator Verification

.1 Unplanned Scrams and Scrams with a Loss of Normal Heat Removal

a. Inspection Scope

The inspector reviewed the performance indicators for Unplanned Scrams per 7,000 Critical Hours, and Scrams with a Loss of Normal Heat Removal. The inspector reviewed records of reactor trips for the period of January 1, 1997, through November 23, 1999.

b. Observations and Findings

There were no findings identified and documented during this inspection.

.2 Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment

a. Inspection Scope

The inspectors reviewed the licensee=s programs for gathering and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment Performance Indicators. The review included the licensee=s tracking and trending reports, and security event reports for the Performance Indicator data submitted from the 2nd quarter of 1997 through the 3rd quarter of 1999.

b. Observations and Findings

There were no findings identified and documented during these inspections.

4OA3 Event Followup

.1 (Closed) URI 50-333/99006-04: Errors in performance indicator (PI) data for Unplanned Power Changes per 7000 Critical Hours. This error was determined to be a minor violation and is not subject to enforcement action. At the time of the initial performance indicator submittal, the unplanned transient performance indicator was white. This error, if properly reported, would not have resulted in a change of indicator status. NYPA reported a correction to the data in the June data submittal.

.2 (Closed) URI 50-333/99006-06: Errors in PI data for Occupational Exposure Control Effectiveness. This error was determined to be a minor violation and is not subject to enforcement action. At the time of the initial performance indicator submittal, the occupational exposure control effectiveness performance indicator was green. This error, if properly reported, would not have resulted in a change of indicator status. NYPA reported a correction to the data in the July data submittal.

4OA4 Other

.1 (Closed) LER 50-333/99-010: Main Turbine Trip and Reactor Scram Due to Degraded Cable in Main Generator Anti-Motoring Circuit. This Licensee Event Report (LER) pertained to a minor issue and was closed during an onsite review. The HPCI issues are discussed in this inspection report.

4OA5 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Lindsey and other members of licensee management on December 14, 1999. The licensee acknowledged the findings presented.

During the exit, three issues of very low risk significance were discussed that are considered as 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 their 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, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the FitzPatrick facility.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Bregg, Instrumentation and Control Manager
R. Brown, ALARA Supervisor
P. Brozenich, Operations Manager
M. Colomb, Site Executive Officer
R. Converse, Tactical Assessment Coordinator
J. Flaherty, Quality Assurance Manager
B. Gorman, Environmental Supervisor, J. A. FitzPatrick Environmental Laboratory
J. Haley, Security Supervisor
W. Hamblin, Chemistry Supervisor
K. Hobbs, General Manager Health Physics
A. Jarvis, General Supervisor, Chemistry
D. Kieper, General Manager Maintenance
D. Lindsey, Plant Manager
G. MacCannon, Security Coordinator.
A. McKeen, Radiological and Environmental Services Manager
E. Mulcahey, General Supervisor, Radiological Engineering
W. O=Malley, General Manager Operations
T. Phelps, Radiological Supervisor, Shipping & Decon
K. Pushee, Radiological Protection Supervisor
D. Ruddy, Director Design Engineering
G. Tasick, Licensing Manager
T. Teifke, Security Manager
A. Zaremba, General Manager Support Services

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

AV 50-333/99-09-01, EA-325: Inadequate test control associated with the monitoring HPCI governor control performance.

Opened and Closed

NCV 50-333/99-09-02: The failure to identify conditions adverse to quality associated with the HPCI system.

NCV 50-333/99-09-03, EA-318: Failure to complete a 50.59 analysis for long -term operation of the facility with the reactor vessel water level control system in single element control mode.

NCV 50-333/99-09-04: Inadequate test control associated with post maintenance testing of the HPCI system.

Closed

URI 50-333/99006-04: Errors in performance indicator data for Unplanned Power Changes per 7000 Critical Hours.

URI 50-333/99006-06: Errors in PI data for Occupational Exposure Control Effectiveness.

LER 50-333/99-010: Main Turbine Trip and Reactor Scram Due to Degraded Cable in Main Generator Anti-Motoring Circuit.

LIST OF ACRONYMS USED

ADS	Automatic Depressurization System
ALARA	As Low As Reasonably Achievable
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
DER	Deficiency and Event Report
ECCS	Emergency Core Cooling Systems
EEI	Escalated Enforcement Item
EHC	Electrohydraulic Control
EOP	Emergency Operating Procedure
FSAR	Updated Final Safety Analysis Report
GE	General Electric
HELB	High Energy Line Break
HPCI	High Pressure Coolant Injection
IST	Inservice Test
LER	Licensee Event Report
LLRT	Local Leak-rate Test
MOV	Motor-Operated Valve
MSR	Moisture Separator/Reheater
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
NYPA	New York Power Authority
PI	Performance Indicator
PMT	Post Maintenance Testing
psi	pounds per square inch
RBCLC	Reactor Building Closed Loop Cooling
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SDP	Significance Determination Process
SIL	Service Information Letter
TS	Technical Specification

ATTACHMENT 1

NRC=s REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) 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 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	Radiation Safety	Safeguards
! Initiating Events	! Occupational	! Physical Protection
! Mitigating Systems	! Public	
! Barrier Integrity		
! Emergency Preparedness		

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 with low to moderate safety significance, which may require additional NRC inspections. YELLOW findings are more serious issues with substantial safety significance and would require the NRC to take additional actions. RED findings represent issues with high safety significance with an unacceptable loss of safety margin and would result in the NRC taking significant actions that could include ordering the plant shut down.

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 incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. The color for an indicator corresponds to levels of performance that may result in increased NRC oversight (WHITE), performance that results in definitive, required action by the NRC (YELLOW), and performance that is unacceptable but still provides adequate protection to public health and safety (RED). GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections.

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. As a licensee=s safety performance degrades, the NRC will take more and increasingly significant action, as described in the matrix. 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.

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