



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
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KING OF PRUSSIA, PA 19406-1415

November 3, 2010

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

**SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - NRC INTEGRATED
INSPECTION REPORT 05000333/2010004**

Dear Mr. Dietrich:

On September 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your James A. FitzPatrick Nuclear Power Plant (FitzPatrick). The enclosed inspection report documents the inspection results which were discussed on October 19, 2010, 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, this report documents one NRC-identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because the issue is entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with Section 2.3.2 of the NRC's Enforcement Policy. If you contest this NCV, you should provide a response within 30 days of the date of the inspection report, with the basis for your denial, to the U. S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with a copy to the Regional Administrator, Region I; Office of Enforcement; U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Resident Inspector at FitzPatrick. In addition, if you disagree with the cross-cutting aspect assigned to the finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at FitzPatrick.

P. Dietrich

2

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Sincerely,

A handwritten signature in cursive script that reads "Mel Gray".

Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000333/2010004
w/Attachment: Supplemental Information

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Sincerely,

/RA/

Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

Docket No.: 50-333
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w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-333

License No.: DPR-59

Report No.: 05000333/2010004

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Scriba, New York

Dates: July 1 through September 30, 2010

Inspectors: E. Knutson, Senior Resident Inspector
S. Rutenkroger, PhD, Acting Senior Resident Inspector
D. Dodson, Acting Resident Inspector
T. Burns, Reactor Inspector

Approved by: Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS.....	3
REPORT DETAILS.....	4
1. REACTOR SAFETY	4
1R04 Equipment Alignment.....	4
1R05 Fire Protection.....	5
1R06 Flood Protection Measures.....	8
1R08 Inservice Inspection Activities.....	8
1R11 Licensed Operator Requalification Program	10
1R12 Maintenance Effectiveness.....	10
1R13 Maintenance Risk Assessments and Emergent Work Control	11
1R15 Operability Evaluations.....	12
1R18 Plant Modifications	13
1R19 Post-Maintenance Testing.....	13
1R20 Refueling and Other Outage Activities.....	14
1R22 Surveillance Testing.....	15
1EP6 Drill Evaluation	15
4. OTHER ACTIVITIES.....	16
4OA2 Identification and Resolution of Problems.....	16
4OA3 Follow-up of Events and Notices of Enforcement Discretion.....	17
4OA6 Meetings, Including Exit	17
4OA7 Licensee-Identified Violations.....	18
ATTACHMENT: SUPPLEMENTAL INFORMATION	18
SUPPLEMENTAL INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPEN, CLOSED, AND DISCUSSED.....	A-1
LIST OF DOCUMENTS REVIEWED	A-2
LIST OF ACRONYMS.....	A-6

SUMMARY OF FINDINGS

IR 05000333/2010004; 07/01/2010 - 09/30/2010; James A. FitzPatrick Nuclear Power Plant; Fire Protection.

The report covered a three-month period of inspection by resident inspectors and announced inspections by region-based inspectors. One Green finding, which was a non-cited violation, was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect for the finding was determined using IMC 0310, "Components Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be "Green" or be assigned a severity level after Nuclear Regulatory Commission (NRC) management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Mitigating Systems

- **Green:** The inspectors identified a non-cited violation (NCV) of very low safety significance of license condition 2.C(3), "Fire Protection," because Entergy personnel blocked a fire door in the open position, defeating its three hour fire barrier function, without establishing the required compensatory measures. Entergy personnel entered this issue into their corrective action program (CAP) as CR-JAF-2010-04825, issued a night order emphasizing the requirements associated with propping open fire doors, provided coaching, and submitted a procedure change request to further clarify procedural applicability requirements.

This finding is more than minor because it is associated with the protection against external events attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the fire door being affixed open without the knowledge of the control room personnel and other operators and without an assigned fire watch resulted in a barrier to fire propagation that was less robust than required by the NRC approved fire protection program. The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1. The finding was determined to be of very low safety significance (Green) because the deficiency represented a low degradation rating. Specifically, the individuals involved were members of the fire brigade, qualified in fire watch duties, and only blocked the door open during resin container transfers. The inspectors determined this finding had a cross-cutting aspect in the area of human performance within the work practices component because Entergy did not effectively communicate expectations to personnel regarding the applicable procedures and personnel did not follow the procedures (H.4(b)). (Section 1R05)

Other Findings

- A violation of very low safety significance was identified by Entergy staff and has been reviewed by the inspectors. Corrective actions taken or planned by Entergy staff have been entered into Entergy's CAP. This violation and the CAP tracking number are listed in Section 4OA7 of this report.

Enclosure

REPORT DETAILS

Summary of Plant Status

The James A. FitzPatrick Nuclear Power Plant (FitzPatrick) began the inspection period operating at 100 percent reactor power. On August 16, 2010, operators reduced reactor power to 38 percent following an unplanned trip of the 'A' reactor water recirculation (RWR) system pump. Following repair of the associated RWR motor-generator (MG), operators restored power to the maximum achievable power (approximately 97 percent due to fuel depletion near the end of the operating cycle) on August 20, 2010. On August 23, 2010, operators reduced reactor power to 55 percent to identify and plug leaking main condenser tubes. Following repairs, operators restored power to the maximum achievable power (approximately 95 percent) on August 25, 2010. In addition to the above power reductions, the plant also conducted scheduled power reductions for control rod pattern adjustments. On September 12, 2010, operators shut down the reactor to conduct a refueling outage. The reactor remained shut down for the remainder of the inspection period.

1. REACTOR SAFETY**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**1R04 Equipment Alignment (71111.04).1 Quarterly Partial System Walkdown (71111.04Q - 4 samples)a. Inspection Scope

The inspectors performed four 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 system procedures, the updated final safety analysis report (UFSAR), and system drawings in order to verify 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 (WOs) to ensure that Entergy personnel identified and properly addressed equipment discrepancies that could impair the capability of the available equipment train, as required by 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." The documents reviewed are listed in the Attachment. The inspectors performed a partial walkdown of the following systems:

- 'B' core spray system when 'A' core spray system was out of service for maintenance;
- 'A' residual heat removal (RHR) system following maintenance activity and scaffold construction within the east and west crescent areas;
- 'A' RHR service water (RHRSW) system when 'B' RHRSW system was out of service for welding to replace a thinned section of the strainer; and
- 'B' 125 volt direct current (VDC) system while the 'A' 125 VDC system was out of service for testing and preventive maintenance during the refueling outage.

These activities constituted four partial system walkdown inspection samples.

Enclosure

b. Findings

No findings were identified.

.2 Complete System Walkdown (71111.04S - 1 sample)

a. Inspection Scope

The inspectors performed a complete system alignment inspection of the standby liquid control (SLC) system to identify discrepancies between the existing equipment lineup and the required lineup. During the inspection, system drawings and operating procedures were used to verify proper equipment alignment and operational status. The inspectors reviewed the open maintenance WOs associated with the system for deficiencies that could affect the ability of the system to perform its function. Documentation associated with unresolved design issues such as temporary modifications, operator workarounds, and items tracked by plant engineering were also reviewed by the inspectors to assess their collective impact on system operation. In addition, the inspectors reviewed the CAP database to verify that equipment problems were being identified and appropriately resolved. The documents reviewed are listed in the Attachment.

These activities constituted one complete system walkdown inspection sample.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Review (71111.05Q - 6 samples)

a. Inspection Scope

The inspectors conducted inspections of fire areas to assess the material condition and operational status of fire protection features. The inspectors verified, consistent with applicable administrative procedures, that combustibles and ignition sources were adequately controlled; passive fire barriers, manual fire-fighting equipment, and suppression and detection equipment were appropriately maintained; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with FitzPatrick's fire protection program. The inspectors evaluated the fire protection program for conformance with the requirements of license condition 2.C(3), "Fire Protection." The documents reviewed are listed in the Attachment.

- Fire area/zone IB/SH-1;
- Fire area/zone IB/FP-1 and IB/FP-3;
- Fire area/zone II/SW-2;
- Fire area/zone IC/SW-1;
- Fire area/zone IE/TB-1; and
- Fire area/zone XIV/PC-1.

These activities constituted six quarterly fire protection inspection samples.

Enclosure

b. Findings

Introduction: The inspectors identified a NCV of very low safety significance of operating license condition 2.C(3), "Fire Protection," because Entergy personnel did not implement and maintain in effect all provisions of the NRC approved fire protection program. Specifically, a fire door was affixed in the open position, defeating its required three hour fire barrier function, without establishing the required compensatory measures.

Description: On August 24, 2010, Entergy personnel were transferring containers of resin from the screenwell house, fire area IB, through Appendix R classified fire door 76FDR-RW-272-11, to the radwaste building, fire area 19. The inspectors identified that Entergy personnel had used a rope to hold the door in the open position as containers of resin were retrieved away from the immediate area and then transported through the opening. In addition, the inspectors noted that no breach permit nor fire watch paperwork was present at the location. Finally, the inspectors verified that the control room had not been notified of the breach and had not entered the appropriate technical requirements manual (TRM) action statement, TRM 3.7.M, in order to apply the required compensatory measures. These measures would have included verifying fire detectors were operable and establishing an hourly fire watch, or establishing a continuous fire watch.

The inspectors also noted that 76FDR-RW-272-11 is classified as a secondary high energy line break (HELB) barrier. In accordance with AP-14.04, "Fire Penetration Breach Permit," and AP-16.14, "Hazard Barrier Controls," this breach of a secondary HELB barrier door required a fire penetration breach permit which would have verified that the primary HELB barrier door had not already been breached. Although this verification was not performed, the primary HELB barrier door had remained operable.

Entergy's staff performed a human performance error review and determined that the personnel involved had inappropriately assumed that propping and/or blocking this door open without contacting the control room for authorization was allowed by procedures when performing resin container transfers from the screenwell house to the radwaste building. In addition, multiple other personnel had also been regularly blocking the door open for these transfers without obtaining control room authorization. However, the individuals responsible for transfers of resin containers were members of the fire brigade, qualified in fire watch duties, and only blocked the door open during these transfers.

Entergy personnel entered this issue into their CAP as CR-JAF-2010-04825 and issued directions to operators emphasizing the requirement to enter the applicable TRM action statement prior to opening a fire door for a period of time beyond that required for momentary passage of personnel. The directions to the operators also stressed that this requirement ensures that fire barriers are properly evaluated and required compensatory measures are in place. Entergy management also provided coaching and submitted a procedure change request to further clarify procedural applicability requirements.

Analysis: The inspectors identified a performance deficiency in that Entergy personnel affixed a fire door in the open position, defeating its required three hour fire barrier function, without establishing the required administrative controls. This finding is greater than minor because it is associated with the protection against external events attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure

the availability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the fire door being affixed open without the knowledge of the control room personnel and other operators and without an assigned fire watch resulted in a barrier to fire propagation that was less robust than required by the approved fire protection program.

The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1. The finding was determined to be of very low safety significance (Green) because the deficiency represented a low degradation rating. Specifically, the individuals involved were members of the fire brigade, qualified in fire watch duties, and only blocked the door open during resin container transfers.

The inspectors determined this finding had a cross-cutting aspect in the area of human performance within the work practices component because Entergy did not effectively communicate expectations to personnel regarding the applicable procedures and personnel did not follow the procedures (H.4(b)).

Enforcement: License condition 2.C(3) requires, in part, that Entergy shall implement and maintain in effect all provisions of the approved fire protection program. A provision of the approved fire protection program is maintaining a qualified three hour fire door, 76FDR-RW-272-11, in accordance with TRM 3.7.M. Contrary to the above, on August 24, 2010, 76FDR-RW-272-11 was affixed in the open position, defeating its required three hour fire barrier function, without performing the actions required by TRM 3.7.M. Because this violation was of very low safety significance and was entered into the CAP as CR-JAF-2010-04825, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000333/2010004-01: Appendix R Fire Door Blocked Open Without Establishing Required Measures)**

.2 Annual Inspection (71111.05A - 1 sample)

a. Inspection Scope

The inspectors observed an announced fire drill conducted on August 22, 2010. The inspection included the post-drill critique and review of the disposition of issues and deficiencies that were identified. The drill was observed to evaluate the capability of the fire brigade to fight fires. Specific attributes evaluated were: (1) control room response; (2) effectiveness of fire brigade leader communications, command and control and utilization of pre-planned strategies; (3) proper wearing of turnout gear and self-contained breathing apparatus; (4) proper use and layout of fire hoses; (5) sufficient firefighting equipment brought to the scene; (6) employment of appropriate fire fighting techniques; (7) search for victims and propagation of the fire into other plant areas; (8) smoke removal operations; and (9) proper storage of firefighting equipment. The inspectors evaluated the fire brigade capability to meet the requirements of 10 CFR Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."

These activities constituted one annual fire protection inspection sample.

Enclosure

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

a. Inspection Scope

The inspectors conducted tours of the east and west electric bays, and adjacent areas of the 272 foot elevation of the TB, to assess internal flooding protection measures in those areas. The inspectors reviewed selected risk significant plant design features intended to protect the associated safety-related equipment from internal flooding events. The inspectors reviewed flood analysis and design documents, including the Individual Plant Examination and UFSAR.

These activities constituted one internal flood protection measures inspection sample.

b. Findings

No findings were identified.

1R08 Inservice Inspection Activities (71111.08 - 1 sample)

a. Inspection Scope

The inspectors assessed the effectiveness of Entergy's inservice inspection (ISI) program for monitoring degradation of reactor pressure vessel internals, reactor coolant system boundary, risk significant piping system boundaries, and containment boundary. The inspectors assessed the ISI activities using requirements and acceptance criteria for component examination specified in the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, and applicable NRC regulatory requirements.

The inspectors selected a sample of nondestructive examination (NDE) activities to perform a documentation review of those NDE activities for compliance with the requirements of the ASME Boiler and Pressure Vessel Code, Section XI. The sample selection was based on the inspection procedure objectives, sample availability, and risk priority of those components and systems wherein degradation could result in a significant increase in risk of core damage. The inspectors verified by observation and documentation review that test procedures and examiner qualifications had been reviewed and approved for use by Entergy. The inspectors verified a sample of these procedures and qualifications were current and in accordance with the ASME Code requirements. In addition, the inspectors determined that the examiners had been trained and qualified in the use of the performance demonstration initiative manual ultrasonic test procedures. The inspectors reviewed and compared a sample of indication notification forms (INF) from the current refueling outage and indication notification reports from prior refueling outages. Also, the inspectors evaluated Entergy's effectiveness in the identification and resolution of relevant indications discovered during the observed ISI activities through a sample of CRs. The inspectors observed the following NDE activities and reviewed the associated documents:

- Ultrasonic test, manual examination (RHR system, pipe to elbow, carbon steel to carbon steel ferritic piping weld, ID 20-10-122);
- Ultrasonic test, manual phased array examination (RHR system, AOV-68A, pipe to valve, twenty-four inch dissimilar metal butt weld, drawing MSK-3013);
- Magnetic particle test (RHR system, elbow to pipe, carbon steel to carbon steel butt weld, ID 20-10-122, drawing MSK 3011);
- Liquid penetrant test of the root and final weld passes (reactor building ventilation and cooling system, ID C10-173, weld #1, drawing ISI-FB-10H); and
- Visual examination (VT-1) of reactor pressure vessel internals, including jet pumps, structural members, steam dryer, and attachments.

The inspectors reviewed visual inspection results of selected in-vessel components (jet pumps, structural members, miscellaneous attachments and other base metals and welds made to secure and support components) in order to assess the test equipment performance (visual resolution), examination technique, and the quality of the inspection environment (water clarity). The inspectors performed a review of in-vessel component non-conforming conditions identified in INF-10-07 and INF-UT-01. The inspectors compared these indications to those identified in 2004 to verify that there was no growth, nor extension, of indications into new material. The inspectors reviewed the associated CRs to evaluate the characterization and disposition of relevant indications identified during this inspection.

The inspectors reviewed the following ASME Section XI repair/replacement plans for welding performed on a safety related pressure boundary:

- WO 241657-01, initiated for the repair of a leaking weld on the discharge piping in the RHRSW system. This repair involved removal of the failed weld and restoring the joint wall thickness to the original specifications. The applicable code for acceptance was ASME Section XI, ISI Class 3; and
- WO 210904-01, initiated to repair tube sheet covers and wall thinning of piping on Unit Cooler 22F, System 66, reactor building normal ventilation. The welding was carbon steel to carbon steel, using WPS CS-1/1-A, revision 3, and CS-1/1-B. The applicable code for acceptance was ASME Section XI, ISI Class 3.

The inspectors evaluated the following characteristics of the two ASME Section XI repair/replacement plans in accordance with ASME Section XI:

- Qualification and control of the welding process specified in the work orders;
- Weld procedures and welders assigned to perform the work; and
- Specified weld examinations and acceptance criteria.

Finally, the inspectors performed a visual evaluation of the primary containment liner, including attached structural members, and assessed the condition of the protective coating. The inspectors examined accessible locations on the 268 and 292 foot elevations, including unobstructed areas above and below. The inspectors evaluated the material conditions with respect to the extent of any peeling, blistering, or coating loss, or any other damage resulting from corrosion, foreign material impact, or lack of maintenance.

The documents reviewed are listed in the Attachment.

Enclosure

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q - 1 sample)

a. Inspection Scope

On July 26, 2010, the inspectors observed licensed operator simulator training to assess operator performance during scenarios to verify that crew 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. Licensed operator training was evaluated for conformance with the requirements of 10 CFR Part 55, "Operators' Licenses." The document reviewed is listed in the Attachment.

These activities constituted one quarterly operator simulator training inspection sample.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 1 sample)

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. The reviews focused on the following aspects when applicable:

- Proper maintenance rule scoping in accordance with 10 CFR Part 50.65;
- Characterization of reliability issues;
- Changing system and component unavailability;
- 10 CFR Part 50.65 (a)(1) and (a)(2) classifications;
- Identifying and addressing common cause failures;
- 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 documents reviewed are listed in the Attachment. The reactor feedwater system was selected for review.

These activities constituted one quarterly maintenance effectiveness inspection sample.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 7 samples)a. Inspection Scope

The inspectors reviewed maintenance 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 Part 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 the Attachment.

- The week of July 19, 2010, that included 'A' and 'C' emergency diesel generator (EDG) monthly surveillance testing, lubrication of the 'A' reactor feedwater pump motor gear unit, primary containment isolation system instrument surveillance tests, a power reduction to 65 percent for a control rod pattern adjustment, and emergent maintenance to overhaul the actuator for a motor operated isolation valve in the main steam leak collection system (29MOV-202B), and to troubleshoot a speed control issue with the 120 volt alternating current uninterruptible power supply motor-generator (71UPS-1).
- The week of August 2, 2010, that included a power reduction to 70 percent for a control rod pattern adjustment, 'B' and 'D' EDG monthly surveillance testing, overhaul of the 'A' control rod drive system pump, high pressure coolant injection (HPCI) and standby gas treatment system logic testing, and a one day maintenance period for the 'B' core spray system.
- The week of August 9, 2010, that included a power reduction to 73 percent for a control rod pattern adjustment and turbine valve testing, calibration of the average power range monitor system, emergency service water system quarterly surveillance testing, and 'B' low pressure coolant injection (LPCI) motor operated valve independent power supply monthly surveillance test.
- The week of August 16, 2010, that included an 'A' and 'C' EDG monthly surveillance test, preparation of the decay heat removal system for use during the refueling outage, 'A' LPCI motor operated valve independent power supply monthly surveillance test, 'A' RHR and RHRSW quarterly surveillance tests, 'A' containment air dilution system quarterly surveillance test, and emergent maintenance to troubleshoot and repair the 'A' RWR MG following an unplanned trip of the 'A' RWR pump.
- The week of August 23, 2010, that included a power reduction to 55 percent to plug leaking main condenser tubes, and quarterly functional testing and calibration of the trip system that initiates the reactor protection, primary containment isolation, and secondary containment isolation systems.

- The week of August 30, 2010, that included a leakage test of the 'B' LPCI inboard injection valve (10MOV-25B), 'B' RHR and RHRSW quarterly surveillance tests, 'B' core spray quarterly surveillance test, 'B' SLC system quarterly surveillance test, remote shutdown panel component operation and isolation verification surveillance test, and emergent maintenance to correct a failure of the 'B' LPCI outboard injection valve (10MOV-27B) to open, repair a steam leak from reactor core isolation cooling (RCIC) steam supply trap bypass valve (13AOV-32), and replace a failed relay in the 'B' RHR low pressure injection permissive logic circuit.
- The week of September 6, 2010, that included 'B' and 'D' EDG monthly surveillance test and loss of coolant accident bypass of the shutdown logic functional test, 'A' core spray quarterly surveillance test, 'A' SLC quarterly surveillance test, RPS and PCIS trip system instrumentation quarterly surveillance tests, a leakage test of the 'A' LPCI inboard injection valve, and emergent maintenance to investigate a degrading trend in the start times for the 'A' and 'C' EDGs.

These activities constituted seven maintenance risk assessments and emergent work control inspection samples.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

The inspectors reviewed operability determinations to assess the acceptability of the evaluations; the use and control of applicable compensatory measures; and compliance with technical specifications (TSs). The inspectors' review included verification that the operability determinations were conducted as specified by EN-OP-104, "Operability Determinations." The technical adequacy of the determinations was reviewed and compared to the TSs, UFSAR, and associated design basis documents (DBDs).

- CR-JAF-2010-03935 and CR-JAF-2010-03949, 10EXJ-4C, the RHRSW pump 'C' discharge expansion joint has surface cracks;
- CR-JAF-2010-04437, a warehouse pallet cart staged for moving support materials in the event of an emergency does not function;
- CR-JAF-2010-04660, the start time for the 'A' and 'C' EDGs was abnormally long but within TS requirements;
- CR-JAF-2010-04935, steam leakage significantly increased from the packing of 13AOV-32, RCIC steam supply trap bypass valve; and
- CR-JAF-2005-00109, concerning continued operability of the two station reserve transformers during the next operating cycle, in light of the decision to not replace them during the current refueling outage.

These activities constituted five operability evaluation inspection samples.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 1 sample)a. Inspection Scope

The inspectors reviewed temporary modification EC-21101, "Install temporary isolation valve downstream of 03HCU-111 for HCU [hydraulic control unit] 06-43," to ensure it did not adversely affect the availability, reliability, or functional capability of any risk-significant SSCs and assessed the adequacy of the 10 CFR 50.59 evaluation. The inspectors reviewed the engineering change package, walked down the area, interviewed various personnel, and compared the installation and control of the modification to the procedural requirements. The inspectors also verified that the installation was consistent with the modification documentation; that the drawings and procedures were updated as applicable; and that the post-installation testing was adequate.

These activities constituted one temporary plant modification inspection sample.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 7 samples)a. Inspection Scope

The inspectors reviewed 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 DBDs; test instrumentation had current calibrations, adequate 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 (PMT) was evaluated for conformance with the requirements of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The documents reviewed are listed in the Attachment.

- WO 00150427, performing preventive maintenance and calibrations on 13INV-801B, RCIC instrument direct current power inverter;
- WO 00247486, replacing the 'A' RWR MG tachometer generator following an unplanned trip of the 'A' RWR pump;
- WO 00241657, removing a thinned and leaking section and welding new replacement material in 10S-5B1, 'B' RHRSW strainer;
- WO 00239455, replacing the actuator of 70TCV-121A, control room AHU-3A outlet temperature control valve operator;

- WO 00243906, performing corrective maintenance on 29MOV-202B, main steam leakage collection system 'B' to standby gas treatment downstream isolation valve;
- WO 00248972, performing corrective maintenance on 10MOV-27B, LPCI outboard injection valve; and
- WO 00188885, replacing the 'A' EDG governor control system.

These activities constituted seven PMT inspection samples.

b. Findings

No findings were identified.

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

a. Inspection Scope

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

- Prior to the refueling outage, the inspectors reviewed how workers' hours would be managed and how the program would be used to monitor fatigue during the outage. During the refueling outage, the inspectors discussed with workers and supervisors how fatigue was being managed, to ensure they were aware of their limits and responsibilities, and to discuss waiver requests, deviations, self declarations and fatigue assessments.
- The inspectors reviewed the outage schedule and procedures, and verified that TS required safety system availability was maintained and shutdown risk was minimized. The inspectors verified that contingency plans existed for restoring key safety functions during periods of reduced system redundancy.
- The inspectors observed portions of the plant shutdown and cooldown, and verified that the TS cooldown rate limits were satisfied.
- Through plant tours, the inspectors verified that Entergy personnel maintained and adequately protected electrical power supplies to safety related equipment and that TS requirements were met.
- The inspectors verified proper alignment and operation of shutdown cooling and other 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 verified that requirements for refueling operations were met through refuel bridge observations, control room panel walkdowns, and discussions with operations department personnel.

The outage was in progress at the end of the inspection period, therefore this sample will be completed during the next inspection period.

Enclosure

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 - 7 samples)a. Inspection Scope

The inspectors witnessed performance of surveillance tests (STs) and/or reviewed test data of selected risk-significant SSCs to assess whether the SSCs satisfied TSs, UFSAR, TRM, and FitzPatrick procedure requirements. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness, and were consistent with DBDs; test instrumentation had current calibrations, adequate range, and accuracy for the application; and tests were performed, as written, with applicable prerequisites satisfied. Upon ST completion, the inspectors verified that equipment was returned to the status specified to perform its safety function. The following STs were reviewed:

- RP-RESP-03.01, "Drywell Continuous Atmospheric Monitoring System," Revision 30;
- ST-4E, "HPCI and SGT [Standby Gas Treatment] Logic System Functional and Simulated Automatic Actuation Test," Revision 54;
- ST-2AO, "RHR Loop B Monthly Operability Test," Revision 14;
- ST-24J, "RCIC Flow Rate and Inservice Test (IST)," Revision 39;
- ST-9BA, "EDG A and C Full Load Test and ESW Pump Operability Test," Revision 11;
- ST-1B, "MSIV Fast Closure Test (IST)," Revision 25; and
- ST-39B-X7A, "Type C Leak Test Main Steam Line A MSIVs (IST), Revision 13.

These activities represented seven surveillance testing inspection samples.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness1EP6 Drill Evaluation (71114.06 - 1 sample)a. Inspection Scope

The inspectors observed simulator activities associated with licensed operator requalification training on July 26, 2010. The inspectors verified that emergency classification declarations and notifications were properly completed. The inspectors evaluated the drill for conformance with the requirements of 10 CFR Part 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities." The inspectors observed the training instructors' critique and compared Entergy's self-identified issues with observations from the inspectors' review to ensure that performance issues were properly identified.

These activities represented one drill evaluation inspection sample.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

4OA2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," to 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 CAP. The review was accomplished by accessing Entergy's computerized database for CRs and attending CR screening meetings. In accordance with the baseline inspection procedures, the inspectors selected items across the Initiating Events, Mitigating Systems, Barrier Integrity, and Public Radiation Safety cornerstones for additional follow-up and review. The inspectors assessed Entergy personnel's threshold for problem identification, the adequacy of the cause analyses, and extent of condition review, operability determinations, and the timeliness of the specified corrective actions. The CRs reviewed are listed in the Attachment.

b. Findings and Observations

No findings were identified. The inspectors determined that Entergy's staff identified equipment, human performance, and program issues at an appropriate threshold and entered them into the CAP.

.2 Annual Sample: Review of Indications in Steam Dryer Welds

a. Inspection Scope (1 sample)

The inspectors reviewed INF JAF-R19-INF-10-07, "Steam Dryer Vibration Blocks SDVB 1 thru 8," for evaluation of flaw identification, characterization, and placement into the CAP. The remote in vessel visual inspection of the reactor steam dryer welds revealed cracks of the attachment fillet welds in each of the eight steam dryer vibration blocks. These cracks were previously identified in refueling outages 16, 17, and 18 (2004 through 2008) and were dispositioned as "accept as is" for at least one additional outage. This disposition was supported by calculation JAF-CALC-04-00516, revision 0, dated October 15, 2004. Entergy personnel performed visual inspections of these components during every subsequent refueling outage, including the current refueling outage, and found no discernible change in the number, location, orientation, and size of the indications.

The indications were characterized as linear, located in the heat affected zone of the eight vibration block fillet welds at the top of steam dryer bank 3. Indications were characterized as having resulted from intergranular stress corrosion. The inspectors reviewed the materials of construction, flaw locations, weld metal profiles, and condition

of the adjacent base materials. The inspectors determined that the flaws identified were characterized appropriately and entered into Entergy's CAP.

b. Findings and Observations

No findings were identified. The inspectors determined that Entergy's staff identified the issues at an appropriate threshold, entered them into the CAP, and monitored them appropriately.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153 - 1 sample)

(Closed) LER 05000333/2010001-00, Residual Heat Removal and Core Spray Safety Valves Fail to Meet IST Acceptance Criteria

On March 22, 2010, Entergy personnel identified that the plant had operated with safety valves in the RHR and core spray (CS) systems which had repetitive failures to meet inservice testing (IST) requirements which should have resulted in declaring the residual heat removal and core spray subsystems inoperable in accordance with TS 3.5.1. TS 3.5.1 requires each emergency core cooling system injection/spray subsystem to be operable or specified actions to be completed within given time limits, and these conditions were not met.

Entergy personnel identified that 10SV-35A, RHR loop A safety valve, had failed to meet IST criteria on February 5, 2010, as well as four of eleven as-found tests since 1981; 10S-35B, RHR loop B safety valve, had failed to meet IST criteria on March 22, 2010, as well as three of nine as-found tests since 1981; and 14SV-20A had failed to meet IST criteria on March 30, 2010, as well as two of four as-found tests since 1990. Entergy's apparent cause evaluations determined that disc to seat bonding and internal binding had caused increases in the pressure required to lift the safety valves by up to 13%. Entergy's evaluations also determined that the IST acceptance criteria that were used were unnecessarily restrictive by using the default +/- 3% tolerance of nameplate pressure rather than more relaxed test limits specified by the owner based on system requirements that are allowed by code.

The significance of the failed IST tests was mitigated by the fact that the maximum operating pressure of the RHR and CS systems is 590 psig and the highest as-found lift pressure was 340 psig for the RHR safety valves (300 psig nameplate pressure rating) and 530 psig for the CS safety valve (500 psig nameplate pressure rating). Corrective actions documented in CR-JAF-2010-01382 and CR-JAF-2010-01595 included performing an extent of condition review along with scheduling additional testing and initiating actions to establish IST acceptance criteria based on pipe class pressure limits rather than +/- 3% of nameplate ratings. This licensee-identified finding involved a violation of TS 3.5.1, "ECCS-Operating." The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. P. Dietrich and other members of Entergy's management at the conclusion of the inspection on October 19, 2010. The

Enclosure

inspectors asked Entergy personnel whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified by Entergy's personnel.

40A7 Licensee-Identified Violations

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

TS 3.5.1 requires that with two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than one low pressure injection pump in both low pressure injection subsystems inoperable that LCO 3.0.3 must be entered immediately. Contrary to this, on March 22, 2010, Entergy personnel identified that they had not complied with TS 3.5.1 for various periods of time since 1981, including most recently from February 5, 2010. Entergy personnel documented this condition in CR-JAF-2010-01382 and CR-JAF-2010-01595. The inspectors evaluated this finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the condition was of very low safety significance (Green) because it did not result in the loss of the overpressure relief safety function in either the RHR or CS systems.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

P. Dietrich, Site Vice President
B. Sullivan, General Manager, Plant Operations
M. Woodby, Director, Engineering
B. Finn, Director Nuclear Safety Assurance
C. Adner, Manager Operations
J. LaPlante, Manager, Security
J. Barnes, Manager, Training and Development
T. Raymond, Manager Project Management
M. Reno, Manager Maintenance
C. Brown, Quality Assurance Manager, Entergy
P. Cullinan, Manager, Emergency Preparedness
V. Bacanskas, Manager Design Engineering
D. Poulin, Manager, System Engineering
P. Scanlon, Manager Programs and Components Engineering
J. Pechacek, Licensing Manager
D. Perry, Manager Radiation Protection

LIST OF ITEMS OPEN, CLOSED, AND DISCUSSED

Opened and Closed

05000333/2010004-01	NCV	Appendix R Fire Door Blocked Open Without Establishing Required Measures
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Closed

05000333/2010001-00	LER	Residual Heat Removal and Core Spray Safety Valves Fail to Meet IST Acceptance Criteria
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Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1RO4: Equipment Alignment

System Health Report, 11 Standby Liquid Control, 2nd quarter 2010

AP-12.12, "Protected Equipment Program," Revision 7

OP-14, "Core Spray System," Revision 32

OP-17, "Standby Liquid Control System," Revision 48

FM-23A, "Flow Diagram, Core Spray System 14"

FM-21A, "Flow Diagram, Standby Liquid Control System 11"

EC 19130

EC 18694

Condition Reports

CR-JAF-2008-3614

CR-JAF-2008-4421

CR-JAF-2009-1600

CR-JAF-2009-3098

CR-JAF-2010-2557

CR-JAF-2010-4194

Work Orders

00153427

52268026

51103323

00237645

Section 1RO5: Fire Protection

JAF-RPT-04-00478, "JAF Fire Hazards Analysis," Revision 2

JAF Safe Shutdown Analysis Report, Revision 1

PFP-PWR17, "Drywell / Elev. 256' Fire Area/Zone XIV/PC-1," Revision 0

PFP-PWR18, "Drywell / Elev. 268' Fire Area/Zone XIV/PC-1," Revision 0

PFP-PWR19, "Drywell / Elev. 292' Fire Area/Zone XIV/PC-1," Revision 0

PFP-PWR33, "Pump Rooms (Screenwell) Elev. 255' Fire Area Zone XII/SP-1, XIII/SP-2, IB/FP-1, FP-3," Revision 1

PFP-PWR34, "Screenwell House and Water Treatment Area Elev. 235', 255', and 260' Fire Area Zone IB/SH-1," Revision 3

PFP-PWR35, "Screenwell House and Water Treatment Area Elev. 272' Fire Area Zone IB/SH-1," Revision 4

Section 1RO8: Inservice Inspection

NDT Examination Reports

I-10VE-001, "Ultrasonic Manual Phased Array Exam of weld 24-10-132 RHR system"

I-10UT-030, "Ultrasonic Manual Exam of N-2C-SE nozzle to safe end"

I-10UT-023, "Ultrasonic Manual Exam of weld 20-10-122, elbow/pipe RHR System"

I-10MT-017, "Magnetic Particle Exam of RHR pipe to elbow weld at elev. 268"

B-10PT017, "Liquid Penetrant Exam of piping welds Reactor Build Ventilation, 66UC-22F"

INR JAFR18-IVVI-08-01, "Visual (VT-1) Exam of steam dryer vibration block welding"

INF-10-07, "Indication Notification of fillet welds of vibration blocks to steam dryer"

INF-UT-01, "Ultrasonic auto UT indications on jet pumps (1, 3, 8, 12 and 17)"

B-10PT058/59, "Liquid Penetrant Exam of root and final pass of weld 10S-5B1 RHR system"
NDT Examination Procedures

SI-UT-130, "Phased Array Ultrasonic Exam of Dissimilar Metal Welds," Revision 3
CEP-NDE-0640, "Liquid Penetrant Exam (PT) for ASME Section XI," Revision 5
CEP-NDE-0731, "Magnetic Particle Exam (MT) for ASME Section XI," Revision 3
CEP-NDE-0400, "Ultrasonic Exam Procedure for Fitzpatrick (Generic)," Revision 3
CEP-NDE-0404, "Ultrasonic Exam of Ferritic Piping Welds (ASME XI)," Revision 4
PRO-ISI-UT-0002, "Auto Ultrasonic Examination of Jet Pump Assembly Welds," Revision 1

Condition Reports

CR-JAF-2010-5925
CR-JAF-2004-4366
CR-JAF-2010-3442

Work Orders

00241657
00210904

Miscellaneous

UT PDI Qualifications for exam personnel
WPS CS-1/1-A, "Weld Procedure Specification for manual gas tungsten arc welding (GTAW) and shielded metal arc welding (SMAW) of carbon steel to itself, ASME Section XI," Revision 3
WPS CS-1/1-C, "Weld Procedure Specification for manual SMAW of carbon steel to itself," Revision 3
PQR 599, 600, 601, 602, 604, 604A Procedure Qualification Records supporting WPS CS 1/1- A and WPS CS-1/1-C ASME Section XI

Section 1R11: Licensed Operator Regualification Program

JSEG-SM-60815-1 R1

Section 1R12: Maintenance Effectiveness

Procedures:

EN-DC-203, "Maintenance Rule Program," Revision 1
EN-DC-204, "Maintenance Scope and Basis," Revision 2
EN-DC-205, "Maintenance Rule Monitoring," Revision 2
EN-DC-206, "Maintenance Rule (a)(1) Process," Revision 1

Documents:

Top Ten Equipment Reliability Issues: Reactor Feed Pump Seals
JAF-RPT-FWS-03079, "Maintenance Rule Basis Document System 34 Feedwater," Revision 2
JENG-APL-01-004, "Feedwater System Maintenance Rule (a)(1) Action Plan," Revision 10
System Health Report, 34 Feedwater, 3rd quarter 2009
System Health Report, 34 Feedwater, 4th quarter 2009
System Health Report, 34 Feedwater, 1st quarter 2010
System Health Report, 34 Feedwater, 2nd quarter 2010
Operational Decision Making Instruction (ODMI), "RFP 'A' and RFP 'B' Degraded Seal Monitoring and Resolution," dated February 20, 2010

Condition Reports:

CR-JAF-2008-1161
CR-JAF-2010-0817
CR-JAF-2010-1838
CR-JAF-2010-3774

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

AP-05.13, "Maintenance During LCOs," Revision 9
AP-10.10, "On-Line Risk Assessment," Revision 6
AP-12.12, "Protected Equipment Program," Revision 7
EN-WM-104, "On Line Risk Assessment," Revision 1

Section 1R15: Operability Evaluations

CR-JAF-2010-03949
CR-JAF-2010-04168
ST-9BA-090817-52198939
ST-9BA-090914-52203961
ST-9BA-091020-52209574
ST-9BA-091116-52217432
ST-9BA-091207-52222373
ST-9BA-100104-52198930
ST-9BA-100201-52230515
ST-9BA-100301-52235906
ST-9BA-100329-52244057
ST-9BA-100427-52250455
ST-9BA-100524-52256427
ST-9BA-100621-52262098
ST-9BA-100719-52230346
WO 020995300
WO 020995301

Section 1R18: Plant Modifications

EN-DC-136, "Temporary Modifications," Revision 5
EN-LI-100, "Process Applicability Determination," Revision 9

Section 1R19: Post Maintenance Testing

AP-05.07, "Post-Maintenance Testing (ISI)," Revision 41
EN-WM-107, "Post Maintenance Testing," Revision 2
EC 14094
MP-059.39, "Limitorque Motor Operator Model SB/SMB-000 Corrective and Overhaul
Maintenance Requirements," Revision 26
OP-27, "Recirculation System," Revision 68
ST-41FA, "HVAC A Control Valve Fail Position Test (IST)," Revision 1
ST-1MB, "B MSLCS Valve Exercise Test (IST)," Revision 0
ST-2AM, "RHR Loop B Quarterly Operability Test (IST)," Revision 29
CR-JAF-2010-04912
WO 00188885

Section 1R20: Refueling and Other Outage Activities

EN-OM-123, "Fatigue Management Program," Revision 2
AP-10.09, "Outage Risk Assessment," Revision 28
R19 Risk Assessment, Revision 1, dated September 1, 2010
NEA-04-065, "JAF Rotated SRM Quadrant Definition"

OSP-66.001, "Management of Refueling Activities," Revision 1

Section 4OA2: Identification and Resolution of Problems

Condition Reports:

CR-JAF-2010-3692	CR-JAF-2010-4632	CR-JAF-2010-5255
CR-JAF-2010-3781	CR-JAF-2010-4646	CR-JAF-2010-5256
CR-JAF-2010-3837	CR-JAF-2010-4658	CR-JAF-2010-5257
CR-JAF-2010-3847	CR-JAF-2010-4660	CR-JAF-2010-5272
CR-JAF-2010-3858	CR-JAF-2010-4688	CR-JAF-2010-5299
CR-JAF-2010-3895	CR-JAF-2010-4690	CR-JAF-2010-5306
CR-JAF-2010-3896	CR-JAF-2010-4797	CR-JAF-2010-5375
CR-JAF-2010-3935	CR-JAF-2010-4825	CR-JAF-2010-5413
CR-JAF-2010-3937	CR-JAF-2010-4907	CR-JAF-2010-5496
CR-JAF-2010-3949	CR-JAF-2010-4922	CR-JAF-2010-5500
CR-JAF-2010-3962	CR-JAF-2010-4935	CR-JAF-2010-5544
CR-JAF-2010-3975	CR-JAF-2010-4986	CR-JAF-2010-5565
CR-JAF-2010-4005	CR-JAF-2010-5060	CR-JAF-2010-5573
CR-JAF-2010-4159	CR-JAF-2010-5067	CR-JAF-2010-5588
CR-JAF-2010-4162	CR-JAF-2010-5073	CR-JAF-2010-5597
CR-JAF-2010-4175	CR-JAF-2010-5082	CR-JAF-2010-5601
CR-JAF-2010-4183	CR-JAF-2010-5097	CR-JAF-2010-5602
CR-JAF-2010-4217	CR-JAF-2010-5102	CR-JAF-2010-5671
CR-JAF-2010-4237	CR-JAF-2010-5106	CR-JAF-2010-5683
CR-JAF-2010-4251	CR-JAF-2010-5132	CR-JAF-2010-5705
CR-JAF-2010-4310	CR-JAF-2010-5186	CR-JAF-2010-5751
CR-JAF-2010-4408	CR-JAF-2010-5190	CR-JAF-2010-5771
CR-JAF-2010-4411	CR-JAF-2010-5191	CR-JAF-2010-5784
CR-JAF-2010-4437	CR-JAF-2010-5193	CR-JAF-2010-5817
CR-JAF-2010-4452	CR-JAF-2010-5195	CR-JAF-2010-5837
CR-JAF-2010-4474	CR-JAF-2010-5196	CR-JAF-2010-5850
CR-JAF-2010-4520	CR-JAF-2010-5198	CR-JAF-2010-5920
CR-JAF-2010-4540	CR-JAF-2010-5200	CR-JAF-2010-5962
CR-JAF-2010-4553	CR-JAF-2010-5201	CR-JAF-2010-6040
CR-JAF-2010-4581	CR-JAF-2010-5207	CR-JAF-2010-6252
CR-JAF-2010-4595	CR-JAF-2010-5229	CR-JAF-2010-6307
CR-JAF-2010-4618	CR-JAF-2010-5238	
CR-JAF-2010-4629	CR-JAF-2010-5247	

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CAP	corrective action program
CFR	Code of Federal Regulations
CR	condition report
DBD	design basis document
EDG	emergency diesel generator
Entergy	Entergy Nuclear Northeast
FitzPatrick	James A. FitzPatrick Nuclear Power Plant
HELB	high energy line break
HCU	hydraulic control unit
HPCI	high pressure coolant injection
IMC	inspection manual chapter
INF	indication notification form
ISI	inservice inspection
IST	inservice test
LCO	limiting condition for operation
LPCI	low pressure coolant injection
MG	motor-generator
NCV	non-cited violation
NDE	nondestructive examination
NRC	Nuclear Regulatory Commission
OA	other activities
PARS	Publicly Available Record
PMT	post-maintenance testing
RCIC	reactor core isolation cooling
RHR	residual heat removal
RWR	reactor water recirculation
SDP	significance determination process
SLC	standby liquid control
SSC	structures, systems, or components
ST	surveillance test
TB	turbine building
TRM	technical requirements manual
TS	technical specification
UFSAR	updated final safety analysis report
WO	work order