

January 19, 2007

Mr. Peter T. Dietrich
Site Vice President
Entergy Nuclear Northeast
James A. FitzPatrick Nuclear Power Plant
Post Office Box 110
Lycoming, NY 13093

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - NRC INTEGRATED
INSPECTION REPORT 05000333/2006005

Dear Mr. Dietrich:

On December 31, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your James A. FitzPatrick Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on January 4, 2007, with you and other members of your staff.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified. However, a licensee-identified violation which was determined to be of very low safety significance is listed in the report. The NRC is treating this violation as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy, because of the very low safety significance of the violation, and because it is entered into your corrective action program. If you contest the non-cited violation in this report, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at the James A. FitzPatrick Nuclear Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

P. Dietrich

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Sincerely,

/RA/

Eugene W. Cobey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket No.: 50-333
License No.: DPR-59

Enclosure: Inspection Report 05000333/2006005
w/ Attachment 1: Supplemental Information
w/ Attachment 2: Mitigating System Performance
Index Verification

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-333

License No.: DPR-59

Report No.: 05000333/2006005

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: 268 Lake Road
Scriba, New York 13093

Dates: October 1, 2006 through December 31, 2006

Inspectors: G. Hunegs, Senior Resident Inspector
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SUMMARY OF FINDINGS

IR 05000333/2006-005; 10/01/2006 - 12/31/2006; James A. FitzPatrick Nuclear Power Plant; Routine Resident Inspector Integrated Inspection Report.

The report covered a three-month period of inspection by resident inspectors, and announced inspections by six regional specialist inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by Entergy, has been reviewed by the inspectors. Corrective actions taken or planned by Entergy have been entered into Entergy's corrective action program. The violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

The James A. FitzPatrick Nuclear Power Plant began the inspection period at 91 percent power in a gradual power reduction (coastdown) as a result of fuel depletion at the end of the operating cycle. On October 9, 2006, the plant was shutdown to commence a refueling outage. On November 3, 2006, reactor startup was commenced following completion of refueling outage activities. The generator was synchronized to the grid on November 5 and full power was achieved on November 7, 2006. The plant continued to operate at or near rated power for the remainder of the inspection period.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 2 samples)

a. Inspection Scope

The inspectors completed the following two adverse weather protection samples.

- The inspectors reviewed Entergy's preparations for inclement weather conditions, because high winds were forecast in the vicinity of the facility for December 2, 2006. The inspectors verified that operators implemented actions and monitoring specified by Abnormal Operating Procedure (AOP)-13, "High Winds, Hurricanes and Tornadoes;" and, toured the plant grounds and risk significant areas including the screenwell, emergency diesel generator (EDG) building, and switchyard. In addition, the inspectors reviewed scheduled activities for risk significant work that could be affected by high winds.
- The inspectors reviewed and verified completion of the operations department cold weather preparation checklist contained in procedure AP-12.04, "Seasonal Weather Preparations," Revision 14. The inspectors reviewed the operating status of the reactor and turbine building heating and cooling systems, EDGs, and fire protection water. Accessible areas of the reactor, turbine, and screen house buildings were inspected to assess the effectiveness of the ventilation systems. The inspections included discussions with operations and engineering personnel to ensure that they were aware of temperature restrictions and required actions. The inspectors also reviewed the following documents:
 - OP-51A, "Reactor Building Ventilation and Cooling System;"
 - OP-52, "Turbine Building Ventilation;"
 - DBD-066, "Design Basis Document for the Reactor Building Heating, Ventilation and Air Conditioning (HVAC) Systems;" and
 - DBD-067, "Design Basis Document for the Turbine Building HVAC Systems."

b. Findings

No findings of significance were identified.

1R02 Evaluation of Changes, Tests, or Experiments (71111.02 - 17 samples) (6 safety evaluations, 11 screenings)

a. Inspection Scope

The inspectors reviewed six safety evaluations in the Initiating Event, Mitigating Systems, and Barrier Integrity cornerstones. The selected safety evaluations were reviewed to verify that changes to the facility or procedures as described in the Updated Final Safety Analysis Reports (UFSAR) were reviewed and documented in accordance with 10 CFR 50.59, and that the safety issues pertinent to the changes were properly resolved or adequately addressed. The inspectors assessed the adequacy of the safety evaluations through interviews with the plant staff and review of supporting information, such as calculations and analyses, design change documentation, procedures, the UFSAR, Technical Specifications (TS) and plant drawings. The reviews also included verification that Entergy had appropriately concluded that the changes and tests could be accomplished without obtaining license amendments.

The inspectors also reviewed 11 evaluations for changes, tests and experiments for which Entergy determined that safety evaluations were not required. This review was performed to verify that Entergy's threshold for performing safety evaluations was consistent with 10 CFR 50.59.

A listing of the evaluations reviewed is provided in Attachment 1.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q - 3 samples)

Partial Walkdown

a. Inspection Scope

The inspectors performed three partial system walkdowns to verify the operability of redundant or diverse trains and components during periods of system train unavailability or following periods of maintenance. The inspectors referenced the system procedures, the UFSAR, and system drawings in order to verify that the alignment of the available train was proper to support its required safety functions. The inspectors also reviewed applicable condition reports (CRs) and work orders to ensure that Entergy had identified

and properly addressed equipment discrepancies that could potentially impair the capability of the available train, as required by 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." The documents reviewed are listed in Attachment 1. The inspectors performed a partial walkdown on the following three systems:

- Residual heat removal (RHR) system including containment spray inside the drywell on October 18;
- Reactor core isolation cooling system (RCIC) on November 6, following the high pressure coolant injection system failure on November 4; and
- 'B' and 'D' EDG subsystems on October 18, while subsystems 'A' and 'C' were out of service for maintenance and testing.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 10 samples)

Quarterly Inspection (10 - samples)

a. Inspection Scope

The inspectors conducted a tour of the ten areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with Entergy's administrative procedures; fire detection and suppression equipment was available for use; passive fire barriers were maintained; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with Entergy's fire plan. The inspectors used procedure ENN-DC-161, "Transient Combustible Program," in performing the inspection. The inspectors evaluated the fire protection program against the requirements of License Condition 2.C.3. The documents reviewed are listed in Attachment 1. This inspection satisfied ten inspection samples for fire protection tours. The areas inspected included:

- Fire Area/Zone XIV/PC-1, elevation 256 foot;
- Fire Area/Zone XIV/PC-1, elevation 268 foot;
- Fire Area/Zone IX/RB-1A, elevation 369 foot;
- Fire Area/Zone IX/RB-1A, elevation 344 foot;
- Fire Area/Zone IX/RB-1A, elevation 326 foot;
- Fire Area/Zone X/RB-1;
- Fire Area/Zone IX/SG-1;
- Fire Area/Zone IA/MG-1;
- Fire Area/Zone 1E/TB-1, elevation 252 foot; and
- Fire Area/Zone 1E/OR-1.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

Internal Flooding (1 sample)

a. Inspection Scope

The inspectors reviewed selected risk-important plant design features and licensee procedures intended to protect the emergency diesel generator buildings, cable tunnels, and associated safety-related equipment from internal flooding events. The inspectors reviewed flood analysis and design documents, including the Individual Plant Examination (IPE) and the UFSAR, engineering calculations, and abnormal operating procedures. This inspection represented one sample.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07A - 1 sample)

a. Inspection Scope

The inspectors reviewed the testing and evaluation of test results for the RHR system heat exchangers performed in accordance with Entergy's response to Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment." Heat removal measurements and heat exchanger capacity calculations were reviewed to verify that cooler performance was consistent with design calculations and the UFSAR. The documents reviewed are listed in the Attachment 1. This review represents one sample.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08 - 1 sample)a. Inspection Scope

The inspector observed non-destructive examination (NDE) activities and reviewed documentation of NDE and repair activities. The sample selection was based on the inspection procedure objectives and risk priority of those components and systems where degradation could result in a significant increase in risk of core damage. The direct observations and documentation reviews were performed to verify that NDE activities were performed in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 1989 Edition, no Addenda, 10CFR 50.55a, "Codes and Standards, Boiling Water Reactor Vessel Internals Program" recommendations, and Entergy implementing procedures. The inspector reviewed a sample of NDE reports initiated to document the performance and record results of in-service inspection (ISI) examinations completed during current refueling outage (RFO-17) as well as those since the last refueling outage. The inspector also evaluated Entergy's effectiveness in resolving relevant indications identified during ISI activities. Documents reviewed for this inspection are listed in the Attachment 1.

The inspector reviewed several NDE examinations including visual, liquid penetrant, ultrasonic testing (UT), and radiographic examination data records to verify the effectiveness of Entergy's program for monitoring degradation of risk significant piping structures, systems, and components. The inspector examined Entergy's evaluation and disposition for continued operation without repair or rework of non-conforming conditions identified during ISI activities by review of UT examination records NDE report 06UT035 which was associated with a recordable indication in core spray weld 12-14-734 and NDE report 06UT037 which evaluated the indication noted in NDE report 06UT035. The report documented a relevant subsurface indication during UT examination of an elbow to elbow weld in core spray system piping line 14-12"-W23-302-4A. Also, NDE report 04UT084, UT examination of weld 18-34-389 on feedwater line 34-18"-WFP-902A, which had a recordable indication noted during UT examination of a valve to elbow weld was considered a construction flaw, subsurface planer indication that was confirmed with radiographs.

The inspector reviewed one ASME Section XI code repair and its associated NDE from the current refueling cycle. Specifically, the inspector reviewed welding repair activities and documentation performed on high pressure coolant injection (HPCI) outboard isolation 10" HPCI 23 MOV-16 valve to pipe weld #2 R1. This review was performed to verify that the activities associated with welding on ASME Class I or II components were in accordance with applicable ASME code requirements.

The inspector performed direct field observations of the penetrant test (PT) examination of standby liquid control nozzle 10 inside the drywell per work order JAF-05-26173 and

UT examination of weld number 10-14-480 on core spray line 014-10" WD23-1504-5A inside the drywell per work order JAF-05-23900, including preparation and final examination data record review. The review was performed to evaluate examiner skills and performance; examination technique; assess contractor oversight activities; and to verify Entergy's and the contractor's ability to identify and characterize observed indications.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

Resident Inspector Quarterly Review (71111.11Q - 1 sample)

a. Inspection Scope

On November 21, 2006, the inspectors observed licensed operator simulator training to assess operator performance during several scenarios to verify that operator performance was adequate and evaluators were identifying and documenting crew performance problems. The inspectors evaluated the performance of risk significant operator actions, including the use of emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, the implementation of appropriate actions in response to alarms, the performance of timely control board operation and manipulation, and the oversight and direction provided by the shift manager. The inspector also reviewed simulator fidelity with respect to the actual plant. Licensed operator training was evaluated against the requirements of 10 CFR 55, "Operators' Licenses." This observation of operator simulator training constituted one sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - 2 samples)

a. Inspection Scope

The inspectors reviewed performance-based problems involving selected in-scope structures, systems, or components (SSCs) to assess the effectiveness of the maintenance program. Reviews focused on:

- Proper Maintenance Rule (MR) scoping in accordance with 10 CFR 50.65;
- Characterization of reliability issues;

- Changing system and component unavailability;
- 10 CFR 50.65 (a)(1) and (a)(2) classifications;
- Identifying and addressing common cause failures;
- Trending of system flow and temperature values;
- Appropriateness of performance criteria for SSCs classified (a)(2); and
- Adequacy of goals and corrective actions for SSCs classified (a)(1).

The inspectors reviewed system health reports, maintenance backlogs, and maintenance rule basis documents. The inspectors evaluated the maintenance program against the requirements of 10 CFR 50.65. The documents reviewed are listed in Attachment 1. The following two maintenance rule samples were reviewed:

- Service water pumps and area unit coolers; and
- Reactor building closed loop cooling water system containment isolation valves.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

The inspectors reviewed the following five activities to verify that the appropriate risk assessments were performed prior to removing equipment for work. The inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4), and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The documents reviewed are listed in Attachment 1. The following activities represent five inspection samples:

- Week of October 2, 2006, that included emergent work on the east diesel-driven fire pump, one 115 kilovolt (kV) offsite circuit inoperable for maintenance, and pre-outage surveillance activities;
- Week of October 16, 2006, that included planned maintenance on both trains of the standby gas treatment system;
- Week of November 6, 2006, that included emergent work on the 120 Volt Alternating Current uninterruptible power supply;
- Week of November 13, 2006, that included replacement of 24 Volt Direct Current instrument batteries; and
- Week of December 18, 2006, that included emergent work on the fire system pressure maintenance pump and inoperable fire protection hydrants during fire protection system troubleshooting.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 6 samples)

a. Inspection Scope

The inspectors reviewed operability determinations to assess the acceptability of the evaluations; when needed, the use and control of compensatory measures; and compliance with TSs. The inspectors' review included a verification that the operability determinations were made as specified by ENN-OP-104, "Operability Determinations." The technical adequacy of the determinations was reviewed and compared to the TS, the UFSAR, and associated design basis documents. The documents reviewed are listed in the Attachment 1. The following six evaluations were reviewed and each constituted inspection program samples:

- CR-2006-04484 concerning identification of a crack in the torus wall at the internal torus gusset plate weld;
- CRs-2006-04224, 04227, and 04183 concerning shroud ring segment indications;
- CR-2006-04327 concerning less than minimum required thrust on low pressure coolant injection valve 10MOV-25A;
- CR-2006-04294 concerning less than minimum required thrust on HPCI steam supply containment isolation valve 23MOV-15;
- CR-2006-04739 concerning low individual cell voltages in the 'A' low pressure coolant injection system battery; and
- CR-2006-04941 concerning the inoperability of control room chiller 70RWC-2B.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A - 2 samples, 71111.17B - 6 samples)

.1 Annual Inspection (2 - samples)

a. Inspection Scope

The inspectors reviewed design and post-installation test documents for modifications ER-JAF-05-25576, which installed a sparger on the HPCI turbine steam exhaust piping in the torus, and ER-JAF-05-19832, which replaced the HPCI steam supply outboard containment isolation valve 23MOV-16. The HPCI steam exhaust sparger was installed to eliminate the effects of condensation oscillation loads on the torus shell that had

resulted in through-wall cracks. Original double disk gate valve 23MOV-16 was replaced with a split wedge gate design to improve local leak rate test performance. Post-installation tests of the HPCI system confirmed sparger design assumptions. Valve 23MOV-16 tests included valve diagnostic, inservice, and seat leakage tests, and nondestructive examinations. Documents reviewed for this inspection are listed in the Attachment 1.

b. Findings

No findings of significance were identified.

.2 Biennial Inspection (71111.17B - 6 samples)

The inspectors reviewed six risk-significant plant modification packages. The review was performed to verify that the design bases, licensing bases, and performance capability of risk significant SSCs had not been degraded through the modifications.

The selected plant modifications were distributed among the Initiating Event, Mitigating Systems, and Barrier Integrity cornerstones. For the accessible components associated with the modifications, the inspectors walked down the systems to detect possible abnormal installation conditions. The inspectors verified that selected attributes were consistent with the design and licensing bases. These attributes included component safety classification, energy requirements supplied by supporting systems, instrument setpoints, and supporting electrical and mechanical calculations and analyses. Design assumptions were reviewed to verify that they were technically appropriate and consistent with the UFSAR. For selected permanent plant changes, the 50.59 screens or evaluations were reviewed as described in section 1R02 of this report. The inspectors verified that procedures, calculations and the UFSAR were properly updated with revised design information and operating guidance. The inspectors also verified that post-modification testing was adequate to ensure the SSC would function in accordance with its design assumptions. The modifications reviewed are listed in the Attachment 1.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19 - 9 samples)a. Inspection Scope

The inspectors reviewed nine post maintenance test procedures and associated testing activities for selected risk significant mitigating systems to assess whether the effect of maintenance on plant systems was adequately addressed by control room and engineering personnel. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness and were consistent with design basis documentation; test instrumentation had current calibrations and the range and accuracy for the application; and tests were performed, as written, with applicable prerequisites satisfied. Upon completion, the inspectors verified that equipment was returned to the proper alignment necessary to perform its safety function. Post maintenance testing was evaluated against the requirements of 10 CFR 50, Appendix B Criterion XI, "Test Control." The following nine post maintenance test activities were reviewed and represent nine inspection program samples.

- Work Request (WR) JAF-06-28641 and WR JAF-06-28820 involved excavation and weld repairs of two torus upper ring girder gusset-to-shell welds. The retests consisted of UT measurements and pneumatic leakage tests of the repaired areas in accordance with ASME Boiler and Pressure Vessel Code Section XI, 1992 edition, Articles IWE-2500 and 5221.
- WR JAF-05-31815 involved replacement of containment instrument nitrogen accumulator check valves and tubing connections to the safety relief valves. The retest consisted of a leak rate test using ST-39B, "Leak Rate Test of ADS Pneumatic Supply Check Valves."
- WR JAF-06-30367 involved replacing 'A' train low pressure coolant injection system battery cells. The retest consisted of verifying individual cell voltages and specific gravities using MST-071.11, "LPCI Battery Quarterly Surveillance Test."
- WR JAF-06-28896 and WR JAF-06-28937 involved repair of drywell equipment drain pump discharge containment isolation valve 20AOV-95 following a failed local leak rate test. The retests consisted of a local leak rate test, valve exercising, and valve position indication verification using ST-39B-X19, "Type C Leak Test of Drywell Equipment Drain Discharge Valves (IST)," ST-1C, "Primary Containment Isolation Valve Exercise Test (IST)," and ST-41D, "Remote Valve Position Indication Verification," respectively.
- WR JAF-06-25666 and WR JAF-05-34791 involved replacing 'B' train low pressure coolant injection system battery cells. The retest consisted of verifying individual cell voltages and specific gravities using MST-071.11 "Low Pressure Coolant Injection Battery Quarterly Surveillance Test."
- WR JAF-06-32359 involved repair of the switch trip arm on containment isolation valve 20AOV-95. The retest consisted of a valve exercise test and verification of remote position indication using ST-1C, "Primary Containment Isolation Valve

Exercise Test (IST),” and ST-41D, “Remote Valve Position Indication Verification.”

- WR JAF-06-32136 involved replacement of the fire protection system pressure maintenance pump. The retest consisted of performance of ST-76D, “High Pressure Water Fire Protection System Operational Test.”
- WR JAF-05-36422 involved repair of the 'D' main steam isolation valve. The retest consisted of performance of ST-39B-X7D, “Type C Leak Test Main Steam Line D Main Steam Isolation Valves.”
- WR JAF-06-26857 involved intermediate range monitor (IRM) 'D' repair. The retest consisted of performance of ISP-71-1, “Intermediate Range Monitor Logic System Functional Test.”

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20 - 1 sample)

a. Inspection Scope

The inspectors observed and reviewed selected refueling outage activities to verify that operability requirements were met and that risk, industry experience, and previous site specific problems were considered.

- **Outage Plan:** The inspectors reviewed outage schedules and procedures, and verified that TS-required safety system availability was maintained, shutdown risk was considered, and contingency plans existed for restoring key safety functions such as electrical power and primary coolant system makeup.
- **Plant shutdown and cooldown:** The inspectors observed portions of the plant shutdown and cooldown on October 8 and 9, and verified that the TS cooldown rate limits were satisfied.
- **During the course of the refueling outage,** the inspectors observed selected reactor disassembly activities and walked down clearances to verify that tagouts were properly hung and that equipment was properly configured. Through plant tours, the inspectors verified that Entergy maintained and adequately protected electrical power supplies to safety-related equipment and that TS requirements were met.
- The inspectors periodically verified proper alignment and operation of the shutdown cooling and alternate decay heat removal systems. The verification also included reactor cavity and fuel pool makeup paths and water sources, and administrative control of drain down paths.

- The inspectors reviewed procedures RAP-7.1.04B, “Refueling Procedure,” and RAP-7.1.04C, “Neutron Instrument Monitoring During In-Core Fuel Handling,” and the results of refueling platform interlock functional tests to ensure that the TS requirements for fuel movement were met. The inspectors also verified through review of procedure ST-39D, “Secondary Containment Leak Test,” that containment requirements for refueling activities were met.
- The inspectors observed portions of the reactor startup following the outage, and verified through plant walkdowns, control room observations, and surveillance test reviews that the safety-related equipment required for mode change was operable, that containment integrity was set, and that reactor coolant boundary leakage was within TS limits.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 6 samples)

a. Inspection Scope

The inspectors witnessed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether the SSCs satisfied TSs, UFSAR, technical requirements manual, and Entergy procedure requirements. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness and were consistent with design basis documentation; that test instrumentation had current calibrations and the range and accuracy for the application; and that tests were performed, as written, with applicable prerequisites satisfied. Upon completion, the inspectors verified that equipment was returned to the status specified to perform its safety function. The inspectors evaluated the surveillance tests against the requirements in TS. The following surveillance tests were reviewed and represented six inspection program samples:

- ST-9C, “Emergency AC Power Load Sequencing Test and 4 kV Emergency Power System Voltage Relays Instrument Functional Test;”
- ST-39B-X9A/B, “Type C Leak Test of Feed Water System Line 'A' and 'B' Valves (IST);”
- ST-39H, “Reactor Pressure Vessel Leakage Test;”
- ST-9BA, “EDG 'A' and 'C' Full Load Test and Emergency Service Water Pump Operability Test;”
- ST-6M, “Standby Liquid Control Recirculation, Injection Test (IST, ISI);” and
- MST-071.26, “Station Battery 'A' Modified Performance Test.”

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]1EP6 Drill Evaluation (71114.06 - 1 sample)a. Inspection Scope

The inspectors observed simulator activities associated with licensed operator requalification training on November 21. The inspectors verified that emergency classification declarations and notification activities were properly completed.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY**Cornerstone: Occupational Radiation Safety**2OS1 Access Control to Radiologically Significant Areas (71121.01 - 7 samples)a. Inspection Scope

During October 16 through 20, 2006, the inspector conducted the following activities to verify that Entergy was properly implementing physical, engineering, and administrative controls for access to high radiation areas (HRAs), and other radiologically controlled areas, and that workers were adhering to these controls when working in these areas. Implementation of the access control program was reviewed against the criteria contained in 10 CFR 20, TS, and Entergy's procedures.

- Radiation work permits (RWPs) were reviewed that provide access to exposure significant areas of the plant including HRAs. Specified electronic personal dosimeter alarm set points were reviewed with respect to current radiological condition applicability and workers were queried to verify their understanding of plant procedures governing alarm response and knowledge of radiological conditions in their work area.
- There were no radiation work permits for airborne radioactivity areas with the potential for individual worker internal exposures of greater than 50 millirem (mrem) committed effective dose equivalent (CEDE).

- The following radiologically significant work activities were selected; the radiological work activity job requirements were reviewed; and work activity job performance was reviewed with respect to the radiological work requirements.
 - In-Service inspection of reactor vessel nozzles;
 - Reactor vessel visual inspection and defueling activities;
 - Control rod drive replacement; and
 - High pressure turbine replacement.
- During observation of the work activities listed above, the adequacy of surveys, job coverage and contamination controls were reviewed.
- There were no significant dose gradients requiring relocation of dosimetry for the radiologically significant work activities listed above.
- During observation of the work activities listed above, radiation worker performance was evaluated with respect to the specific radiation protection (RP) work requirements and their knowledge of the radiological conditions in their work areas.
- During observation of the work activities listed above, RP technician work performance was evaluated with respect to their knowledge of the radiological conditions, the specific RP work requirements and RP procedures.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - 3 samples)

a. Inspection Scope

During October 16 through 20, 2006, the inspector conducted the following activities to verify that Entergy was properly maintaining individual and collective radiation exposures as low as is reasonably achievable (ALARA). Implementation of the ALARA program was reviewed against the criteria contained in 10 CFR 20.1101(b) and Entergy's procedures.

- The following highest exposure work activities for the Fall 2006 refueling outage were selected for review:
 - In-Service inspection of reactor vessel nozzles;
 - Reactor vessel visual inspection and defueling activities;
 - Control rod drive replacement; and
 - High pressure turbine replacement.

- With respect to the work activities listed above, these job sites were observed to evaluate if surveys and ALARA controls were implemented as planned.
- With respect to the work activities listed above, radiation worker and RP technician performance was observed during the performance of these work activities to demonstrate the ALARA principles.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator Verification

a. Inspection Scope (71151 - 7 samples)

The inspectors reviewed performance indicator (PI) data for the below listed cornerstones and used NEI 99-02, "Regulatory Assessment PI Guidance," to verify individual PI accuracy and completeness.

Cornerstone: Mitigating Systems

- Safety system unavailability, RHR;
- Safety system unavailability, HPCI;
- Safety system unavailability, RCIC;
- Safety system unavailability, Emergency AC Power; and
- Safety system functional failures.

The inspectors reviewed data and plant records from January 2004 to December 2006. The records reviewed included PI data summary reports, licensee event reports, operator narrative logs, and maintenance rule records. The inspectors verified the accuracy of the number of critical hours reported, and interviewed the system engineers and operators responsible for data collection and evaluation.

Cornerstone: Occupational Radiation Safety

- Occupational Exposure Control Effectiveness

The inspector reviewed implementation of Entergy's Occupational Exposure Control Effectiveness PI Program. Specifically, the inspector reviewed CRs, and radiological controlled area dosimeter exit logs for the past four calendar quarters. These records were reviewed for occurrences involving locked HRAs, very HRAs, and unplanned exposures against the criteria specified in Nuclear Energy Institute (NEI) 99-02,

"Regulatory Assessment PI Guideline", Revision 2, to verify that all occurrences that met the NEI criteria were identified and reported as PIs. This inspection activity represents the completion of one sample relative to this inspection area, completing the annual inspection requirement.

Cornerstone: Public Radiation Safety

- Radiological Environmental Technical Specifications/Offsite Dose Calculation Manual- Radiological Effluent

The inspector reviewed a listing of relevant effluent release reports for the past four calendar quarters, for issues related to the public radiation safety PI, which measures radiological effluent release occurrences per site that exceed 1.5 millirem/quarter whole body or 5.0 millirem/quarter organ dose for liquid effluents; 5 millirads/quarter gamma air dose, 10 millirad/quarter beta air dose, and 7.5 millirads/quarter for organ dose for gaseous effluents. This inspection activity represents the completion of one sample relative to this inspection area, completing the annual inspection requirement.

The inspector reviewed the following documents to ensure that Entergy met all of the PI requirements:

- Monthly projected dose assessment results due to radioactive liquid and gaseous effluent releases;
- Quarterly projected dose assessment results due to radioactive liquid and gaseous effluent releases; and
- Dose assessment procedures.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered into the Corrective Action Program (CAP)

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all items entered into Entergy's corrective action program. The review was accomplished by accessing Entergy's computerized database for CRs and attending CR screening meetings.

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In accordance with the baseline inspection modules, the inspectors selected 50 corrective action program items across the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstones for additional follow-up and review. Additionally, NRC specialist inspectors reviewed CRs associated with ISI, occupational radiation safety and 10 CFR 50.59 plant modifications. The inspectors assessed Entergy's threshold for problem identification, the adequacy of the cause analyses, extent of condition review, and operability determinations, and the timeliness of the specified corrective actions. The CRs reviewed are noted in the Attachment 1.

b. Assessment and Observations

No findings of significance were identified.

.2 Semi-Annual Review to Identify Trends

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of Entergy's Corrective Action Program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment and corrective maintenance issues but also considered the results of daily inspector CAP item screening discussed in Section 40A2.1. The review also included issues documented outside the normal CAP in system health reports, corrective maintenance work requests, component status reports, site monthly meeting reports and maintenance rule assessments. The inspectors' review nominally considered the six-month period of July 2006 through December 2006, although some examples expanded beyond those dates when the scope of the trend warranted. The inspectors compared and contrasted their results with the results contained in the licensee's latest integrated quarterly assessment report. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy. The inspectors also evaluated the trend report specified in ENN-LI-102, "Corrective Action Process," and 10 CFR 50, Appendix B. The documents reviewed during this inspection are listed in the Attachment 1.

b. Assessment and Observations

Equipment, human performance and program issues were identified at an appropriate threshold and were entered into their corrective action program. No findings of significance were identified.

.3 Annual PI&R Sample Review (71152 - 3 samples)a. Inspection Scope

The inspectors selected three corrective action issues for detailed review. These reports were reviewed to ensure that an appropriate causal evaluation was performed and appropriate corrective actions were specified. The inspectors evaluated the reports against the requirements of procedure ENN-LI-102, "Corrective Action Process," and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment 1.

- CR-2006-03286 concerned the loss of the 'B' reactor protection system (RPS) bus and half scram that occurred on September 8, 2006;
- CRs 2006-03543, 05149, 04491, and 04778 involved relief valve inservice test failures in the emergency service water and shutdown cooling systems; and
- CR 2006-01044 involved 'B' reactor feed pump mechanical seal leakage.

b. Assessment and Observations

No findings of significance were identified. The adequacy of causal analysis, extent of condition review and the timeliness of the specified corrective actions were determined to be reasonable.

4OA5 Other Activities.1 Institute of Nuclear Power Operations (INPO) Plant Assessment Report Reviewa. Inspection Scope

In accordance with the NRC Field Policy Manual, NUREG/BR-0075, Revision 4, the inspectors reviewed the final report for the INPO plant assessment of FitzPatrick conducted in March, 2006. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and to verify if any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings of significance were identified.

.2 (Closed) URI 05000333/2002002-01, Adequacy of Hemyc Cable Wrap Fire Barrier Qualification Test and Evaluation

Inspection report 05000333/2002002 documented the potential inadequacy of Hemyc fire wrap barrier material at FitzPatrick. The issue was unresolved pending further NRC

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review to determine whether the qualification tests of the Hemyc fire wrap systems were acceptable. In subsequent NRC fire tests, results indicated that Hemyc/MT materials cannot be routinely relied upon as one hour fire barriers. The NRC staff has completed a significant effort informing industry of the concerns associated with these materials by issuing Information Notice 2005-07, "Results of Hemyc Electrical Raceway Fire Barrier System Full Scale Fire Testing," and Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations." As required by GL 2006-03, Entergy responded appropriately to the NRC concerns by identifying all applications of Hemyc/MT materials, implementing compensatory measures, and initiating corrective actions. On September 27, 2006, the NRC approved an exemption from 10 CFR 50, Appendix R pertaining to the Hemyc fire wrap installed in the west cable tunnel. The NRC staff has determined that there was no performance deficiency associated with the issue and this unresolved item is closed.

.3 Temporary Instruction (TI) - 2515/169, "Mitigating System Performance Index Verification"

a. Inspection Scope

The objective of TI 2515/169 is to verify that the licensee has correctly implemented the Mitigating Systems Performance Index (MSPI) guidance for voluntarily reporting unavailability and unreliability of the monitored safety systems. On a sampling basis, the inspector validated the accuracy of the unavailability and unreliability input data used for both the 12-quarter period of baseline performance and for the first reported results (second calendar quarter 2006). Specific attributes examined by the inspectors per this TI included: surveillance activities which, when performed, do not render the train unavailable for greater than 15 minutes; surveillance activities which, when performed, do not render the train unavailable due to credit for prompt operator recovery actions; and for each MSPI system, on a sampling basis, the inspectors independently confirmed the accuracy of baseline planned unavailability, actual planned and unplanned unavailability, and the accuracy of the failure data (demand, run, and load, as appropriate) for the monitored components.

b. Findings

No findings of significance were identified.

Per TI 2515/169-05 reporting requirements, Attachment 2 to this report documents additional information pertaining to the inspectors review.

4OA6 Meetings, Including Exit

On January 4, 2007, the inspectors presented the inspection results to Mr. Peter T. Dietrich and other members of his staff. The inspectors asked Entergy whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-identified Violations

The following violation of very low safety significance (Green) was identified by Entergy and is a violation of NRC requirements that met the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

TS 5.4.1.a requires that procedures recommended in Appendix A of Regulatory Guide 1.33 be implemented. Section 9.a of Regulatory Guide 1.33, Appendix A, requires that maintenance that can affect the performance of safety-related equipment be performed in accordance with written procedures appropriate to the circumstances. Entergy procedure MP-023.14, "HPCI Turbine Minor Inspection, 23TU-2*," provides detailed instructions for disconnecting and reconnecting control oil tubing from the HPCI turbine EG-R hydraulic actuator, including matchmarking of tubing connections and independent verification. Contrary to this on October 25, 2006, two hydraulic lines to the EG-R actuator were connected to the wrong oil ports rendering the HPCI turbine inoperable. The condition was identified during post-work testing when the turbine failed surveillance test ST-4N, "HPCI Quick Start, Inservice, and Transient Monitoring Test (IST)," and was documented in Entergy's corrective action program as CR-2006-04754. This finding is of very low safety significance because of the short duration of the condition and the availability of all of the other redundant and diverse emergency core cooling systems. Documents reviewed for this inspection are listed in the Attachment 1.

ATTACHMENT 1: SUPPLEMENTAL INFORMATION

ATTACHMENT 2: MITIGATING SYSTEM PERFORMANCE INDEX VERIFICATION

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ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

N. Avrakotos, Manager, Emergency Preparedness
S. Bono, Director Engineering
J. Costedio, Manager, Regulatory Compliance
P. Dietrich, Site Vice President
M. Durr, Manager, System Engineering
M. Jacobs, Manager, Training
D. Johnson, Manager, Operations
J. LaPlante, Manager, Security
K. Mulligan, General Manager, Plant Operations
J. Pechacek, Manager, Programs and Components Engineering
W. Rheaume, Manager, CA&A
J. Solowski, Radiation Protection
D. Wallace, Director, Nuclear Safety Assurance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000333/2002002-01	URI	Adequacy of Hemyc Cable Wrap Fire Barrier Qualification Test and Evaluation (Section 4OA5.2)
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LIST OF DOCUMENTS REVIEWED

Section 1R02: Evaluation of Changes, Tests, or Experiments

Safety Evaluations

JAF-SE-00-003, "Update of FSAR to Remove Inconsistency Concerning Maximum EDG Room Temperature," Revision 0

JAF-SE-00-025, "Provide Chemical Cleaning Process for ESW Piping and Heat Exchanger," Revision 4

JAF-SE-01-009, "Feedwater Heaters Maximum String Flow," Revision 0

JAF-SE-05-001, "ASME Code Repair of Containment (Torus)," Revision 0

JAF-SE-05-002, "Evaluation of the Capability of Cooling Water Intake Bar Heaters," Revision 0

Attachment

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JAF-SE-05-003, "Shutdown Cooling Using Main Steam Line Drains and the Main Condenser," Revision 0

10 CFR 50.59 Screened-out Evaluations

JAF-04-12478, "Placement of LEXAN (non-clear sheeting) FME Barriers onto the midrail section of the handrails around the Spent Fuel Pool perimeter," dated February 10, 2004

JAF-04-19423, "Stator Water Single Point Trip Vulnerabilities," Revision 0

JAF-04-40074, "MSR Drain Tank Level Instrumentation Upgrade," Revision 0

JAF-05-10930, "RHR Steam Condensing Mode Elimination," dated October 10, 2005

JAF-05-19832, "Replace Valve 23MOV-16," dated December 21, 2005

JAF-05-25176, "Off-Gas Condenser Replacement," dated May 23, 2006

JAF-05-25576, "Install Sparger on High Pressure Coolant Injection Turbine Steam Exhaust Piping inside Torus," Revision 0

JAF-05-29050, "Install Hydrolase Connections and Drain Piping Connections," dated July 18, 2006

JF-03-01858, "HPCI & RCIC Instrumentation Non-Density Compensated Indication," dated December 5, 2005

SCR-A1-05-0003, "Setpoint tolerance changes for HPCI Flow Transmitter 23FT-82 and Square Rooter 23SQX-82," dated February 7, 2005

TI-04-0005, "Temporary Setpoint Change to raise Temp Recorder Alarm to reduce nuisance annunciation in Control Room," dated March 4, 2004

Calculations

JAF-CALC-NBI-00209, "02-3LT-83A,B,C,D Reactor Vessel Level 8 HPCI and RCIC Trip Setpoint & Confirmatory Low Level 3 ADS Setpoint," dated January 24, 2002

Drawings

FM-20A, "RHR Flow Diagram," Revision 70

FM-20B, "RHR Flow Diagram," Revision 62

FM-22A, "RCIC Flow Diagram," Revision 52

Miscellaneous

06-01899, "DRN: High Pressure Coolant Injection," dated August 6, 2006

92-091, "RWCU Drain Line Temporary Shielding," dated January 8, 1993

ER-JF-03-01407, "Remove #10 Line Pilot Wire Gnd Detection from Station Battery Gnd Detection," dated May 15, 2003

NRC Information Notice 2002-15, "Hydrogen Combustion Events in Foreign BWR Piping," dated April 12, 2002

"Human Factors Engineering Evaluation Checklist for Design Change No: JF-03-01858," dated October 24, 2005

Modification Packages

JAF-05-10930, "Retire Steam Condensing Mode," Revision 0

JAF-05-25176, "Off-Gas Condenser Replacement," Revision 0
JAF-CALC-04-00460, "Parameter Values to support BWROG/EPG/SAG Implementation and Cycle 17 Core," Revision 2
JAF-CALC-89-06, "SBO Room Heat-Up Analysis," Revision 1
JF-03-01858, "HPCI/RCIC Level Density Compensation," dated December 01, 2005
TI-04-0005, "Setpoint Change Request: RWR Pump B No. 2 Seal Cavity Temperature Alarm," dated March 4, 2004

Procedures

AOP-1, "Reactor Scram," Revision 4
AOP-43, "Plant Shutdown From Outside the Control Room," Revision 32
AP-05.07, "Maintenance Testing and Post-Work Testing (ISI)," Revision 36
ENN-LI-101, "50.59 Screen Control Form," Revision 7
EOP-2, "RPV Control," Revision 8
MP-046.04, "East and West Electric Bay Unit Cooler Supply Piping Chemical Cleaning (ISI)," Revision 3
MP-046.05, "East and West Crescent Area Unit Cooler Supply Piping Chemical Cleaning (ISI)," Revision 3
OP-13G, "RHR - Steam Condensing," Revision 5
OP-15, "High Pressure Coolant Injection," Revision 52
RT-02.01, "Chemical Flush," Revision 4

Section 1R04: Equipment Alignment

OP-13, "Residual Heat Removal," Revision 93
OP-19, "Reactor Core Isolation Cooling," Revision 45
OP-22, "Diesel Generator Emergency Power," Revision 22

Section 1R05: Fire Protection

PFP-PWR17, Fire Area Zone XIV/PC-1
PFP-PWR18, Fire Area Zone XIV/PC-1
PFP-PWR28, Fire Area Zone IX/RB-1A
PFP-PWR27, Fire Area Zone IX/RB-1A
PFP-PWR26, Fire Area Zone, IX/RB-1A
PFP-PWR21, Fire Area Zone, X/RB-1
PFP-PWR22, Fire Area Zone, IX/SG-1
PFP-PWR23, Fire Area Zone, IA/MG-1
PFP-PWR42, Fire Area Zone, IE/TB-1
PFP-PWR44, Fire Area Zone, IE/OR-1

Section 1R07: Heat Sink Performance

JPN-93-015, "Updated Response to GL 89-13 Service Water System Problems Affecting Safety Related Equipment," dated March 16, 1993
ST-2Y, "RHR Heat Exchanger Performance Test," Revision 7

JAF-CALC-RHR-01903, "Instrument Indication Uncertainty for RHR Heat Exchanger Performance Test," Revision 1

JAF-CALC-RHR-02953, "RHR Heat Exchanger K-value with Reduced Tube Side Fouling Factor," Revision 0

JAF-CALC-RHR-00392, "Calculation for Design Basis/Acceptance Criteria for ST-2Y," Revision 0

Section 1R08: Inservice Inspection Activities

NDT Examination Reports

NDE Report 06S104, "Liquid Penetrant Surface Exam on Standby Liquid Control (SLC) Nozzle N -10 Safe End and Dissimilar Metal Weld," Work Request JAF-05-26173

NDE Report, VT-3, "Visual Examination Report 06VT274, Primary Containment Exterior Surfaces," Work Request JAF-05-27738

NDE Report, "UT Examination Report 06UT144, HPCI Turbine Steam Inlet Line 23-10"-SHP-902-19, Tee to Pipe Weld 10-23-705," Work Request JAF-05-27690

Repair-Replacement

Radiographic Examination Report 06R001 and 06R003, "C06-046, Weld #2 R1, 10" HPCI 23 MOV-16 Valve to Pipe Weld," Work Request JAF-05-35430, Modification ER JAF-05-19832

Flaw Evaluation

NDE Report 04UT084, "UT examination of weld 18-34-389 on feedwater line 34-18"-WFP-902A," dated 10/11/2004

NDE Report 06UT035, "UT examination of weld 12-14-734 on core spray line 14-12"-W23-302-4A," dated 9/25/2006

NDE Report 06UT037, "Evaluation of Recordable Indication for NDE Report 06UT035," dated 9/25/2006

Procedures

ENN-DC-120, "ASME Section XI Code Programs," Revision 1

ENN-NDE-9.04, "Ultrasonic Examination of Ferritic Piping Welds," Revision 1

ENN-NDE-1.00, "Administrative Controls for Non-Destructive Examination," Revision 0

EN-DC-329, "Engineering Programs Control and Oversight," Revision 0

ER-JAF-06-25191, "JAF RO17 Controlled In-Vessel Inspection Checklist," Revision 0

ER-JAF-05-18533, "RO17 IGSCC Inspection Program Selection/Scope," Revision 5

ER-JAF-05-18531, "ISI Components/Supports, IWE, and Augmented Inspection," Revision 0

AP-05.14, "ASME Section XI Repair/Replacement Program," Revision 7

AP-05.07, "Maintenance Testing And Post-Work Testing (ISI)," Revision 36

Miscellaneous

JAFP-05-0013, "Inservice Inspection Summary report 2004 Refuel Outage (Reload 16/Cycle 17)," dated January 19, 2005

JAF-ISI-0002, "ISI Program," Revision 4

JAF-ISI-0003, "Third In-Service Inspection Interval In-service Inspection Plan," Revision 5

ISI Program Health Reports, 1st, 2nd, and 3rd, Quarter 2006

LO-JAFLO-2005-00069, "Engineering Programs Focused Self-Assessment"

LO-JAFLO-2005-00056, "Focused Self-Assessment Inservice Inspection Program"

Section 1R11: Licensed Operator Requalification Program

72050-0, Technical Specification Instrument Failure, Loss of 10700 Bus, Small Leak Inside Drywell with EOP-2/4, Residual Transfer with failure of HPCI, Emergency Depressurization

Section 1R12: Maintenance Effectiveness

JENG-06-0181, "R17 Post-Outage Containment Leakage Testing Report"

JENG-APL-05-010, "Reactor Building Closed Loop Cooling Containment Isolation Valve Action Plan," Revision 0

JAF-RPT-MULTI-02294, "Maintenance Rule Basis Document for System 046 Service Water Systems," Revision 6

JAF-RPT-PC-02736, "Maintenance Rule Basis Document for Systems 016 and 016-1 Primary Containment and Primary Containment Leak Rate Test Instrumentation Systems Containment, Indication, and Isolation Functions," Revision 5

Section 1R17: Permanent Plant Modifications

Modification ER-JAF-05-25576, "HPCI Turbine Steam Exhaust Line Sparger"

JAF-CALC-06-00030, "JAFNPP Structural Qualification of HPCI Turbine Steam Exhaust Piping From The Turbine to the Sparger in Torus," Revision 0

JAF-CALC-06-00028, "Hydraulic analysis of HPCI Exhaust Line," Revision 1

JAF-CALC-06-00048, "Torus Suppression Pool Analysis," Revision 0

3.74-15, "Sparger Installation Details HPCI Turbine Exhaust Mod to 24" HPCI Line at X-214," Revision 0

3.74-16, "Sparger Fabrication Details HPCI Turbine Exhaust Mod to 24" HPCI Line at X-214," Revision 0

3.74-17, "Sparger Fabrication and Instrument Notes HPCI Turbine Exhaust Mod to 24" HPCI Line at X-214," Revision 0

FM-25A, "Flow Diagram High Pressure Coolant Injection System 23," Revision 68

Modification ER-JAF-05-19832, "Replace HPCI Steam Supply Outboard CIV 23MOV-16"

JAF-CALC-HPCI-01997, "Thrust and Torque Limits Calculation for 23MOV-16," Revision 6

JAF-CALC-ELEC-02610, "125VDC Station Battery 'B' Sizing and Voltage Drop," Revision 2

JAF-RPT-05-00187, "Design Report and Weak Link Analysis, 10X8X10 Fig. B11511 (Component ID 23MOV-16)," Revision 0

JAF-CALC-HPCI-01826, "Reduced Voltage Analysis for 23MOV-16," Revision 3

Section 40A2: Identification and Resolution of Problems

EN-LI-102, "Corrective Action Process," Revision 8
 MP-059.07, "Testing of Relief and/or Safety Valves," Revision 17
 JSEM-93-031, "Investigation of Recurring Deficiencies with Reactor Protection System Electrical Protection Assemblies," Revision 1
 RICSIL No. 026, "Inoperative Electrical Protection Assembly Trip Function," dated July 26, 1988
 SIL No. 496, "Electrical Protection Assembly Performance," dated August 24, 1989
 SIL No. 496, "Electrical Protection Assembly Performance," Revision 1, dated September 14, 1990

Condition Reports

2004-04472	2006-05055	2006-04738
2005-02593	2006-05057	2006-03854
2005-02802	2006-05286	2006-04419
2005-04368	2006-04524	2006-04591
2005-04441	2006-04711	2006-04590
2005-04442	2006-04024	2006-04074
2005-04529	2006-02469	2006-04272
2006-03439	2006-04808	2006-04327
2006-03454	2006-04757	2006-04274
2005-00110	2006-04684	2006-04257
2006-04276	2006-04294	2006-04238
2006-04078	2006-04461	2006-03972
2001-04435	2006-03954	2006-03983
2004-00953	2006-04982	2006-04018
2004-05200	2006-04694	2006-03966
2004-05353	2006-04917	2006-03944
2005-01178	2006-05106	2006-03828
2005-03430	2006-04629	2006-03762
2005-02660	2006-04941	2006-03733
2006-01726	2006-04425	2006-03739
2006-03972	2006-03953	
2006-04492	2006-04893	
2006-04585	2006-03551	
2006-05023	2006-04824	
2006-05041	2006-03971	
2006-05054	2006-04739	

Section 40A7: Licensee-identified Violations

WO JAF-05-27731
 WO JF-03077800

ST-4N, "HPCI Quick Start, Inservice, and Transient Monitoring Test (IST)," Revision 53
 MP-023.14, "HPCI Turbine Minor Inspection, 23TU-2*," Revision 10

LIST OF ACRONYMS

ADAMS	agencywide documents access and management system
ALARA	as low as reasonably achievable
AOP	abnormal operating procedure
ASME	American Society of Mechanical Engineers
CAP	corrective action program
CEDE	committed effective dose equivalent
CR	condition report
DBD	design basis document
EDG	emergency diesel generator
EP	emergency preparedness
GL	generic letter
HPCI	high pressure coolant injection
HRA	high radiation area
HVAC	heating, ventilation and air conditioning
INPO	Institute of Nuclear Power Operations
IPE	Individual Plant Examination
ISI	in-service inspection
IST	in-service test
kV	kilovolt
MR	maintenance rule
MREM	millirem
MSPI	mitigating systems performance index
NCV	non-cited violation
NDE	non-destructive examination
NEI	nuclear energy institute
NRC	Nuclear Regulatory Commission
ODCM	off site dose calculation manual
PARS	publically available records
PI	performance indicator
PT	penetrant test
RCIC	reactor core isolation cooling
RETS	radiological effluent technical specification
RHR	residual heat removal
RP	radiation protection
RPS	reactor protection system
RWP	radiation work permit
SSC	structure, system, and component
TI	temporary instruction

TS	technical specification
UFSAR	Updated Final Safety Evaluation Report
UT	ultrasonic testing
WR	work request

ATTACHMENT 2

SUPPLEMENTAL INFORMATION

MITIGATING SYSTEM PERFORMANCE INDEX VERIFICATION

Question 1: For the sample selected, did the licensee accurately document the baseline planned unavailability hours for the MSPI systems?

Answer: Yes

Question 2: For the sample selected did the licensee accurately document the actual unavailability hours for the MSPI systems?

Answer: Yes

Question 3: For the sample selected, did the licensee accurately document the actual unreliability information for each MSPI monitored component?

Answer: Yes

Question 4: Did the inspector identify significant errors in the reported data, which resulted in a change to the indicated index color?

Answer: No

Question 5: Did the inspector identify significant discrepancies in the basis document which resulted in (1) a change to the system boundary; (2) an addition of a monitored component; or (3) a change in the reported index color?

Answer: No