

September 9, 2009

Mr. Peter T. Dietrich
Site Vice President
Entergy Nuclear Northeast
James A. FitzPatrick Nuclear Power Plant
P.O. Box 100
Lycoming, NY 13093

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – NRC EVALUATION OF
CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT
MODIFICATIONS TEAM INSPECTION REPORT 05000333/2009006

Dear Mr. Dietrich:

On July 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the James A. FitzPatrick Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on July 30, 2009, 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. In conducting the inspection, the team reviewed selected procedures, calculations and records, observed activities, and interviewed station personnel.

Based on the results of this inspection, no findings of significance were identified.

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 NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure: Inspection Report 05000333/2009006
w/Supplemental Information

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Site Vice President
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cc w/encl:

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Vice President, Oversight, Entergy Nuclear Operations

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 50-333

License No: DPR-59

Report No: 05000333/2009006

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Scriba, New York

Dates: July 13, 2009 through July 30, 2009

Inspectors: A. Ziedonis, Reactor Inspector, Division of Reactor Safety (DRS),
Team Leader
K. Young, Senior Reactor Inspector, DRS
J. Tiff, Reactor Inspector, DRS

Approved by: Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000333/2009006; 07/13/2009 - 07/30/2009; James A. FitzPatrick Nuclear Power Plant; Engineering Specialist Plant Modifications Inspection.

This report covers a two week on-site inspection period of the evaluations of changes, tests, or experiments and permanent plant modifications. The inspection was conducted by three region based engineering inspectors. No findings of significance were identified. 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.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (Inspection Procedure (IP) 71111.17)

.1 Evaluations of Changes, Tests, or Experiments (25 samples)

a. Inspection Scope

The team reviewed two safety evaluations to determine whether the changes to the facility or procedures, as described in the Updated Final Safety Analysis Report (UFSAR), had been reviewed and documented in accordance with 10 CFR 50.59 requirements. In addition, the team evaluated whether Entergy had been required to obtain NRC approval prior to implementing the change. The team interviewed plant staff and reviewed supporting information including calculations, analyses, design change documentation, procedures, the UFSAR, technical specifications (TS), and plant drawings, to assess the adequacy of the safety evaluations. The team compared the safety evaluations and supporting documents to the guidance and methods provided in Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Evaluations," as endorsed by NRC Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," to determine the adequacy of the safety evaluations.

The team also reviewed a sample of twenty-three 10 CFR 50.59 screenings and applicability determinations for which Entergy had concluded that no safety evaluation was required. These reviews were performed to assess whether Entergy's threshold for performing safety evaluations was consistent with 10 CFR 50.59. The sample of issues inspected that had been screened out by Entergy included design changes, calculations, procedure changes, temporary alterations and setpoint changes.

The team reviewed all the safety evaluations Entergy had performed during the time period covered by this inspection (i.e., since the last modifications inspection). The screenings and applicability determinations were selected based on the safety significance, risk significance and complexity of the change to the facility.

In addition, the team compared Entergy's administrative procedures, used to control the screening, preparation, review, and approval of safety evaluations, to the guidance in NEI 96-07 to determine whether those procedures adequately implemented the requirements of 10 CFR 50.59. The reviewed safety evaluations, screenings, and applicability determinations are listed in the attachment.

b. Findings

No findings of significance were identified.

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.2 Permanent Plant Modifications (12 samples)

.2.1 'B' and 'D' Emergency Diesel Generator (EDG) Governor Control System Upgrade

a. Inspection Scope

The team reviewed a modification (EC 0906) that replaced the governor control systems for the 'B' and 'D' EDGs. Entergy implemented the modification because the previous governor control systems for the EDGs were no longer supported by the original equipment vendor, and the equipment obsolescence issues challenged the reliability of the EDGs. The modification included installation of new governor control system components including the governor actuator, the load sharing and speed control unit, and the digital reference unit. The team conducted the review to verify that the design bases, licensing bases and performance capability of the 'B' and 'D' EDGs had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed associated drawings, operating procedures, maintenance procedures, and training documents to ensure they had been properly updated to incorporate the changes to the 'B' and 'D' EDG governor control systems. The team also reviewed condition reports and EDG system health reports to determine if there were reliability or performance issues that may have resulted from the modification. In addition, post-modification testing and completed surveillance testing were reviewed to verify proper operation of the governor control system. The team performed a walkdown of the accessible components of the governor control systems to identify abnormal conditions. The team also discussed the modification and design basis with design and system engineers, maintenance personnel and operations staff to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.2 345 kV Breaker Upgrade

a. Inspection Scope

The team reviewed a modification (EC 2189) that replaced a 345 kV switchyard breaker associated with the Fitzpatrick – Edic 345 kV line. Entergy implemented the modification to upgrade the current rating of the breaker from 37 kiloamps (kAs) to 63 kAs as a result of grid growth in the Oswego area. The team conducted the review to verify that the design bases and performance capability of the breaker had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed associated drawings, operating procedures, maintenance procedures, and training documents to ensure they had been properly updated to incorporate the changes associated with the new breaker. The team reviewed post-

modification testing and completed surveillance testing to verify proper operation of the new breaker. The team performed a walkdown of the new breaker to identify abnormal conditions. The team also reviewed condition reports associated with the breaker to verify that deficiencies were appropriately identified and corrected. In addition, the team reviewed the respective alarm response procedures and annunciator windows for monitoring the new breaker to ensure they were revised in the control room and simulator as a result of this modification. The team also discussed the modification and design basis with design and system engineers, maintenance personnel and operations staff to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.3 High Pressure Coolant Injection (HPCI) System and Reactor Core Isolation Cooling (RCIC) System Reactor Vessel Level Indication

a. Inspection Scope

The team reviewed a modification (EC 5-18801) that provided indication for non-density compensated reactor vessel level in close proximity to the HPCI and RCIC flow controllers in the control room. Entergy implemented the modification to provide operators with non-compensated vessel level indication for low reactor coolant pressures and temperatures. The modification enhanced operator awareness of the relationship between actual vessel level and the high reactor vessel level pump trips, and eliminated the need for procedural aids (e.g., charts and graphs). The team conducted the review to verify that the design bases, licensing bases and performance capability of the vessel level indication instruments had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed associated drawings, calculations, procedures, and training documents to ensure they had been properly updated to incorporate the addition of the new reactor vessel level indication. In addition, the team reviewed post-modification testing, calibration data, and completed surveillance testing to verify proper operation of the new non-compensated vessel level instruments. The team performed a walkdown of the non-compensated level indication instruments to identify abnormal conditions. The team also reviewed condition reports associated with the non-compensated level indication to verify that deficiencies were appropriately identified and corrected. The team also observed the simulator to ensure it had been appropriately updated to include non-compensated level instrumentation for operator training as a result of this modification. The team also discussed the modification and design basis with design and system engineers, operations staff, and training personnel to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.4 Uninterruptible Power Supply (UPS) Motor-Generator (MG) Set Output Undervoltage Relay Setpoint Change

a. Inspection Scope

The team reviewed a modification (ER JAF-05-32724) that lowered the UPS MG set (71UPS-1) output undervoltage relay setpoint. The UPS MG set provides power to an electrical bus that supplies the feed water control system and other non-essential loads. Entergy implemented the setpoint revision to enhance the UPS capabilities of the MG set during performance of maintenance activities. The team conducted the review to verify that the design bases and performance capability of the undervoltage relay had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed associated drawings, calculations, calibration instrumentation sheets, and procedures to ensure they were properly updated for the new setpoint. In addition, the team reviewed post-modification testing and completed surveillance testing to verify proper operation of the undervoltage relay. The team reviewed condition reports associated with the undervoltage relay to verify that deficiencies were appropriately identified and corrected. The team also discussed the modification and design basis with design engineers and operations staff to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.5 Electro-Hydraulic Control (EHC) Fluid Reservoir Configuration Change

a. Inspection Scope

The team reviewed a modification (EC 4621) that installed a supply of dry, filtered instrument air to purge the EHC fluid reservoir. Entergy installed the modification to reduce the moisture content within the reservoir, in response to a negative trend in the EHC fluid water content. The team conducted the review to verify that the design bases and performance capability of the EHC system had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed EHC fluid reservoir water content trends before and after the modification was installed to determine the effectiveness of the modification. The team also reviewed condition reports associated with the EHC fluid reservoir to verify that deficiencies were appropriately identified and corrected. The team reviewed post-

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modification testing to verify proper operation of the EHC fluid reservoir air purge. The team also discussed the modification and design basis with design engineers to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.6 Recirculation Pump MG Set Upgrade

a. Inspection Scope

The team reviewed a modification (ER JAF-04-39800) that installed additional capacitance to the recirculation pump MG set voltage regulator negative feedback circuit. Entergy installed the modification to provide for additional voltage regulator stability at higher recirculation pump flow rates. The modification was initiated in response to significant generator current and voltage oscillations experienced when operators raised recirculation pump speed during power ascension after the previous refueling outage (RFO 16). The team conducted the review to verify that the design bases, licensing bases and performance capability of the MG set had not been degraded by the modification. The 10 CFR 50.59 screening determination associated with this modification was also reviewed as described in section 1R17.1 of this report.

The team reviewed post-modification testing to verify proper operation of the MG set. Preventative maintenance schedules were reviewed to verify that appropriate maintenance was scheduled for the new components. The team reviewed condition reports associated with the MG set to verify that deficiencies were appropriately identified and corrected. The team also discussed the modification and design basis with design engineers to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.7 Reactor Protection System (RPS) MG Set Electrical Protection Assembly (EPA) Replacements

a. Inspection Scope

The team reviewed a modification (EC 0901) that installed new electrical protection assemblies to provide overvoltage, undervoltage and under-frequency protection for the loads connected to the RPS power buses. Entergy initiated the modification in response to repeated failures and false actuations of the existing EPAs, which generated trip signals to a single train of the RPS. This modification installed a new design to address reliability and obsolescence issues associated with the previous EPAs. The team conducted the review to verify that the RPS design bases, licensing bases and performance capability had not been degraded by the modification. In addition, the 10

CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed post-modification testing to verify proper operation of the new EPAs. Preventative maintenance schedules were reviewed to verify that appropriate maintenance was scheduled for the new components. The team reviewed condition reports associated with the EPAs to verify that deficiencies were appropriately identified and corrected. The team also discussed the modification and design basis with design engineers to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.8 Station Battery Train Ventilation Configuration Change

a. Inspection Scope

The team reviewed a configuration change (EC 13492) to the station battery ventilation. Entergy implemented the modification to permit continued plant operation with a single battery room recirculation fan or a single air handling unit removed from service. The battery room ventilation system was designed with two trains of components that provide ventilation to the station battery rooms and battery charger rooms. This modification was initiated in response to a licensee-identified condition that incorrectly assumed each air handling unit had 100% capacity to provide adequate ventilation under design basis conditions, resulting in two conditions where Technical Specification (TS) 3.8.4.B action statement would have been exceeded over a three year period dating back from January of 2009 (50-333 LER 2009-002-00 and NRC Integrated Inspection Report 50-333/2009-05, Section 4OA7: Licensee Identified Violations). This modification involved engineering analysis to refine the capability of the battery room ventilation system, and also revised the Technical Requirements Manual (TRM) to reflect the actual capacity of the air handling units. The team conducted the review to verify that the design bases, licensing bases and performance capability of the battery room ventilation had not been degraded by the modification. In addition, the 10 CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed calculations, drawings and condition reports to verify that the configuration change did not degrade the capability of the battery room ventilation system to perform its safety function. The team reviewed the TRM to verify that it was properly updated to reflect the actual capacity of the air handling units. The team also discussed the modification and design basis with design engineers to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

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.2.9 Conversion to Ultra Low Sulfur Diesel (ULSD) Fuel

a. Inspection Scope

The team reviewed the modifications (EC 0551 and EC 1069) that replaced the existing S500 (500 ppm sulfur) low sulfur diesel fuel oil with S15 (15 ppm sulfur) ULSD fuel oil in the emergency diesel generators, diesel driven fire pumps, and the portable diesel generator. Entergy implemented the modifications in response to new Environmental Protection Agency requirements that no longer allow use of S500 fuel, which was previously used for station diesel fuel applications. The team conducted the review to verify that the design bases, licensing bases and performance capability of the emergency diesel generators, diesel driven fire pumps, and the portable diesel generator were not been degraded by the modification. In addition, the 10 CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed Entergy's evaluations for use of the ULSD fuel, as well as Entergy's review of industry Operating Experience, to verify that any compatibility issues with ULSD fuel were appropriately evaluated. Condition reports associated with the ULSD fuel were reviewed by the team to verify that deficiencies were appropriately identified and corrected. The team reviewed fuel oil sample records to verify that Entergy was appropriately monitoring and evaluating the ULSD fuel parameters. The team also discussed the modification and design basis with design engineers to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.10 HPCI Lubricating Oil Filter Replacement

a. Inspection Scope

The team reviewed a modification (ER JAF-03-00925) that replaced the existing lubricating oil duplex filter unit for the HPCI system. The HPCI lubricating oil system provides bearing lubrication as well as hydraulic control oil for operation of certain valves. Entergy implemented the modification to resolve a degraded filter housing isolation valve. The team conducted the review to verify that the design bases, licensing bases and performance capability of the HPCI system had not been degraded by the modification. In addition, the 10 CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed system health reports, condition reports and the post-modification test to verify that the HPCI system was not degraded by this modification. The team discussed the modification and design basis with design engineers to assess the adequacy of the modification. In addition, the team reviewed an operability determination that was performed when Entergy identified that a differential pressure switch for automatic bypass of a clogged filter element was not included in the original

design, as described in the vendor manual, to assess its adequacy. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.11 Control Room Chiller Replacements

a. Inspection Scope

The team reviewed a modification (EC 0606) that replaced the control room chiller units. The chillers provide cooling to the main control room and relay room using a closed-loop chilled water system during normal operation, and are capable of being supplied with emergency service water (ESW) as a backup to the safety-related air handling units. Entergy implemented the modification as a reliability enhancement to the previous control room chiller units, and also due to obsolescence of the previous R-12 refrigerant. The team conducted the review to verify that the design bases and performance capability of the control room chillers had not been degraded by the modification. In addition, the 10 CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed system health reports, condition reports and post-modification tests to verify that the design function of the control room chillers was not degraded by this modification. Additionally, the team verified that the associated chiller unit condensers were categorized as seismic quality assurance category 1, to verify that the safety-related ESW system was not degraded by this modification. The team also discussed the modification and design basis with design engineers and operations staff to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.12 Traveling Screen Upgrade

a. Inspection Scope

The team reviewed a modification (EC 6660) that replaced the 'A,' 'B,' and 'C' traveling screens at the main intake structure. The traveling screens provide a filtered supply of water from Lake Ontario to the circulating water system, service water system, residual heat removal service water system, emergency service water system, and fire protection system. Entergy implemented the modification due to equipment reliability and obsolescence issues with the previous traveling screens. The installation of 20 horsepower, variable frequency drive motors was an upgrade to the previous traveling screen motors, providing the capability for high speed operation during conditions of high differential pressure across the screens. The screen wash system was also upgraded as part of this modification. The team conducted the review to verify that the design

bases and performance capability of the traveling screens had not been degraded by the modification. In addition, the 10 CFR 50.59 screening determination associated with this modification was reviewed as described in section 1R17.1 of this report.

The team reviewed system health reports, condition reports and post-modification tests to verify that the design function of the traveling screens was not degraded by this modification. The team performed a walkdown of the intake structure to identify any abnormal conditions, and to verify proper operation of the traveling screens while in-service. The team also discussed the modification and design basis with design engineers and operations staff to assess the adequacy of the modification. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The team reviewed a sample of condition reports associated with 10 CFR 50.59 and plant modification issues to determine whether Entergy was appropriately identifying, characterizing, and correcting problems associated with these areas, and whether the planned or completed corrective actions were appropriate. The condition reports reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

The team presented the inspection results to Mr. Peter T. Dietrich, Site Vice President, and other members of Entergy's staff at an exit meeting on July 30, 2009. The team verified that this report does not contain proprietary information.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

P. Dietrich	Site Vice President
J. Pechacek	Licensing Manager
G. Dorman	Licensing Engineer
V. Bacanskas	Engineering Manager
D. Ruddy	Supervisor, Electrical Design
W. Drews	Superintendent, Reactor Engineering
D. Callen	Design Engineer
G. Foster	Design Engineer
S. Glover	Design Engineer
A. Lillienthal	Design Engineer
S. Scott	Design Engineer
A. Yost	Design Engineer
M. Cook	System Engineer
L. Leiter	System Engineer
D. Burch	Senior Engineer
R. Casella	Senior Engineer
K. Brazeau	Test Engineer
S. Scott	Technical Specialist
D. Stein	Operations Support

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

10 CFR 50.59 Evaluations

JAF-SE-07-002, Maximum Extended Operating Domain Implementation, Rev. 0
JAF-SE-08-001 R0, Cycle 19 Core Reload, 9/15/08

10 CFR 50.59 Screened-out Evaluations

EC 0551, Use of ULSD Fuel in EDGs, 07/31/07
EC 0606, Control Room Chiller Replacement, Rev. 0
EC 6660, Traveling Water Screen Replacements, Rev. 0
EC 0901, Replacement of Electrical Protection Assemblies, 01/28/08

A-2

EC 0906, Upgrade B & D EDG Governor Control System, Rev. 0
EC 1069, Use of ULSD Fuel in Diesel Fire Pumps and the Portable Diesel Generator, 05/09/07
EC 7281, Evaluation of Wall Thinning of Tubes in EDG Jacket Water Cooler 93WE-1B, Rev. 0
EC 2189, Upgrade 71PCB-10052 Breaker for Higher Fault Current Rating, Rev. 0
EC 2773, Revise EPIC Set Point Alarm for Motor Using "Kingsbury" Bearing for
Top Bearing for 46P-1A, 1B, and 1C, Rev. 0
EC 4621, EHC Fluid Reservoir Air Purge, 02/25/08
EC 12987, Add Isolation Valve Assembly to an Existing 1-1/2" Tee Located on the 100#
HPCI Hydraulic Oil Supply Piping to 23HOV-1 Pilot Shuttle Valve, Rev. 0
EC 13185, Revise TRM for Non-Functioning Battery Room Ventilation System, Rev. 0
EC 13492, Station Battery Complex Mixed Train Ventilation, 03/06/09
EC 14793, Calculation Change to JAF-CALC-09-00008, Long-Term Temperature Following
DBA-LOCA, Rev. 0
EC 5-18801, HPCI & RCIC Instrumentation Non-Density Compensated, Rev. 0
EC 5-18222, 600V Switchgear Replacement EC-1 Trip Devices, 3/1/07
EC 5-18289, EPIC Full Core Rod Scan Nuclear Change, Rev. 0
ER JAF-03-00925, HPCI Lubricating Oil Duplex Filter, Rev. 0
ER JAF-04-39800, Recirculation MG Set Stability Circuit, 06/06/06
ER JAF-05-32724 SCR-S1-06-0004 71UPS-3UV Setpoint Change, 12/5/06
DRN 07-00066, Revision 13 to AOP-49, Station Blackout, 01/23/07
Procedure Change OP-13 and OP-13A, Residual Heat Removal and Low Pressure Coolant
Injection, Rev. 94 and 16
SRC-S1-06-0010, Raise Alarm Setpoint for HCU's, 09/20/06

Modification Packages

EC 0551 and 1069, Use of ULSD Fuel in EDGs, 07/31/07; and Use of ULSD Fuel in Diesel Fire
Pumps and the Portable Diesel Generator, 05/09/07
EC 0606, Control Room Chiller Replacement, Rev. 0
EC 6660, Traveling Water Screen Replacements, Rev. 0
EC 0901, Replacement of Electrical Protection Assemblies, 01/28/08
EC 0906, Upgrade B & D EDG Governor Control System, Rev. 0
EC 2189, Upgrade 71PCB-10052 Breaker for Higher Fault Current Rating, Rev. 0
EC 4621, EHC Fluid Reservoir Air Purge, 02/25/08
EC 13185 and 13492, Revise TRM for Non-Functioning Battery Room Ventilation System,
Rev. 0; and Station Battery Complex Mixed Train Ventilation, 03/06/09
EC 5-18801, HPCI & RCIC Instrumentation Non-Density Compensated, Rev. 0
ER JAF-03-00925, HPCI Lubricating Oil Duplex Filter, Rev. 0
ER JAF-04-39800, Recirculation MG Set Stability Circuit, 06/06/06
ER JAF-05-32724 SCR-S1-06-0004, 71UPS-3UV Setpoint Change, 12/5/06

Audits and Self-Assessments

JAFLO-2008-00125, Plant Modifications and 10CFR50.59 Assessment, 2008
Snapshot Assessment on Effectiveness of Implementation of Fleet Process Applicability / 50.59
/ 72.48 Screen Procedure EN-LI-100, 08/22/07
QA-5-2007-JAF-1, Quality Assurance Audit Report, dated 05/14/2007

QA-4-2008-JAF-1, Quality Assurance Audit Report, dated 04/03/08
 QA-5-2009-JAF-1, Quality Assurance Audit Report, dated 05/07/2009

Calculations & Analysis

36-SG-7-1, Seismic Study of Sluice Gates Intake (1A/1B/1C) and Discharge (6A/6B), 03/20/78
 88-024, Battery Rooms Hydrogen Concentration, Rev. 1
 07-012, Minimum Required Diesel Fuel for Eight Hours of Operation of 76P-1 and 76P-4, Rev. 0
 07-019, Volume in EDG Underground Fuel Oil Storage Tanks as a Function of Level, Rev. 0
 07-020, Revised EDG Fuel Oil Storage Quantities for Seven Day and Six Day Supplies, Rev. 0
 07-025, Structural Qualification of Electrical Protection Assembly Supports, Rev. 0
 09-001, Station Battery Charger Room Temperature without Ventilation, Rev. 0
 09-003, Station Battery Complex Mixed Train Ventilation, Rev. 0
 JAF-CALC-ELEC-02472, UPS MG Set Low Voltage Transfer Undervoltage Relay
 71UPS-3UVR Setpoint Calculation, Rev. 1
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 FM-46A, Service Water, Rev. 88
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 FM-47A, Flow Diagram Nuclear Boiler Vessel Instruments System 02-3, Rev. 48
 FM-50B, Flow Diagram EHC, Sht. 1, Rev. 14
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LIST OF ACRONYMS

ADAMS	NRC Document System
CFR	Code of Federal Regulations
COLR	Core Operating Limit Report
DRS	Division of Reactor Safety
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EHC	Electro-Hydraulic Control
EPA	Electrical Protection Assemblies
ESW	Emergency Service Water
kA	kiloamp
kV	kilovolt
HPCI	High Pressure Coolant Injection
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
MG	Motor Generator
NRC	Nuclear Regulatory Commission
NEI	Nuclear Energy Institute
ppm	Parts per Million
PARS	Publicly Available Records
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RPS	Reactor Protection System
SSC	Structures, Systems and Components
TRM	Technical Requirements Manual
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
ULSD	Ultra Low Sulfur Diesel
UPS	Uninterruptible Power Supply