

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

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Licensee: New York Power Authority

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Post Office Box 41
Scriba, New York 13093

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EXECUTIVE SUMMARY

James A. FitzPatrick Nuclear Power Plant NRC Inspection Report 50-333/98-06

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covered a six week period of resident inspection and the results of an announced occupational exposure control inspection by a region based specialist.

Operations

Testing and control room operations were conducted appropriately with formal communications. Material deficiencies were appropriately dispositioned and operability determinations were adequately performed as issues were identified. (Section O1.1)

Corrective actions taken in response to violation 50-333/97-03-01, for the inadvertent withdrawal of a control rod, were reasonable and appeared effective. Operators observed during reactivity manipulations were formal and the peer check provided a positive reinforcement. (Section O8.4)

Maintenance

Licensee event reports 50-333/97006-00 and 50-333/97009-00 adequately described the events, the significance, and the corrective actions taken for two examples of exceeding periodic test requirements required by technical specifications. The failure to perform technical specification required testing is a violation of NRC requirements. However, these licensee identified and corrected violations are being treated as a non-cited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. (NCV 50-333/98-06-01) (Section M8.4)

Engineering

The NRC reviewed an operability determination for pressurization occurring in the "B" residual heat removal system header, and concluded that the basis for determining the leakage past a containment isolation valve (10MOV25B) was not sound. Key assumptions used in a leak rate calculation were not considered. Further testing by NYPA proved the valve leakage was acceptable and the system was operable. The development of an action plan to address this recurring problem long term was a positive initiative. (Section E8.1)

Plant Support

The radiological protection program was effectively implemented. Radiological controls were effectively incorporated into the work planning process to minimize personnel exposure. Measures implemented included use of remote cameras in high radiation areas, use of ALARA waiting areas, and inter-departmental coordination to reduce exposures. The radiation protection staff conscientiously ensured that radiation work permits (RWP)

Executive Summary (cont'd)

requirements were met. Through close QA and management oversight, work performance standards were effectively reinforced. (Sections R1.1 - R8.4)

During a practice emergency preparedness exercise, the inspectors noted good management and control of the emergency facilities, good communications, and a thorough post exercise critique. (Section P1.1)

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Report Details

Summary of Plant Status

The unit began the inspection period at 100 percent reactor power. On August 27, 1998, reactor power was reduced to 70 percent due to problems with a feedwater heater level controller. On August 29, 1998, reactor power was returned to 100 percent. With the exception of manipulations for rod pattern adjustments, the reactor remained at full power throughout the remainder of the period.

I. Operations

01 Conduct of Operations

01.1 Control Room Observations

a. Inspection Scope (71707)

During the period, the inspectors observed evolutions and testing performed in the control room. Additionally, the inspectors observed the control room resolution of equipment deficiencies as such items were identified.

b. Observations and Findings

Evolutions and testing were conducted formally and in accordance with approved procedures. The use of headsets by personnel directing tests and evolutions allowed good communications with the field without distracting operators. Operators interviewed were aware of evolutions in progress and the possible impacts on plant operations. Operators were also knowledgeable of the status and effects of off normal control room alarms and indications.

Equipment deficiencies were appropriately dispositioned by the crews. Deficiencies were evaluated for operability with appropriate input from engineering. Deficiencies were logged as limiting conditions for operation (LCOs), or potential limiting conditions for operation (PLCOs), as appropriate.

c. Conclusions

Testing and control room operations were conducted appropriately with formal communications. Material deficiencies were appropriately dispositioned and operability determinations were adequately performed as issues were identified.

08 Miscellaneous Operations Issues

08.1 (Closed) Violation 50-333/96-05-01, Failure to Maintain Equipment Status Control

Personnel errors in the licensee's protective tagging record release program contributed to valve positions not being in accordance with the system checkoff list for two safety related systems; and, an inadequate procedure contributed to

incorrect equipment status for the control room refrigeration water chiller system following restoration from maintenance. Corrective actions included procedure changes to incorporate an independent verifier whose responsibilities include providing a second check of the release position annotated on protective tag records. In addition, clarifications were made to the operating procedure for placing the control room chiller in a standby line-up. The inspectors verified procedure changes were in place and concluded that the licensee's corrective actions had been appropriate.

08.2 (Closed) Licensee Event Report 50-333/98001-00, Invalid Isolations of Reactor Building Ventilation and Associated Actions

On January 28, 1998, a spurious invalid isolation signal of the reactor building B side below refuel floor ventilation exhaust radiation monitor occurred. This resulted in an engineered safety features (ESF) actuation with isolation of the reactor building ventilation, B side primary containment atmospheric sampling system, and start of the B standby gas treatment (SGT) system. The B radiation monitor was removed from service for troubleshooting, and the B SGT system was secured. At the time, the A SGT system was removed from service for planned maintenance. This resulted in a configuration where the remaining operable B SGT system would not have received an automatic start function, because the only operable radiation monitor system (A side) was not designed to start the B SGT system. The event was reviewed in NRC inspection report 50-333/97-10, dated March 12, 1998, and violation 50-333/97-10-01 was issued. Based on in-office review, this licensee event report (LER) provided no new information. This LER is closed.

08.3 (Closed) Licensee Event Report 50-333/97011-00, Invalid ESF Actuation and Failure to Perform T.S. Required Actions While Performing Trouble Shooting Activities

On October 24, 1997, during a DC ground troubleshooting repair of the B high pressure coolant injection (HPCI) logic circuit, an invalid ESF actuation occurred due to a technician inadvertently causing a short across two terminals. In addition, operators failed to recognize that the troubleshooting activities disabled the primary containment isolation system function of the outboard HPCI steam lines. During the same period, while carrying out the actions of an abnormal operating procedure, operators missed a procedure step which resulted in an unanticipated realignment of the HPCI suction valves. This event was reviewed in NRC inspection report 50-333/97-08 dated January 20, 1998, and violations 50-333/97-08-01 and 02 were issued. Based on in-office review, this LER provided no new information. This LER is closed.

08.4 (Closed) Violation 50-333/97-03-01, Inadvertent Control Rod Withdrawal Event

a. Inspection Scope (71707)

NRC inspection report 50-333/97-03, dated April 14, 1997, documented an event involving the inadvertent withdrawal of a control rod. The inspector reviewed the licensee's corrective actions and subsequent performance history.

b. Observations and Findings

The inadvertent control rod withdrawal occurred as an on shift reactor operator was demonstrating control rod coupling checks to a reactor operator under instruction. The operator intended to perform the check on a fully withdrawn control rod, but inadvertently selected a rod at notch 22. The control rod was pulled two notches, to notch 26, prior to identification. The rod was restored and a detailed analysis was performed to assure that no core damage occurred.

The licensee conducted a detailed root cause analysis. At the center of this issue was human performance and the formality of the control of the evolution. Key corrective actions taken by NYPA management included: 1. Temporally suspending reactivity manipulations for training purposes; 2. Revised the administrative procedures regarding the responsibilities and authorization required for reactivity control manipulation; 3. Instated a peer check policy; and, 4. Conducted training sessions on lessons learned, and instituted further reenforcement through periodic staff briefings.

The inspector observed portions of a reactor startup on August 20, 1998, and several rod pattern adjustments throughout the period. The inspector concluded that operators were formal during the reactivity manipulations and peer checking provided positive reinforcement. The inspector reviewed agendas from several previous operations department staff meetings, and noted the discussion of human performance issues.

c. Conclusions

Corrective actions taken in response to violation 50-333/97-03-01, for the inadvertent withdrawal of a control rod, were reasonable and appeared effective. Operators observed during reactivity manipulations were formal and the implementation of a peer check policy provided a positive reinforcement.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments on Maintenance Activities (62707)

The inspectors observed all or portions of the following work activities:

98-03461-00, Install Additional Fuses for Electrical Penetration Protection
 96-04682-00, Replacement of Control Circuit Relay in EDG-C
 MP 88.02, Reactor Building Crane Periodic Inspection
 MP 101.37, Lubrication of Reactor Building Cranes
 98-03562-03, Troubleshoot/repair 6th Point Heater Level Control Valve
 95-02411-06, Installation of New Spent Fuel Rack

The inspectors observed that the work performed to the above work requests and procedures was conducted satisfactorily.

M1.2 General Comments on Surveillance Activities (61726)

The inspectors observed all or portions of the following surveillance activities:

TST-84-25B, Residual Heat Removal System Leakage Testing
 TOP-287, Residual Heat Removal System Pressurization Testing
 ISP-66-4, Scram Discharge Instrument Volume Water Level Transformer Calibration
 ST-24J, Reactor Core Isolation Cooling Flow Rate and Inservice Test

The licensee conducted the above surveillance activities appropriately and in accordance with procedural and administrative requirements. As applicable, good coordination and communication with the control room were observed during performance of the surveillance.

M8 Miscellaneous Maintenance Issues (92702)

M8.1 (Closed) Licensee Event Report 50-333/96010-00, Plant Shutdown Due to Human Error Inadvertently Connecting Two Terminals While Calibrating Protective Relay

On September 16, 1996, the plant was operating at 100% power, the uninterruptable power supply (UPS) motor generator (MG) set was removed for maintenance, and protective relay calibration in progress. A screwdriver, which a technician was using, slipped and inadvertently connected two terminals of a 24KV iso-phase bus ground fault protective relay. The short circuit simulated relay closure and caused the main unit output transformer load side circuit breakers to open, which resulted in a generator load reject from 100 percent power. The short circuit also inhibited (by design) the fast transfer of station loads to the reserve power sources. The subsequent residual transfer resulted in a loss of circulating water flow and subsequent loss of condenser vacuum. Condenser pressurization resulted in actuation of rupture discs on a low pressure turbine hood and one of the feed pump turbine exhaust manifolds. The event was reviewed in NRC inspection report 50-333/96-06, dated September 28, 1996. Unresolved items 50-333/96-06-02 and 50-333/96-06-04, regarding the condenser rupture disc and the traversing incore probe containment isolation valve response, were reviewed and closed in inspection reports 50-333/98-02 and 50-333/97-11 respectively. The corrective actions for the human performance issues were reviewed in inspection report 50-333/98-04 and violation 50-333/96-06-01 was closed. Based on in-office review, this LER provided no new information. This LER is closed.

M8.2 (Closed) Licensee Event Report 50-333/98004-00, Manual Scram Due to Rod Position Information System Power Supply Failure Resulting in Multiple Control Rod "Drift" Alarms

The events associated with LER 50-333/98004-00, which documented an equipment failure which resulted in a manual reactor scram, were reviewed and

documented in NRC inspection report 50-333/98-02, dated July 2, 1998, and violation 50-333/98-02-01 was issued. Based on in-office review, this LER provided no new information. This LER is Closed.

M8.3 (Closed) Licensee Event Report 50-333/97005-01, Manual Reactor Scram Due to Failure of the Number 3 Turbine Control Valve

The events related to LER 50-333/97005-01 were reviewed and documented in NRC inspection report 50-333/97-05, dated July 22, 1997. The revision to the LER was submitted to provide follow-up to corrective actions outlined in the first submittal. Based on in-office review, this LER provided no new information and no violations were identified. This LER is closed.

M8.4 (Closed) Licensee Event Report 50-333/97006-00, Instrumentation Isolation Trip Surveillance Test Not Performed at Required Frequency, and Licensee Event Report 50-333/97009-00, Exceeded Quarterly Frequency for Radwaste Building Exhaust Radiation Monitor

a. Inspection Scope (92700)

The inspector reviewed LER 50-333/97006-00, Instrumentation Isolation Trip Surveillance Test Not Performed at Required Frequency, and LER 50-333/97009-00, Exceeded Quarterly Frequency for Radwaste Building Exhaust Radiation Monitor. Additionally, the inspector conducted onsite interviews of licensee personnel regarding the scope of corrective actions.

b. Observations and Findings

These LERs identified two cases of the licensee exceeding periodic test frequencies required by technical specifications. In both cases, there was no safety significance and the equipment was confirmed operable upon testing. These errors were caused by personnel errors and poor test tracking. The inspector concluded that the corrective actions stated in the LER's were reasonable and effective. Although the LERs were similar, the inspector verified the licensee conclusion that the corrective actions for LER 50-333/97006-00, would not have prevented the condition reported in LER 50-333/97009-00.

c. Conclusions

Licensee Event Report's 50-333/97006-00, and 50-333/97009-00, adequately described the events, the significance, and the corrective actions taken for two examples of exceeding periodic test frequencies required by technical specifications. The failure to perform technical specification required testing is a violation of NRC requirements. However, these licensee identified and corrected violations are being treated as a non-cited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. (NCV 50-333/98-06-01)

M8.5 (Closed) Violation 50-333/97-07-01, Technical Information in Procedure Incorrectly Translated

a. Inspection Scope

NRC inspection report 50-333/97-07, dated November 17, 1997, identified a violation of NRC requirements involving the improper planning and conduct of maintenance. In this case, a work procedure was written and performed which resulted in installing the incorrect oil in the residual heat removal (RHR) keep fill pump. The inspector reviewed the violation response and verified implementation of corrective actions.

b. Observations and Findings

The most significant cause of this violation was the method of using a pre-written text file as a shell for developing pump work plans. The file listed an oil to be used, which was not the correct oil for all applications. The corrective actions removed the preprinted oil information and flagged the blanks to be filled in on a case by case basis.

Other corrective actions included counseling of personnel involved, and briefing personnel performing similar procedure preparation tasks.

c. Conclusions

The inspector concluded that the corrective actions taken in response to violation 50-333/97-07-01, for installing the incorrect oil in the residual heat removal (RHR) keep fill pump, adequately addressed the causes of the problem.

III. Engineering

E1 Conduct of Engineering

E1.1 Residual Heat Removal Header Pressurization

a. Inspection Scope (37551)

The inspector reviewed the history and operability determinations associated with the pressurization of the "B" RHR system injection header.

b. Observations and Findings

The pressurization of the RHR injection headers was a recurring problem at JAF. RHR, a low pressure system, has connections to several higher pressure systems through a series of check and isolation valves. The pressurization occurred due to boundary valve leakage from adjoining systems into the injection header.

The RHR header is normally maintained at approximately 70 psi by a dedicated keep fill system. However, periodically operators have seen pressure increases and taken action to vent the header prior to the header relief valve set point of 300 psi. This header pressurization has been an intermittent problem documented as far back as 1991.

In response to header pressurization in August, an operability determination was performed on August 25, 1998. The determination concluded that the system was operable based on two parameters: header pressure not affecting the ability of the system to inject water, and leakage from the containment isolation valve not exceeding valve leak rate criteria.

Although the operability determination assessed the correct considerations, the NRC concluded that the basis for determining the leakage past the containment isolation valve (10MOV25B), was not sound. The operability determination assumed the containment leakage criteria would be met provided the rate of pressurization was less than 40 psi/hr. The determination was based on a calculation performed as a result of testing done for similar leakage on the "A" RHR header. However, when applying the calculation to the "B" RHR header, there were assumptions that were not considered, that made the basis invalid. Examples included the assumed out-leakage rates of the headers, and the relative volume of the headers.

NYPA concurred with the NRC assessment and performed testing on the "B" RHR header to validate the leakage. The testing proved the valve leakage was acceptable and the system was operable. An action plan was developed to detail further testing and long term corrective actions.

c. Conclusions

The NRC reviewed an operability determination for pressurization occurring in the "B" residual heat removal system header, and concluded that the basis for determining the leakage past a containment isolation valve (10MOV25B) was not sound. Key assumptions used in a leak rate calculation were not considered. Further testing by NYPA proved the valve leakage was acceptable and the system was operable. The development of an action plan to address this recurring problem long term was a positive initiative.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Implementation of the Radiation Protection Program

a. Inspection Scope (83750)

The Radiation Work Permit (RWP) program and As Low As Reasonably Achievable (ALARA) program were reviewed to determine the adequacy of worker knowledge

regarding radiological conditions and the measures taken to minimize exposure during routine operations.

b. Observation and Findings

Radiation Work Permit (RWP) program

Records, surveys, pre-job briefing notes, and supporting ALARA planning information were complete and current for the RWP packages reviewed.

Pre-job briefings for various ongoing tasks were found to be formalized and detailed. There were good discussions between journeyman RP technicians and laborers regarding work scope, contamination controls, and minimizing dose. Drawings and sketches were effectively used to assure clear understanding of radiological conditions.

Dose intensive tasks were appropriately planned with other site departments to minimize dose. For example, the pipe leak repair on the turbine bypass valves (RWP 98-0035) was effectively coordinated with Operations. The hydrogen injection rate to the primary system was reduced to lower work area dose rates prior to beginning the task on September 1, 1998.

A technician was observed performing a confirmatory survey (RWP 98-0407) to verify that contamination/radiation levels were unchanged following the erection of scaffolding in the control rod drive pump cage. The technician actively sought out potentially contaminated regions and conscientiously surveyed components. Smears were properly evaluated. Data was appropriately recorded.

ALARA Program

Measures to limit dose to ALARA have contributed to declining trends in personnel exposures. Cumulative personnel exposure over the past three years averaged 258 person-rem and the collective exposure for 1997 was the lowest in plant history, 89.6 person-rem. For 1998, through the end of July, the personnel occupational radiation exposure (41.5 person-rem) was slightly above the projected goal (40 person-rem). The licensee attributed this to emergent work involving repairs to the reactor water cleanup pump coupling and condenser tube cleaning.

The ALARA program was closely monitored and fully supported by station management. The top 10 daily dose intensive tasks and the ten individuals receiving the highest dose over the previous work day were reviewed at the morning management meetings.

Routine work in radiologically controlled areas (RCAs) was planned with projected dose expenditures. Worker debriefings followed job completion and captured lessons-learned to further reduce dose in future tasks. Remote cameras in high radiation areas were frequently used in the work planning process to expedite task

completion and minimize dose. Low dose waiting areas and higher dose "Do Not Linger" areas were clearly marked and conscientiously used by the workforce.

Advanced planning to maintain doses ALARA was evident in preparing for the Emergency Core Cooling System (ECCS) strainer/torus modification to be installed during the October 1998 refueling outage. Decontamination, shielding, ventilation, and flushing plans were being finalized to minimize worker dose when making this plant modification.

c. Conclusions

Radiological controls were effectively incorporated into the work planning process to minimize personnel exposure. Measures implemented included use of remote cameras in high radiation areas, use of as low as reasonably achievable (ALARA) waiting areas, and inter-departmental coordination to reduce exposures. Management closely monitored daily activities to assess the effectiveness in reducing personnel exposure.

R2 Status of RP&C Facilities and Equipment

a. Inspection Scope (83726)

At various times, the inspector accompanied the Radiation Protection Manager and various radiation protection (RP) technicians, and independently toured areas of the Turbine Building, Reactor Building, Radwaste Building, and Main Administrative Building. The inspector observed radiological practices, housekeeping, and access controls.

b. Observations and Findings

Housekeeping in all plant areas was generally good. Materials were neatly staged and step-off pads were clean and orderly. Illumination in both the east and west crescent rooms was less than optimal with some lights in need of relamping. Prompt action was taken by the licensee's staff to correct this matter.

In all areas, radiological boundaries were clearly marked and doors/barriers to locked high radiation areas were securely locked.

A member of the licensee's offsite staff was observed entering into the RCA in the Main Administration Building without obtaining the required RWP Check-In Brief. The individual was quickly identified and summoned by a vigilant RP Chief technician for counseling. A Deviation/Event Report (DER-98-02128) was immediately initiated to track such personnel errors. The Radiological and Environmental Services (RES) Department was found to be sensitive to such inattention-to-detail as a result of previous occurrences over the past year. Broad based corrective actions had been taken previously to improve worker practices including the installation of turnstiles, assignment of technicians to monitor control points, and development of a posting/signs protocol. The RWP access controls program effectively challenged individuals who infrequently enter the RCAs.

Issuance of portable survey instruments was found to be tightly controlled to ensure that instruments were properly operating and currently calibrated prior to use. All instruments examined were currently calibrated and in good material condition. Sealed radioactive sources used for instrument calibration were found to be properly inventoried, with leakage wipe tests performed within the required six month frequency.

c. Conclusions

Overall plant housekeeping was generally good. The radiation protection plan was being conscientiously implemented with radiologically controlled areas properly surveyed and clearly marked. The radiation protection staff conscientiously ensured that RWP requirements were met.

R5 Staff Training and Qualification in RP&C

a. Inspection Scope (83750)

The education, experience, qualifications, and training of selected members of the Radiological and Environmental Services (RES) Department were reviewed to determine if established qualification standards were met. The method of qualifying contractor radiation protection technicians was also reviewed.

b. Observations and Findings

The education, experience, qualifications, and training of three Chief Journeymen Radiation Protection Technicians were reviewed and were found to meet the licensee's established standards for classroom training, task performance evaluation, and Joint Apprenticeship Committee approval.

Similarly, the qualifications of the recently appointed General Supervisor Health Physics were reviewed and found to exceed the minimum education and experience requirements of ANSI/ANS 3.1-1981 for the assigned position.

To work onsite, contracted radiation protection technicians must be qualified under the New York State Radiation Protection Technician Qualification Card Program and have an onsite sponsor to vouch for the individual's abilities.

c. Conclusion

Selected individuals were found to be properly qualified for their assigned positions. A formalized qualification program was established to assure that site and contracted radiation protection technicians have the skills necessary to carry out their responsibilities.

R7 Quality Assurance in RP&C Activitiesa. Inspection Scope (83750)

A sample of audits, surveillance reports, self-assessments, and various management internal appraisals were reviewed to determine the adequacy of identifying and correcting deficiencies related to the implementation of the radiation protection program.

b. Observations and Findings

Quality Assurance (QA) Audit A97-20J, Radiation Protection Program, was found to be a thorough evaluation of the Radiation Work Permit and Dosimetry Programs. The audit included an in-depth assessment of the routine radiation worker practices and personnel access controls to the RCA. DERs initiated as a result of audit findings were addressed and closed in a timely manner.

A sample of 1998 QA routine surveillance reports were in-depth evaluations addressing specific aspects of the radiation protection program, including worker performance in conducting surveys, dosimeter processing, and radwaste cask inspection/documentation. Surveillances were normally conducted monthly.

The current RES Department self-assessment was a comprehensive performance evaluation based on findings contained in NRC inspection reports, formalized management internal appraisals (e.g., Coach of the Day and Coach of the Week reports), third party inspections, QA audits/surveillances, and DERs. The self-assessment identified areas for additional management attention. Prompt corrective action was taken in response to findings. For example, comprehensive measures were taken to improve the control of slightly contaminated tools. Actions taken included identification of all tool containers within the RCAs, surveying stored tools, and development of a strategy for reducing the number of locations and improving the consolidation of contaminated tools.

The management internal appraisal program provided a structured approach for site managers to monitor work-in-progress. Daily reports were provided to senior management and adverse findings were discussed at the daily management planning meetings. Through review of a sample of daily reports, it was evident that significant time and attention was directed by management to the proper implementation of radiological controls.

c. Conclusions

Through close Quality Assurance (QA) and management oversight, work performance standards were effectively reinforced. Internal self-assessments were comprehensive and identified areas for improvement; prompt and comprehensive actions were taken to correct deficiencies.

R8 Miscellaneous RP&C Issues

- R8.1 (Closed) Inspector Follow Item 50-333/98-02-08, Shielding of Alternate Decay Heat Removal System

Technical issues regarding the installation of permanent shielding on components of the Alternate Decay Heat Removal System were being addressed through the licensee's Action/Commitment tracking system (ACT-98-34218). Pending completion of the engineering evaluation, temporary shielding packages, TSP Nos. 96-043 and 96-045, were developed as contingency measures to reduce dose rates on the system's filter housing and heat exchangers, respectively. This item is closed.

- R8.2 (Closed) Inspector Follow Item 50-333/98-02-09, Evaluate the Effects of the Difference Between Calibration Source Energy and the Plant Energy Spectra on Portable Survey Instruments

A Radiological Technical Information Document (RTID-98-009) was developed to evaluate the effects on portable instrument response by using cesium-137 calibration sources to reflect the plant's average energy spectra. From this evaluation, no changes to procedures or work practices were required due to the small, conservative, over response of the survey instruments to a higher plant gamma ray energy. This item is closed.

- R8.3 (Closed) Inspector Follow Item 50-333/98-02-10, Evaluate the Effects of Non-gamma emitting radionuclides on Internal Exposure Estimates

The licensee was evaluating the effects that non-gamma emitting radionuclides and poorly resolved gamma emitters have on bioassay measurements and was developing strategies to address this issue. Such radionuclides represented a small fraction of the derived air concentration fraction and did not significantly contribute to internal exposure. These actions were being formally tracked through completion by licensee's Action/Commitment Tracking system (ACT-98-34220). This item is closed.

- R8.4 (Closed) Violation 50-333/98-02-11, Improperly Classified Radioactive Material Shipment

The actions described in the Reply to the Notice of Violation, dated August 3, 1998, were verified to be completed. A thorough root cause analysis was performed to establish the underlying causes for improperly classifying a radioactive material shipment as "Limited Quantity" when the contact dose rate on the container exceeded the criteria for such a classification. Comprehensive corrective actions (ACT-98-33009), including procedural changes, independent verifications, and improved worker practices, were developed to preclude a recurrence. This item is closed.

P1 Conduct of Emergency Preparedness Activities**P1.1 Practice Emergency Preparedness Drill****a. Inspection Scope (71750)**

On September 16, 1998, the FitzPatrick staff conducted a partial participation emergency preparedness exercise. The inspectors observed portions of the exercise from various emergency response facilities to assess the adequacy of the licensee's emergency response program.

b. Observations and Findings

The exercise included participation by the County of Oswego. With the exception of an initial telephone notification to the Emergency Operations Center, there was no participation by the NRC. The drill was conducted during the day shift and progressed to a General Emergency Action Level per FitzPatrick's Emergency Preparedness Plan. The inspectors observed portions of the drill from the simulator, operations support center, technical support center, and emergency offsite facility. Facilities were appropriately staffed in a timely manner and good management and control were noted. Field teams were properly briefed and debriefs were of good quality.

The inspectors attended the drill critique following the emergency drill. The inspectors determined that the observations and recommendations made by the drill observers were discussed in depth. The comments were generally self critical with several items taken for action by the emergency preparedness staff.

The drill observers identified that the 15-minute notification for changing emergency classification was not met when the exercise progressed to the general emergency phase. Albeit, the information was transmitted verbally, written notification took approximately 27 minutes to transmit. A deficiency event report was assigned to the item and planned corrective actions include additional training for emergency response personnel.

c. Conclusions

During a practice emergency preparedness exercise, the inspectors noted good management and control of the emergency facilities, good communications, and a thorough post exercise critique.

V. Management Meetings**X1 Exit Meeting Summary**

The inspectors presented the inspections results to members of the licensee management at the conclusion of the inspection on October 8, 1998. The licensee acknowledged the findings presented.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Alexander, Administrative Coordinator, Radiological & Environmental Services (RES)
N. Avrakotos, Emergency Preparedness Coordinator
M. Colomb, Site Executive Officer
D. Cristafulli, Radiation Protection Training Program Administrator
D. Lindsey, General Manager, Operations
J. Maurer, General Manager, Support Services
A. McKeen, RES Manager
K. Peper, Health Physics General Supervisor
K. Pushee, Respiratory Protection Supervisor
J. Ratigan, Radiological Engineer
D. Ruddy, Director, Design Engineering
K. Szeluga, Dosimetry Supervisor
D. Vandermark, Quality Assurance Manager
A. Zaremba, Licensing Manager

NRC

J. White, Chief, Radiation Safety Branch, Region I

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
IP 61726: Surveillance Observations
IP 62707: Maintenance Observations
IP 64704: Fire Protection Program
IP 71707: Plant Operations
IP 71750: Plant Support
IP 82701: Operational Status of the Emergency Preparedness Program
IP 83750: Occupational Radiation Exposure
IP 83726: Control of Radioactive Materials and Contamination, Surveys, and Monitoring
IP 92700: Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92702: Followup on Corrective Actions for Violations and Deviations
IP 92901: Followup - Plant Operations
IP 92902: Followup - Maintenance
IP 92903: Followup - Engineering

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-333/98-06-01 NCV Failure to Perform Technical Specification Required Testing

Closed

50-333/96-05-01 VIO Failure to Maintain Equipment Status Control
 50-333/98001-00 LER Invalid Isolations of Reactor Building Ventilation and Associated Actions
 50-333/97011-00 LER Invalid ESF Actuation and Failure to Perform T.S. Required Actions While Trouble Shooting Activities
 50-333/97-03-01 VIO Inadvertent Control Rod Withdrawal Event
 50-333/96010-00 LER Plant Shutdown Due to Human Error Inadvertently Connecting Two Terminals While Calibrating Protective Relay
 50-333/98004-00 LER Manual Scram Due to Rod Position Information System Power Supply Failure Resulting in Multiple Control Rod "Drift" Alarms
 50-333/97005-01 LER Manual Reactor Scram Due to Failure of the Number 3 Turbine Control Valve
 50-333/97006-00 LER Instrumentation Isolation Trip Surveillance Test Not Performed at Required Frequency
 50-333/97009-00 LER Exceeded Quarterly Frequency for Radwaste Building Exhaust Radiation Monitor
 50-333/97-07-01 VIO Technical Information in Procedure Incorrectly Translated
 50-333/98-02-08 IFI Shielding of Alternate Decay Heat Removal System
 50-333/98-02-09 IFI Evaluate the Effects of the Difference Between Calibration Source Energy and the Plant Energy Spectra on Portable Survey Instruments
 50-333/98-02-10 IFI Evaluate the Effects of Non-gamma emitting radionuclides on Internal Exposure Estimates
 50-333/98-02-11 VIO Improperly Classified Radioactive Material Shipment

Discussed

None

LIST OF ACRONYMS USED

ACT	Action/Commitment Tracking
ALARA	As Low As Reasonably Achievable
DER	Deficiency and Event Report
ECCS	Emergency Core Cooling System
ESF	Engineered Safety Feature
HPCI	High Pressure Coolant Injection
LCO	Limiting Conditions for Operation
LER	Licensee Event Report
MG	Motor Generator
NRC	Nuclear Regulatory Commission
PLCO	Potential Limiting Conditions for Operation
QA	Quality Assurance
RCA	Radiologically Controlled Area
RES	Radiological and Environmental Services
RHR	Residual Heat Removal
RP	Radiation Protection
RP&C	Radiological Protection and Chemistry
RTID	Radiological Technical Information Document
RWP	Radiation Work Permit
SGT	Standby Gas Treatment
TSP	Temporary Shielding Packages
UPS	Uninterruptable Power Supply