



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

February 8, 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 05000333/2009005**

Dear Mr. Dietrich:

On December 31, 2009, 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 January 14, 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 two NRC-identified findings of very low safety significance (Green). These findings were determined to be violations of NRC requirements. Additionally, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) in accordance with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, 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 characterization of any 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 Resident Inspectors at FitzPatrick. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

P. Dietrich

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Sincerely,

A handwritten signature in black ink, appearing to read "Mel Gray", with a long, sweeping flourish extending to the right.

Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000333/2009005
w/Attachment: Supplemental Information

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Sincerely,

/RA/
Mel Gray, Chief
Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000333/2009005
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.: 05000333/2009005

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Scriba, New York

Dates: October 1 through December 31, 2009

Inspectors: G. Hunegs, Senior Resident Inspector
S. Rutenkroger, PhD, Resident Inspector
J. Commiskey, Health Physicist
S. McCarver, Project Engineer

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

Enclosure

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SUMMARY OF FINDINGS

IR 05000333/2009005; 10/01/2009 - 12/31/2009; James A. FitzPatrick Nuclear Power Plant; Maintenance Effectiveness.

The report covered a three-month period of inspection by resident inspectors and announced inspections by region-based inspectors. Two Green findings, which were non-cited violations (NCVs), were 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 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be "Green" or be assigned a severity level after 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 an NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the emergency lighting system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals in accordance with 10 CFR 50.65(a)(1). Specifically, the inspectors identified that a second emergency light failure had not been correctly classified as a functional failure as documented in condition report (CR)-JAF-2009-02768, initiated on August 12, 2009. The issue was entered into Entergy's corrective action program (CAP) as CR-JAF-2009-02999 and Entergy classified the emergency lighting system (a)(1) due to this repeat failure. Additionally, the emergency lighting battery preventive maintenance replacement period was reduced from 24 months to 18 months due to an excessive number of emergency lighting battery failures that occurred between 18 and 24 months.

This finding is more than minor because it affected the external factors attribute (fire) of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, plant operators rely on emergency lighting to provide lighting to complete actions described in emergency operating procedures in case of a partial or complete loss of normal plant lighting. Additionally, Appendix R emergency lighting supports time critical post-fire safe shutdown manual actions and the availability of the emergency lighting battery system was affected. The emergency lighting system had not been maintained sufficiently to provide for reliable operation of the equipment.

The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected post-fire safe shutdown. The finding was determined to be of very low safety significance (Green) because the inspectors assigned a low degradation rating in phase 1 of the SDP. The inspectors assigned a low degradation rating because the issue did not have a significant impact on safe shutdown operations: operators, carry flashlights,

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the three emergency portable lighting units located in the control room were available, and there were not specific plant areas that had widespread emergency lighting outages at any one time.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the emergency lighting battery system in a timely manner. (P.1(d)) (Section 1R12)

Green. The inspectors identified an NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the standby liquid control (SLC) system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals in accordance with 10 CFR 50.65(a)(1). Entergy initiated CR-JAF-2009-03994 and CR-JAF-2009-04017 to address the issues and classified the SLC system as (a)(1) due to the repetitive maintenance preventable failures and the incomplete corrective actions related to increasing the PM frequency from every two months to once a month.

The inspectors determined the finding is more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, plant operators rely on the SLC tank level indication in the control room for performing actions required by emergency operating procedures and the availability of this indication was affected.

The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency; did not represent a loss of system safety function; and did not screen as potentially risk-significant due to external initiating events. Specifically, the loss of control indication did not render the SLC system incapable of injecting borated water into the reactor coolant system, and operators remained capable of measuring the level of the SLC tank locally using manual dipping.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the SLC tank level indication in a timely manner. (P.1(d)) (Section 1R12)

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. The violation and corrective action tracking number is listed in Section 40A7 of this report.

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 December 22, 2009, operators reduced reactor power to 55 percent to repair condenser tube leaks. Following repairs, reactor power was restored to 100 percent on December 23, 2009. With the exception of scheduled power reductions for control rod pattern adjustments, the plant continued to operate at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity1R01 Adverse Weather Protection (71111.01 – 2 samples)a. Inspection Scope

On October 7, 2009, the site experienced high winds. The inspectors reviewed the operating status of the traveling water screens and assessed debris intrusion; and walked down the emergency offsite power system. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and performance requirements for systems selected for inspection. The inspectors also determined that operator actions were consistent with procedure requirements. The documents reviewed are listed in the Attachment. This inspection satisfied one imminent weather condition inspection sample.

The inspectors reviewed and verified completion of the cold weather preparation checklist contained in procedure AP-12.04, "Seasonal Weather Preparations," Revision 17. The inspectors reviewed the operating status of the reactor and turbine building cooling systems, reviewed the procedural limits and actions associated with cold weather, and walked down accessible areas of the reactor and turbine buildings to assess the effectiveness of the heating and ventilation systems. Walkdowns were also conducted in the emergency diesel generator (EDG), emergency service water (SW), station battery, and greenhouse rooms. Discussions with operations and engineering personnel were conducted to ensure that they were aware of temperature restrictions and required actions. The documents reviewed are listed in the Attachment. The inspection satisfied one inspection sample for seasonal weather conditions.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04).1 Quarterly Partial System Walkdown (71111.04Q – 3 samples)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 system procedures, the 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 CRs and work orders (WO) 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:

- 'A' battery room ventilation system when the 'B' battery room ventilation system was out of service for emergent maintenance;
- 'B' EDG subsystem when the 'A' EDG subsystem was out of service for planned maintenance; and
- 120 volt alternating current (AC) alternate power sources when the 120 volt AC uninterruptible power supply motor generator set was out of service for emergent maintenance.

These activities constituted three partial system walkdown inspection samples.

b. Findings

No findings of significance 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 Entergy's fire protection program. The inspectors evaluated the fire protection program for conformance with the requirements of License Condition 2.C.3. The documents reviewed are listed in the Attachment.

- Fire Area/Zone XX/SG;
- Fire Area/Zone 7/CR-1;
- Fire Area/Zone IA/AD-6;

- Fire Area/Zone 1A/AS-1;
- Fire Area/Zone IB/SH-1; and
- Fire Area/Zone XVII/RB-1E.

These activities constituted six quarterly fire protection inspection samples.

b. Findings

No findings of significance were identified.

.2 Annual Inspection (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed an unannounced fire drill conducted on November 26, 2009, and an announced fire drill conducted on November 29, 2009. The inspection included the post-drill critique, and review of the disposition of issues and deficiencies that were identified. The drills were 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 fire fighting 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 fire fighting equipment. The inspectors evaluated the fire brigade capability to meet 10 CFR Part 50 Appendix R requirements. This inspection represented one sample.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 – 2 samples)

a. Inspection Scope

The inspectors conducted tours of the east and west crescent rooms 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, UFSAR, and engineering evaluations. The documents reviewed are listed in the Attachment.

The inspectors examined the conditions within the following underground bunkers/manholes in order to assess the adequacy of the conditions in which underground cabling was maintained. The inspectors verified by direct observation that cables which were not qualified for continuous submergence were not submerged in water; that cables and/or splices appeared intact; that the condition of cable support structures were adequate to maintain the integrity of cables; and as required that the proper drainage and/or dewatering device (sump pump) operation and level alarm circuits were set appropriately.

- Manhole (MH)4A;
- MH4B;
- MH5A; and
- MH5B.

These activities constituted one annual review of cables located in underground bunkers/manholes inspection sample and one internal flood protection measures inspection sample.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07 – 2 samples)

a. Inspection Scope

The inspectors reviewed Entergy's programs for maintenance, testing, and monitoring of risk significant heat exchangers to verify whether potential deficiencies could mask degraded performance, and to assess the capability of the heat exchangers to perform their design functions. The inspectors assessed whether the FitzPatrick program conformed to Entergy's commitments to NRC Generic Letter 89 -13, "Service Water System Problems Affecting Safety-Related Equipment." In addition, the inspectors evaluated whether any potential common cause heat sink performance problems could affect multiple heat exchangers in mitigating systems or result in an initiating event.

Based on risk significance and prior inspection history, the following heat exchangers were selected:

- 'A' residual heat removal (RHR) heat exchanger (10E-2A) and
- 'B' RHR heat exchanger (10E-2B).

The heat exchangers are cooled by the safety-related RHR SW systems. The systems were designed to supply cooling water from the ultimate heat sink (Lake Ontario) to various heat loads to ensure a continuous flow of cooling water to systems and components necessary for plant safety both during normal operation and under abnormal conditions. The inspectors reviewed system health reports, performance tests, inspection test results, and chemical control methods to ensure that the selected components conformed to Entergy's commitments to Generic Letter 89 -13, "SW System Problems Affecting Safety-Related Equipment." The inspectors compared the surveillance test (ST) and inspection results to the established acceptance criteria to verify that the results were acceptable and that the heat exchangers operated in accordance with design. The documents reviewed are listed in the Attachment. These activities constituted two heat sink performance inspection samples.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11).1 Quarterly Review (71111.11Q – 1 sample)a. Inspection Scope

On November 3 and 5, 2009, 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 (EOP). 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 documents reviewed are listed in the Attachment. This activity constituted one operator simulator training inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q – 4 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. 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;
- 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 follow systems were selected for review:

- Screenwell ventilation;
- EL;
- SLC; and
- Emergency SW.

These activities constituted four quarterly maintenance effectiveness inspection samples.

b. Findings

.1 Emergency Lighting Performance Demonstration Not in Accordance with 10 CFR 50.65 (a)(2)

Introduction: The inspectors identified an NCV of very low safety significance (Green) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the emergency lighting system had been effectively controlled through the performance of appropriate preventive maintenance in accordance with 10 CFR 50.65(a)(2).

Description: The emergency lighting system provides lighting to allow operators to perform their accident or transient mitigation duties on a loss of normal plant lighting, and in addition, Appendix R emergency lighting supports time critical post-fire safe shutdown manual actions. The inspectors noted that emergency light 76ELB-HB-252-5 failed on November 17, 2007, and on February 28, 2009, as documented in CR-JAF-2007-04039 and CR-JAF-2009-00756 respectively. The inspectors identified that Entergy did not classify the second failure as a maintenance rule functional failure (FF) as documented in CR-JAF-2009-02768.

In response to inspectors' questions, Entergy staff determined that, in accordance with EN-DC-205, Maintenance Rule Monitoring," Revision 2, the February 28, 2009, failure was a repeat functional failure. Entergy personnel then evaluated the emergency lighting system for (a)(1) classification per EN-DC-206, "Maintenance Rule (a)(1) Process," Revision 1, as documented in CR-JAF-2009-02999, initiated on September 1, 2009, and classified the emergency lighting system (a)(1) due to this repeat failure and the overall need to implement a reduction in the emergency lighting battery preventative maintenance replacement period from 24 months to 18 months due to an excessive number of emergency lighting battery failures between 18 and 24 months.

The inspectors also identified that Entergy had classified two other instances of emergency lighting failures as functional failures but had not included these failures within an administrative tracking tool as part of performance monitoring. This resulted in Entergy personnel not accounting for these failures when comparing system performance against established goals and determining system health.

Additionally, the inspectors observed that when Entergy maintenance personnel identified an emergency lighting battery that would light for less than eight hours, the maintenance personnel considered the emergency lighting battery failed and replaced the battery and charger. However, Entergy engineering personnel, in accordance with JAF-RPT-MISC-02751, "Maintenance Rule Basis Document for System 076 Emergency Lighting," classified any test with lighting greater than four hours to not be a maintenance rule functional failure, or a system health related failure, due to a station blackout coping analysis which established a four hour coping time. However, the inspectors identified that the intended function of these lights is to satisfy 10 CFR Part 50 Appendix R, which requires emergency lights with at least an eight hour battery supply to be supplied in all areas needed for operation of safe shutdown equipment and in access and egress

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routes thereto. In response to the inspector's questions, Entergy personnel reconsidered their (a)(2) performance monitoring criteria and revised the emergency lighting maintenance rule basis document to classify future eight hour lighting failures as maintenance rule functional failures. Entergy staff initiated CR-JAF-2009-02274, CR-JAF-2009-02275, CR-JAF-2009-02767, CR-JAF-2009-02768, CR-JAF-2009-02850, CR-JAF-2009-02999, CR-JAF-2009-03800, and CR-JAF-2009-03867 in order to address the issues.

Analysis: The inspectors identified a performance deficiency because Entergy staff did not demonstrate that the performance of the emergency lighting system had been effectively controlled through the performance of appropriate preventive maintenance in accordance with 10 CFR 50.65(a)(2).

The inspectors determined the finding is more than minor because it affected the external factors attribute (fire) of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, plant operators rely on emergency lighting to provide lighting to perform their accident or transient mitigation duties on a loss of normal plant lighting and Appendix R emergency lighting supports time critical post-fire safe shutdown manual actions and the availability of the emergency lighting battery system was affected.

The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected post-fire safe shutdown. The finding was determined to be of very low safety significance (Green) because the inspectors assigned a low degradation rating in phase 1 of the SDP. The inspectors assigned a low degradation rating because the issue did not have a significant impact on safe shutdown operations, There was not a significant impact on safe shutdown operations because operators carry flashlights, the three emergency portable lighting units located in the control room were available, and there were not any specific plant areas that had widespread emergency lighting outages at any one time.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the emergency lighting system in a timely manner (P.1(d)).

Enforcement: 10 CFR 50.65(a)(1) requires, in part, that licensees monitor the performance or condition of structures, systems, or components (SSCs) within the scope of the rule as defined by 10 CFR 50.65(b) against licensee-established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended functions.

10 CFR 50.65 (a)(2) states, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function.

Contrary to the above, as of February 28, 2009, Entergy personnel did not demonstrate that the performance condition of the emergency lighting system had been effectively controlled through the performance of appropriate preventive maintenance and did not

monitor against licensee-established goals. Specifically, Entergy personnel did not identify, and properly account for three preventive maintenance preventable functional failures of emergency lights occurring from February 28, 2009 through September 2009, which demonstrated that the performance or condition of the emergency lighting system was not being effectively controlled through the performance of appropriate preventive maintenance and, as a result, that goal setting and monitoring was required.

Because this violation was of very low safety significance and was entered into Entergy's CAP (CR-JAF-2009-02274, CR-JAF-2009-02275, CR-JAF-2009-02767, CR-JAF-2009-02768, CR-JAF-2009-02850, CR-JAF-2009-02999, CR-JAF-2009-03800, and CR-JAF-2009-03867), this violation is being treated as an NCV, consistent with section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000333/2009005-01: Emergency Lighting Performance Demonstration Not in Accordance with 10 CFR 50.65 (a)(2).)**

.2 Standby Liquid Control Performance Demonstration Not in Accordance with 10 CFR 50.65 (a)(2)

Introduction: The inspectors identified an NCV of very low safety significance (Green) of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the standby liquid control (SLC) system had been effectively controlled through the performance of appropriate preventive maintenance in accordance with 10 CFR 50.65(a)(2).

Description: On August 20, 2009, Entergy personnel identified that the SLC sodium pentaborate storage tank level control room indication had trended up from 82% to 95% over three days with no actual increase in the tank level and initiated CR-JAF-2009-02854. The personnel also noted that the condition appeared to be a repeat of the problem previously documented in CR-JAF-2009-02526. Entergy staff concluded that the SLC tank level was indicating incorrectly due to boron crystals plugging the level indicator sensing line tube.

Because JAF-RPT-SLC-02282, "Maintenance Rule Basis Document System 11 Standby Liquid Control," Revision 5 specifies a maintenance rule system function to provide control room level indication with a performance criteria of less than or equal to one functional failure within 24 months, Entergy staff determined the system to be approaching (a)(1) status and initiated CR-JAF-2009-03098 on September 8, 2009. As a result, Entergy personnel initiated corrective actions which included increasing the PM frequency of cleaning the level indicator's sensing line from every two months to once a month.

The inspectors found that similar issues with the control room indication for the SLC tank level indication were identified in six CRs beginning April 17, 2007 (CR-JAF-2007-01468, CR-JAF-2008-02455, CR-JAF-2009-01600, and CR-JAF-2009-02526) and that these were not classified as functional failures. The inspectors observed that some CRs included documentation that stated Operations would not use the level indication in an emergency and would instead monitor SLC tank level through local manual dipping. The inspectors further noted that EN-DC-205, "Maintenance Rule Monitoring," Revision 2, states that if Operations would decide not to use the SSC in an emergency then the condition should be considered a functional failure.

Entergy staff evaluated the previously identified issues and determined that the identified level deviations continued to increase from the time the CRs were initiated until maintenance was performed. As such, the deviations exceeded the amounts recorded in the CRs, which had previously been used as the basis to classify the events as not FFs. In addition, further interviews with Operations personnel confirmed that in the event of an emergency, the SLC control room level indication would not have been relied upon since these deviations were excessive and increasing. Therefore, Entergy staff concluded that all four events were FFs and classified the SLC system as (a)(1) due to the repetitive maintenance preventable functional failures and not implementing corrective actions related to increasing the PM frequency from every two months to once a month.

Entergy initiated CR-JAF-2009-03994 and CR-JAF-2009-04017 to address the issues.

Analysis: The inspectors identified a performance deficiency because Entergy staff did not demonstrate that the performance of the SLC system had been effectively controlled through the performance of appropriate preventive maintenance in accordance with 10 CFR 50.65(a)(2).

The inspectors determined the finding is more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, plant operators rely on the SLC tank level indication in the control room for performing actions required by EOPs and the availability of this indication was affected.

The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency; did not represent a loss of system safety function; and did not screen as potentially risk-significant due to external initiating events. Specifically, the loss of control indication did not render the SLC system incapable of injecting borated water into the reactor coolant system (RCS), and operators remained capable of measuring the level of the SLC tank locally using manual dipping.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the SLC tank level indication in a timely manner.
(P.1(d))

Enforcement: 10 CFR 50.65 (a)(1), requires, in part, that licensees shall monitor the performance or condition of structures, systems, or components (SSCs) within the scope of the rule as defined by 10 CFR 50.65 (b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended functions.

10 CFR 50.65 (a)(2) states, in part, that monitoring as specified in 10 CFR 50.65 (a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function.

Enclosure

Contrary to the above, as of April 17, 2007, Entergy staff failed to demonstrate that the performance of the standby liquid control system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals. Specifically, Entergy personnel failed to identify, and properly account for four maintenance preventable functional failures the SLC tank level indication occurring from April 17, 2007 to August 20, 2009, which demonstrate that the performance or condition of this SSCs was not being effectively controlled through the performance of appropriate preventive maintenance and, as a result, that goal setting and monitoring was required.

Because this violation was of very low safety significance and was entered into Entergy's corrective action program (CR-JAF-2009-03994 and CR-JAF-2009-04017), this violation is being treated as a NCV, consistent with section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000333/2009005-02: Standby Liquid Control System Performance Demonstration Not In Accordance with 10 CFR 50.65(a)(2))**

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 4 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 November 2, 2009, which included increased risk due to high pressure coolant injection (HPCI) system testing, emergent work on the reactor core isolation cooling (RCIC) system, and installation of a battery room ventilation system modification;
- The week of November 9, 2009, which included increased risk due to emergent work on the 120 volt AC uninterruptible power supply motor generator set, and rescheduled activities;
- The week of November 30, 2009, which included increased risk due to extensive work on the 'B' emergency SW system, SW system preventive maintenance and HPCI system instrument surveillance activities; and
- The week of December 7, 2009, which included increased risk due to extensive work on the 'A' emergency SW system, a scheduled power reduction to 63 percent for a rod pattern adjustment, increased risk due to a National Weather Service high wind warning and emergent work to replace a 345 kilovolt (kv) backup protection scheme relay.

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

b. Findings

No findings of significance 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 TSs. The inspectors' review included a verification that the operability determinations were conducted as specified by ENN-OP-104, "Operability Determinations." The technical adequacy of the determinations was reviewed and compared to the TSs, UFSAR, and associated design basis documents (DBD). The documents reviewed are listed in the Attachment.

- CR-JAF-2009-03636, failure of the power supply for the 'A' EDG electronic speed switch, 93ESS-A, due to a voltage spike in the 125 volts direct current control power circuit;
- CR-JAF-2009-03845, failure to evaluate the effects of increased power supply frequency on the adequacy of suction lift for the EDG fuel oil transfer pumps and net positive suction head for the motor driven emergency core cooling system pumps;
- CR-JAF-2009-04174, Auxiliary shutdown panel control switch for 'B' and 'D' EDG tie breaker was not in the correct position;
- CR-JAF-2009-04117, 'A' RHR system heat exchanger heat transfer capability; and
- CR-JAF-2009-03840, Impact of tornado pressure drop on EDG ventilation combustion air and supply duct.

These activities constituted five operability evaluation samples.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18 – 3 samples)a. Inspection Scope

The inspectors assessed the adequacy of the 10 CFR Part 50.59 evaluations for the following temporary modifications. 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. This review represented three temporary modification inspection samples.

- Engineering change (EC)-8167 was installed to modify the operation of the drywell equipment drain pumps 'A' and 'B' discharge outboard isolation valve;
- EC-6513 was installed to provide contingency cooling for the battery room complex to maintain functionality of the battery room ventilation system; and
- EC-8063 was installed to provide fish impingement study equipment for the traveling water screens.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 – 6 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 design basis documents (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 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 00150625, 'B' battery ventilation system maintenance including discharge isolation damper operator replacement;
- WO 52186644, 'D' EDG turbocharger lube oil pump motor, 93P-3D, replacement;
- WO 51546535, 'A' EDG field shutdown relay, 93TDVR-1EDGA12, replacement;
- WO 52035328, 'A' EDG voltage motor operated potentiometer, 93POT-1A, replacement;
- WO 00214793, Repair 120 volt AC uninterruptible power supply motor generator; and
- WO 00218049, 345 kV system backup protection scheme relay replacement and return to service.

This inspection constituted six post-maintenance test samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 – 5 samples)a. Inspection Scope

The inspectors witnessed performance of STs 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 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:

- ST-40Y, "Alternate Method of Determining RCS Leakage," Revision 1;
- ST-9BB, "B and D Full Load Test and ESW Pump Operability Test," Revision 10;

- ST-4N, "HPCI Quick-Start, Inservice, and Transient Monitoring Test (IST)," Revision 57;
- ISP-22-1, "RCIC Turbine Exhaust Diaphragm High Pressure Instrument Functional Test/Calibration," Revision 34; and
- ST-2AM, "RHR Loop 'B' Quarterly Operability Test (IST)," Revision 28.

These activities represented five surveillance testing inspection samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 – 1 sample)

a. Inspection Scope

The inspectors observed simulator activities associated with licensed operator requalification training on November 5, 2009. 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 Entergy's critique and compared Entergy's self-identified issues with observations from the inspectors' review to ensure that performance issues were properly identified. This evaluation represented one inspection sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupation Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01 – 16 samples)

a. Inspection Scope

During October 19-23, 2009, the inspectors conducted the following activities to verify that Entergy was properly implementing physical, engineering, and administrative controls for access to high radiation areas (HRA), 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 Part 20, site technical specifications (TS), and Entergy's procedures required by the TSs as criteria for determining compliance. During the inspection, the inspectors interviewed the radiation protection manager, radiation protection supervisors, and radiation workers.

Inspection Planning

Performance indicator (PI) events and associated documentation packages reported by Entergy in the Occupational Radiation Safety Cornerstone were reviewed.

Plant Walk Downs and Radiation Work Permit (RWP) Reviews

Exposure significant work areas were identified for review within radiation areas, HRAs, and airborne areas in the plant. Associated Entergy controls and surveys were reviewed for adequacy. Work reviewed included:

- Reactor water cleanup system outage window work RWP (RWP 09-25);
- Independent spent fuel storage installation (ISFSI) dry cask storage work 2009 (RWP 09-32);
- Condensate demineralizer tank room work (RWP 09-37);
- Reactor feed pump and feed pump turbine work (RWP 09-47);
- Steam leak repair, 31MSR-52 (RWP TBD);
- Radwaste 252' el., 20P19 pump repair (RWP 09-20);
- Plant wireless modification installation (RWP 09-51);
- The inspectors walked down available areas with a survey meter to determine: whether prescribed RWP, procedure, and engineering controls were in place, whether Entergy surveys and postings were complete and accurate, and whether air samplers were properly located;
- The inspectors reviewed RWPs used to access these and other HRAs to identify what work control instructions or control barriers have been specified. Electronic dosimeter alarm set points were reviewed for adequacy;
- There were no RWPs for airborne radioactivity areas with the potential for individual worker internal exposures of >50 mrem committed effective dose equivalent (CEDE);
- There were no internal dose assessments that resulted in actual internal exposures greater than 50 mrem CEDE. Internal assessments were reviewed to determine adequacy and assurance that they were not in fact equal to or greater than 50 mrem CEDE; and
- Physical and programmatic controls for highly activated or contaminated materials (non-fuel) stored within the spent fuel pool were reviewed for adequacy.

Problem Identification and Resolution

Access controls related condition reports (CRs) were reviewed since the last inspection in this area. Staff members were interviewed and documents reviewed to determine that follow-up activities are being conducted in an effective and timely manner, commensurate with their safety and risk;

For repetitive deficiencies or significant individual deficiencies in problem identification and resolution, the inspectors determined if Entergy's assessment activities were also identifying and addressing these deficiencies; and

A review of events occurring since the last inspection revealed no PI events that involved dose rates greater than 25 Rem/hour at 30 cm, dose rates greater than 500 Rem/hour at 1 meter, or unintended exposures greater than 100 mrem total effective dose equivalent (or greater than 5 Rem SDE or greater than 1.5 Rem LDE)

Job-in-Progress Reviews

The inspectors observed aspects of various on-going activities to confirm that radiological controls, such as required surveys, area postings, job coverage, and job site preparations were conducted. The inspectors verified that personnel dosimetry was properly worn and that workers were knowledgeable of work area conditions.

High Risk Significant, High Dose Rate (HDR) High Radiation Areas (HRA) and Very High Radiation Areas (VHRA) Controls

The inspectors discussed with the radiation protection manager HDR-HRA, and VHRA controls and procedures with a focus on any procedural changes since the last inspection. The inspectors verified that any changes to Entergy procedures do not substantially reduce the effectiveness and level of worker protection; and

Keys to locked high radiation areas (LHRA) and VHRA, were controlled and inventoried. Accessible LHRA's were verified to be properly secured and posted during plant tours.

Radiation Worker Performance

The inspectors reviewed condition reports, related to radiation worker performance to determine there were similar issues identified in the condition reports that could be traced to a common cause.

Radiation Protection Technician Proficiency

During observation of the work activities, radiation protection technician work performance was evaluated with respect to their knowledge of the radiological conditions, the specific radiation protection work requirements and radiation protection procedures; and

The inspectors reviewed CRs, related to radiation technician performance to determine if an observable pattern traceable to a similar cause was evident.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - 16 samples)

a. Inspection Scope

During October 19 through 23, 2009, the inspectors conducted the following activities to verify that Entergy personnel were 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 Part 20, applicable industry standards, and Entergy's procedures.

Inspection Planning

The inspectors reviewed pertinent information regarding cumulative exposure history, current exposure trends, and on-going activities to assess current performance and outage exposure challenges. The inspectors determined the site's 3-year rolling collective average exposure;

The inspectors reviewed work performed during the inspection period, the associated ALARA plans, RWPs, ALARA Committee Reviews, exposure estimates, actual exposures and post job reviews. Jobs reviewed included those listed in section 2OS1.A.2. of this report; and

The inspectors reviewed implementing procedures associated with maintaining occupational exposures ALARA, this included a review of the processes used to estimate and track work activity exposures.

Radiological Work Planning

With respect to the work activities listed previously, the inspectors reviewed dose summary reports, related post-job ALARA reviews, related RWPs, exposure estimates and actual exposures, and ALARA Committee meeting paperwork. Through this review, the inspectors determined that dose was appropriately managed and evaluated by station management. In addition, the inspectors attended work planning meetings and verified various work groups, as well as, station management involvement;

ALARA work activity evaluations, exposure estimates, and exposure mitigating requirements were reviewed for work packages previously mentioned. The inspectors determined that Entergy has established procedures, engineering and work controls, based on sound radiation protection principles;

The inspectors compared the results achieved with the intended dose that was established in the planning of the work. The inspectors determined the reasons for any inconsistencies between the intended and actual work activity doses and station management awareness and involvement;

The inspectors evaluated the interfaces between operations, radiation protection, maintenance, maintenance planning, scheduling and engineering groups for interface problems or missing program elements. The inspectors attended work planning meetings to verify that the various work groups were involved in the planning process; and

The inspectors reviewed the integration of ALARA requirements into work procedure and RWP documents.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed the assumptions and basis for the current annual collective exposure estimate and reviewed applicable procedures to determine the methodology for estimating work activity-specific exposures and the intended dose outcome;

The inspectors reviewed Entergy's method for adjusting exposure estimates to assure that adjustments to estimated exposure (intended dose) are based on sound radiation protection and ALARA principles; and

The inspectors reviewed Entergy's exposure tracking system to evaluate whether the level of exposure tracking detail, exposure report timeliness and exposure report distribution is sufficient to support control of collective exposures. During the conduct of exposure significant maintenance work, the inspectors looked for evidence that Entergy management was aware of the exposure status of the work and would intervene if exposure trends increased beyond exposure estimates.

Job Site Inspections and ALARA Controls

The inspectors observed in progress maintenance and operational activities being performed, to verify that radiological controls, such as required surveys, job coverage, and contamination controls were implemented. Through interviews, workers were found to be knowledgeable of the work area radiological conditions. Associated ALARA Plans and RWPs were reviewed to determine if appropriate exposure and contamination controls were being employed; and

The inspectors reviewed individual exposures from various work groups to evaluate any significant exposure variations which may exist among workers and determine whether these significant exposure variations are the result of poor ALARA practices or planning.

Source-Term Reduction and Control

Utilizing Entergy records, the inspectors determine the historical trends and current status of tracked plant source terms and determine if Entergy is making allowances or developing contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry.

Declared Pregnant Workers

The inspectors reviewed Entergy's occupational radiological controls relative to declared pregnant workers to verify the implementation of appropriate monitoring and control in accordance with 10 CFR Part 20.

Problem Identification and Resolution

The inspectors reviewed elements of Entergy's CAP related to implementing radiological controls to determine if problems are being entered into the program for timely resolution.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03 – 1 sample)

a. Inspection Scope

During October 19 through 23, 2009, the inspectors conducted the following activities to evaluate the operability and accuracy of radiation monitoring instrumentation, and the adequacy of the respiratory protection program for issuing self-contained breathing apparatus to emergency response personnel. Implementation of these programs was reviewed against the criteria contained in 10 CFR Part 20, applicable industry standards, and Entergy's procedures.

The inspectors reviewed the calibration and operability of several respiratory related instruments and equipment. Verification methods included a review of calibration and response check documentation. The inspectors determine what actions are taken when instruments are found out of calibration and determined the possible consequences of instrument use since last successful calibration or response check. The inspectors verified that instruments found out of calibration were entered into Entergy's CAP.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator (PI) Verification (71151 – 11 samples)

a. Inspection Scope

The inspectors reviewed PI data for the cornerstones listed below and used Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment PI Guideline," Revision 6, to verify individual PI accuracy and completeness.

Cornerstone: Initiating Events

- Unplanned scrams;
- Unplanned power changes; and
- Unplanned scrams with complications.

The inspectors reviewed Entergy's event reports, operator logs, and PI data sheets to determine whether Entergy adequately identified the number of scrams and unplanned power changes greater than 20 percent that occurred between July 2008 and July 2009. This number was compared to the number reported for the PI during the applicable quarter. The inspectors also verified the accuracy of the number of critical hours reported.

The inspectors noted that Entergy performed three power changes in February 2009, to defish/clean condenser waterboxes and had planned to submit a frequently asked question in accordance with the Reactor Oversight Process to determine if these power changes met the requirements for an environmental exception to the PI for unplanned power changes. However, Entergy concluded that the initial power change met the criteria for an unplanned power change and revised the data for the PI. This change

does not result in the PI crossing the Green/White PI threshold and will be reflected in the fourth quarter 2009 data.

Cornerstone: Mitigating Systems

- Safety system FFs;
- Mitigating systems performance index (MSPI), emergency AC power system;
- MSPI, high pressure injection system;
- MSPI, heat removal system;
- MSPI, RHR system; and
- MSPI, cooling water systems.

The inspectors reviewed data and plant records from July 2008 to July 2009. The records reviewed included PI data summary reports, licensee event reports (LER), operator narrative logs, and maintenance rule records. The inspectors also verified the accuracy of the number of critical hours reported.

Cornerstone: Barrier Integrity

- RCS leak rate; and
- RCS specific activity.

The inspectors reviewed operator logs, plant computer data, chemistry records, and procedure ST-40D, "Daily Surveillance and Channel Check," to verify the accuracy of Entergy's reported maximum RCS identified leakage and specific activity from July 2008 to July 2009.

b. Findings

No findings of significance were identified.

Cornerstone: Occupational Exposure Control Effectiveness

a. Inspection Scope (1 Sample)

The inspectors reviewed implementation of Entergy's Occupational Exposure Control Effectiveness PI Program. Specifically, the inspectors reviewed issue reports, and associated documents, for occurrences involving locked HRAs, VHRAs, and unplanned exposures against the criteria specified in NEI 99-02, Regulatory Assessment PI Guideline to verify that all occurrences that met the NEI criteria were identified and reported as PIs. This inspection activity represents the completion of one (1) sample relative to this inspection area; completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

RETS/ODCM Radiological Effluent Occurrencesa. Inspection Scope (1 Sample)

The inspectors reviewed relevant effluent release reports for the period October 2008 through September 2009, for issues related to the public radiation safety PI, which measures radiological effluent release occurrences that exceed 1.5 mrem/qtr whole body or 5.0 mrem/qtr organ dose for liquid effluents; 5mrads/qtr gamma air dose, 10 mrad/qtr beta air dose, and 7.5 mrads/qtr for organ dose for gaseous effluents. This inspection activity represents the completion of one (1) sample relative to this inspection area; completing the annual inspection requirement.

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

- 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 (71152 – 1 sample).1 Review of Items Entered into the Corrective Action Programa. 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, and Barrier Integrity 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.

The inspector reviewed corrective action CRs and assessments associated with the radiation protection program that were initiated since the last inspection. The inspectors verified that problems identified by these CRs were properly characterized in Entergy's event reporting system, and that applicable cause and corrective actions were identified commensurate with the safety significance of the radiological occurrences.

b. Findings and Observations

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

.2 Semi-Annual Review to Identify Trends (71152 – 1 sample)

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of Entergy's CAP 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 4OA2.1. The review also included issues documented 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 2009 through December 2009, although some examples expanded beyond those dates when the scope of the trend warranted. The inspectors compared and contrasted their results with the results documented in the last NRC integrated quarterly assessment report for FitzPatrick. Corrective actions associated with a sample of the issues identified in the trend report were reviewed for adequacy. The inspectors also evaluated trend report specified in ENN-LI-102, "Corrective Action Process," and 10 CFR Part 50, Appendix B. The documents reviewed are listed in the Attachment.

b. Findings and Observations

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

.3 Annual Sample: Review of Actions in Response to Report of Defect per 10 CFR Part 21 Basler Electric SBSR AVR Card Solder Joints (71152 – 1 sample)

a. Inspection Scope

The inspectors reviewed Entergy personnel's evaluation and corrective actions associated with the "Report of Defect per 10 CFR Part 21 Basler Electric SBSR AVR Card Solder Joints" issued by MPR Associates, Inc., on September 21, 2007. The basic component is an analog electronic circuit card in Basler voltage regulators used on the EDG. The Basler SBSR excitation system provides closed-loop control of EDG stator voltage via an automatic voltage regulator (AVR) and an exciter. The AVR is the controller, while the exciter converts the control signal from the AVR to a field voltage that is applied to the EDG field winding. The AVR is an analog assembly. The main component of this assembly is an electronic circuit card that is referred to as the SBSR AVR card.

The defect identified by the 10 CFR Part 21 report dealt specifically with the soldered electrical connections between the L1 magnetic amplifier module (magamp) and the card. Specifically, over a period of many years, cracks can form in the solder joint connections between the L1 magamp and the circuit board. There are nine such solder connections at the L1 magamp, and all nine are susceptible to cracking. The safety hazard is that when electrical continuity is lost at L1 magamp soldered connections, the voltage regulator does not perform as intended, and the EDG could fail to deliver emergency AC power as intended.

Since no supplier-specified actions existed that would ensure that degraded cards were detected or avoided, MPR Associates, Inc. issued Maintenance Bulletin MB-2007-01, "Potential for Solder Joint Cracks on Basler SBSR AVR Cards," Revision 0. MPR Associates, Inc. recommended that each nuclear power plant that utilizes an SBSR excitation system establish an inspection program to periodically inspect for L1 magamp solder joint cracks on a fuel cycle periodicity after 15 years of service. MB-2007-01 also provided a recommended inspection procedure.

The inspectors verified that Entergy implemented an inspection procedure which conformed to MB-2007-01 for all four EDGs and observed maintenance personnel performing this inspection. Specifically, the inspectors ensured that Entergy's inspection used suitable lighting lens with a magnification factor of 2.5 or more magnifying lens, located the nine solder joints for the L1 magamp, and inspected each joint, looking for darkness or lack of reflection in the solder that would indicate a crack.

b. Findings and Observations

No findings of significance were identified.

The inspectors observed that Entergy's personnel used a magnifying lens that did not include any identifying information to ensure that the lens had a magnification factor of 2.5 or more. However, following the completion of the inspections, the inspectors verified that Entergy used the proper magnifying lens. Entergy initiated CR-JAF-2009-04093 to address the failure to properly control equipment used to accomplish safety-related tasks.

.4 Annual Sample: Review of Actions Related to Degraded High Pressure Coolant Injection System Trends (71152 – 1 sample)

a. Inspection Scope

The inspectors reviewed corrective actions related to the high pressure coolant injection (HPCI) system due to degrading system trends and two unplanned entries into limiting conditions for operation in the past two years. The focus was on actions associated with recent system performance degradation. On November 2, 2009, the quarterly surveillance test, ST-4N, "HPCI Quick-Start, Inservice, and Transient Monitoring Test (IST)" response time and stop valve stroke time increased. The inspectors reviewed the apparent cause evaluation and associated corrective actions.

b. Findings and Observations

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

4OA5 Other Activities

.1 Independent Spent Fuel Storage Installation

a. Inspection Scope (60855)

An ISFSI inspection was conducted on October 19 - 23, 2009, under the NMSS inspection program utilizing inspection procedure 60855.1, to review the ongoing maintenance and surveillance activities for onsite dry storage of spent fuel. The ISFSI licensing basis documents and implementing procedures were reviewed as the inspection standards for the inspection. The inspection consisted of: observation of the condition of the 15 Holtec Hi-Storm casks currently storing spent fuel inside the restricted area at Fitzpatrick; independent radiation survey of the 15 spent fuel storage casks; verification of perimeter area dosimetry placement; and review of surveillance records including; monthly air vent inspections, and daily air vent outlet temperature readings.

b. Findings

No findings of significance were identified.

.2 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors performed observations of security force personnel and activities to ensure that the activities were consistent with Entergy security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours. These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

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 January 14, 2010. The inspectors asked Entergy whether any materials examined during the inspection should

be considered proprietary. No proprietary information was identified by Entergy personnel.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance Severity Level IV 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.

10 CFR Part 72.212 (b)(1)(ii) requires, as a condition of general license under the provisions of 10 CFR Part 72.210, that a licensee register use of each ISFSI cask with the NRC no later than 30 days after using that cask to store spent fuel. This requirement is also contained in Entergy's procedure, MP-019.07, "MPC Transfer and Hi-Storm Movement." Contrary to this requirement, two multi-purpose canisters (MPCs) were placed into service for greater than 30 days without notification to the NRC. Cask 10, location 10, (MPC 221, Hi-Storm 307) was placed into service on July 14, 2009. Cask 11, location 7 (MPC 222, Hi-Storm 309) was placed into service on July 27, 2009. Entergy identified the issue on September 18, 2009 and generated CR-JAF-2009-03243. Entergy subsequently provided formal notification to the NRC on September 21, 2009.

Traditional enforcement applies because a failure make a required report to the NRC in a timely manner has the potential to impact the NRC's ability to perform its statutory mission. This violation was determined to be a Severity Level IV violation (Very Low Safety Significance) consistent with Section IV.A.3 and Supplement I.D. of the NRC Enforcement Policy. This finding is in Entergy's CAP as CR-JAF-2009-03243.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

- P. Dietrich, Site Vice President
- C. Adner, Manager Operations
- J. Barnes, Manager, Training and Development
- C. Brown, Quality Assurance Manager, Entergy
- P. Cullinan, Manager, Emergency Preparedness
- B. Finn, Director Nuclear Safety Assurance
- D. Johnson, Manager, System Engineering
- J. LaPlante, Manager, Security
- K. Mulligan, General Manager, Plant Operations
- J. Pechacek, Licensing Manager
- J. Rodriguez, Project Manager, ISFSI
- J. Solowski, Radiation Protection
- M. Woodby, Director Engineering

LIST OF ITEMS OPEN, CLOSED, AND DISCUSSED

Opened and Closed

05000333/2009005-01	NCV	Emergency Lighting Performance Demonstration Not in Accordance with 10 CFR 50.65(a)(2).
05000333/2009005-02	NCV	Standby Liquid Control Performance Demonstration Not in Accordance with 10 CFR 50.65(a)(2).

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

SAP-19, "Severe Weather," Revision 5

OP-51A, "Reactor Building Ventilation and Cooling System," Revision 47

OP-52, "Turbine Building Ventilation," Revision 16

DBD-066, "DBD for the Reactor Building Heating, Ventilation and Air Condition (HVAC) Systems"

DBD-067, "DBD for the Turbine Building HVAC Systems"

AOP-13, "High Winds, Hurricanes and Tornadoes," Revision 19

Section 1R04: Equipment Alignment

OP-46B, "120 VAC Power System," Revision 27

Section 1R05: Fire Protection

PFP-PWR22, Fire Area/Zone XX/SG, elevation 272 foot

PFP-PWR13, Fire Area/Zone 7/CR-1, elevation 300 foot

PFP-PWR08, Fire Area/Zone IA/AD-6, elevation 300 foot

PFP-PWR09, Fire Area/Zone 1A/AS-1, elevation 272 foot

PFP-PWR35, Fire Area/Zone IB/SH-1, elevation 272 foot

PFP-PWR14, Fire Area/Zone XVII/RB-1E, elevation 227 and 242 foot

Section 1R07: Heat Sink performance

AP-19.14, "Eddy Current Testing of Heat Exchanger Tubes," Revision 11

JAF-RPT-RHR-02281, "Maintenance Rule Basis Document System 10 Residual Heat Removal System," Revision 9

System Health Report, "10 RHR and RHRSW," 3rd quarter 2009

ST-2YB, "RHR Heat Exchanger 'B' Performance Test," Revision 0, completed 01/24/09

ST-2YA, "RHR Heat Exchanger 'A' Performance Test," Revision 0, completed 02/12/08

ST-2YA, "RHR Heat Exchanger 'A' Performance Test," Revision 0, completed 08/24/07

ST-2YA, "RHR Heat Exchanger 'A' Performance Test," Revision 0, completed 05/04/07

ST-2Y, "RHR Heat Exchanger Performance Test," Revision 7, completed 02/28/05

CR-JAF-2008-00531

CR-JAF-2007-03009

CR-JAF-2007-01716

WO 00110174

WO 00120884

WO 00139255

Section 1R11: Licensed Operator Regualification

80190-5, "Loss of 10500/Power Reduction/Steam Leak in the HPCI System (Unisolable)/ EOP-2/5 Entry/Emergency Depressurization"

JSEG-LOR-81690-1, "RPIS Power Supply Failure, EOP-2 Alt Level Leg and ED Required"

Section 1R12: Maintenance Effectiveness

ARP HV-11A-02, "SERV WTR PP RM EXHAUST FAN FN-3A TROUBLE," Revision 1

ARP HV-11B-2, "SERV WTR PP RM EXHAUST FAN FN-3B TROUBLE," Revision 2

ESK-6FZ, "Elem. Diagram 600V. CKTS. -HVAC Fan FN-3A, 3B, 7, 11, 5A & 5B - Screenwell," Revision 11

AOP-28, "Operation during Plant Fires," Revision 18
 EAP-3, "Fire," Revision 25
 EN-DC-205, "Maintenance Rule Monitoring," Revision 2
 Information Notice 90-69, "Adequacy of Emergency and Essential Lighting"
 Information Notice 95-36, "Potential Problems with Post-Fire Emergency Lighting"
 Information Notice 95-36, Supplement 1, "Potential Problem with Post-Fire Emergency Lighting"
 JAF-RPT-FPS-02367, "Fire Protection Plan," Revision 12
 JAF-RPT-MISC-02751, "Maintenance Rule Basis Document for System 076 Emergency Lighting," Revision 3
 JAF-RPT-SWC-02497, "Maintenance Rule Basis Document for System 073 Screenwell Ventilation System," Revision 1
 JAF-RPT-SLC-02282, "Maintenance Rule Basis Document System 11 Standby Liquid Control," Revision 11
 Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2
 Safety Guide 33, "Quality Assurance Program Requirements," 11/3/1972
 ST-16J2, "Turbine Building, Heater Bay, and Electric Bay Emergency Lighting Test," Revision 11
 System Health Report, 46 Emergency Service Water, 3rd quarter 2009
 System Health Report, 76 Fire Protection System, 1st quarter 2009
 System Health Report, 76 Fire Protection System, 2nd quarter 2009
 System Health Report, 76 Fire Protection System, 3rd quarter 2009
 System Health Report, 11 Standby Liquid Control, 3rd quarter 2009

CR-JAF-2008-04531	CR-JAF-2009-02724	CR-JAF-2008-02650
CR-JAF-2009-00191	CR-JAF-2009-02764	CR-JAF-2008-03914
CR-JAF-2009-00756	CR-JAF-2009-03415	CR-JAF-2008-03915
CR-JAF-2009-01135	CR-JAF-2009-03436	CR-JAF-2008-04140
CR-JAF-2009-02274	CR-JAF-2006-05294	CR-JAF-2008-04435
CR-JAF-2009-02275	CR-JAF-2007-00187	CR-JAF-2008-02455
CR-JAF-2005-03200	CR-JAF-2007-01468	CR-JAF-2009-01600
CR-JAF-2005-03692	CR-JAF-2006-03160	CR-JAF-2006-01836
CR-JAF-2006-01187	CR-JAF-2006-05329	CR-JAF-2006-00846
CR-JAF-2006-02914	CR-JAF-2006-05330	CR-JAF-2006-02998
CR-JAF-2007-02587	CR-JAF-2007-00624	CR-JAF-2009-02526
CR-JAF-2007-04503	CR-JAF-2007-00943	CR-JAF-2009-02854
CR-JAF-2008-01003	CR-JAF-2007-02403	CR-JAF-2006-02997
CR-JAF-2008-01308	CR-JAF-2007-02682	CR-JAF-2009-03098
CR-JAF-2008-03228	CR-JAF-2007-04392	
CR-JAF-2009-01100	CR-JAF-2008-01528	
CR-JAF-2009-02204	CR-JAF-2008-01915	
CR-JAF-2009-02643	CR-JAF-2008-02489	

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

AP-12.12, "Protected Equipment Program," Revision 4

AP-10.10, "On-Line Risk Assessment," Revision 6

Section 1R15: Operability Evaluations

NRC Regulatory Issue Summary 2006-23, "Post-Tornado Operability of Ventilating and Air-Conditioning Systems Housed in Emergency Diesel Generator Rooms"

Section 2OS1: Access Control to Radiologically Significant Areas

Section 2OS2: ALARA Planning and Controls

Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment

Procedures

EN-LI-114, Performance Indicator Process

EN-PL-169, Commitment to ALARA Principles

EN-RP-101, Access Control for Radiologically Controlled Areas

EN-RP-102, Radiological Control

EN-RP-105, Radiation Work Permits

EN-RP-106, Survey Documentation

EN-RP-108, Radiation Protection Posting

EN-RP-110, ALARA Program

EN-RP-121, Radioactive Material Control

EN-RP-131, Air Sampling

EN-RP-141, Job Coverage

EN-RP-203, Dose Assessment

EN-RP-205, Prenatal Monitoring

EN-RP-503, Selection, Issue, Use of Respiratory Protection Equipment

MP-019.06, MPC Loading and Sealing

MP-019.07, MPC Transfer and Hi-Storm Movement

MP-019.15, Hi-Storm Overpack Annual Inspection

RP-OPS-08.01, Routine Surveys and Inspections (ISFSI)

St-32B, Overpack Heat Removal System Operability Test

Other Documents:

FitzPatrick ALARA 5 Year ALARA Plan 2009 – 2013, dated Aug. 2009

Dose Reduction Initiatives / Business Plan, dated Oct. 2009

Personnel Transaction Logs (Electronic Dosimeter Alarms, Personnel Exposures)

Personnel Contamination Events (PCE)

Departmental and Personnel Exposure Breakdown

Work Week Exposure Estimates

Daily ALARA, Status, and Chemistry Reports

Source Term Reduction Plan

EPRI BWR BRAC Summary

LO-JAFLO-2009-00063, ALARA & Access Control Snapshot Self Assessment

JAF-SE-94-069 Rev 2, Onsite Interim Waste Storage Area.

ISFSI Annual Inspection Work Orders

Completed St-32B, Overpack Heat Removal System Operability Test for Oct 2009

Completed ISFSI surveys, RP-OPS-08.01, Routine Surveys and Inspections

ISFSI Cask Surveys for cask Nos. 307, 308, 309, 310, 311, 312

Hi-Storm 100 FSAR, Revision 7

Condition Reports

CR-2009-01569	CR-2009-02679	CR-2009-03460
CR-2009-01979	CR-2009-02688	CR-2009-03544
CR-2009-02298	CR-2009-02690	CR-2009-03561
CR-2009-02314	CR-2009-02795	CR-2009-03642
CR-2009-02319	CR-2009-02862	CR-2009-02862
CR-2009-02374	CR-2009-02993	CR-2009-02982
CR-2009-02410	CR-2009-03243	
CR-2009-02455	CR-2009-03356	

Section 4OA2: Identification and Resolution of ProblemsCondition Reports:

CR-2008-03193	CR-2009-03696	CR-2009-04085
CR-2008-03506	CR-2009-03697	CR-2009-04092
CR-2009-00350	CR-2009-03714	CR-2009-04093
CR-2009-02091	CR-2009-03715	CR-2009-04098
CR-2009-02557	CR-2009-03724	CR-2009-04117
CR-2009-02241	CR-2009-03725	CR-2009-04166
CR-2009-02641	CR-2009-03726	CR-2009-04168
CR-2009-03055	CR-2009-03755	CR-2009-04170
CR-2009-03246	CR-2009-03759	CR-2009-04174
CR-2009-03826	CR-2009-03768	CR-2009-04198
CR-2009-03852	CR-2009-03788	CR-2009-04224
CR-2009-03581	CR-2009-03796	CR-2009-04251
CR-2009-03586	CR-2009-03800	CR-2009-04412
CR-2009-03595	CR-2009-03826	CR-2009-04430
CR-2009-03597	CR-2009-03828	CR-2009-04435
CR-2009-03609	CR-2009-03829	CR-2009-04436
CR-2009-03611	CR-2009-03840	CR-2009-04456
CR-2009-03634	CR-2009-03845	CR-2009-04459
CR-2009-03636	CR-2009-03852	CR-2009-04466
CR-2009-03644	CR-2009-03857	CR-2009-04468
CR-2009-03646	CR-2009-03867	CR-2009-04497
CR-2009-03647	CR-2009-03873	CR-2009-04499
CR-2009-03649	CR-2009-03895	CR-2009-04504
CR-2009-03650	CR-2009-03948	CR-2009-04506
CR-2009-03660	CR-2009-03964	CR-2009-04510
CR-2009-03689	CR-2009-03994	CR-2009-04511
CR-2009-03690	CR-2009-04004	CR-2009-04517
CR-2009-03691	CR-2009-04017	CR-2009-04495
CR-2009-03692	CR-2009-04018	CR-2009-04590
CR-2009-03694	CR-2009-04053	CR-2009-04591
CR-2009-03695	CR-2009-04072	

Section 40A5.2: Independent Spent Fuel Storage Installation

2005 Fitzpatrick ISFSI Campaign Project Summary

Certificate of Compliance for Spent Fuel Storage Casks, No. 1014, Amendment No. 5, Holtec International

Certificate of Compliance for Spent Fuel Storage Casks, No. 1014, Appendix A, Technical Specifications for the HI-STORM 100 Cask System

Final Safety Evaluation Report, Docket No. 72-1014, Holtec International, HI-STORM 100 Cask System, Certificate of Compliance No. 1014, Amendment No. 5

JSEM-OPS-ISFSI-JITT, Just In Time Training Seminar for ISFSI Cask Loading, training slides and objectives

Tool Room Control of Lifting Equipment, MDSO-09, Revision 16, dated 11/05/2007

Medical Program, EN-NS-112, Revision 6

Work Order # 19-1TI-1*000, Calibrate 19-1TI-1 and 19-1TI-2 Temperature Indicators

Overpack Heat Removal System Operability Test, ST-32B, Revision 5, dated 07/09/2009

Dry Cask Storage Operations Overview Training, LP-OPS-19-1, Revision 3

Shift Turnover and Logkeeping, ODSO-4, Revision 102, Shift Turnover Checklist

10 CFR 72.48 Review Program, EN-LI-112, Revision 4

Engineering Report No. JAF-RPT-SFS-04329, Revision 5, ISFSI 10CFR 72.212 Evaluation Report

Engineering Change 11117, Package for 2009 ISFSI

Engineering Change Order with 10 CFR 72.48 Screens and Evaluations

HI-STORM Operability Tracking Procedure, MP-019.14, Revision 4

MPC Receiving, Handling, and Storage, MP-019.02, Revision 7

MPC Loading and Sealing, MP-019.06, Revision 11

MPC Transfer and HI-STORM Movement, MP-019.07, Revision 17

Dry Cask Storage Special Lifting Devices, MP-019.10, Revision 4

Dry Fuel Storage Cask Ancillary Equipment Inspection, MP-019.11, Revision 2

Ancillary Equipment Functional Checks, MP-019.12, Revision 1

Work Orders

00202633

00193120

001021900

00193753

00185921

020854100

LIST OF ACRONYMS

AC	alternating current
ADAMS	Agencywide Documents Access and Management System
ALARA	as low as is reasonable achievable
AVR	automatic voltage regulator
CAP	corrective action program
CEDE	committed effective dose equivalent
CFR	Code of Federal Regulations
CR	condition report
DBD	design basis document
EC	engineering change

EDG	emergency diesel generator
EL	emergency lighting
ELB	emergency lighting battery
Entergy	Entergy Nuclear Northeast
EOP	emergency operating procedure
FitzPatrick	James A. FitzPatrick Nuclear Power Plant
FF	functional failure
HPCI	high pressure coolant injection
HRA	high radiation areas
IMC	inspection manual chapter
ISFSI	independent spent fuel storage installation
IST	inservice test
kV	kilovolt
LER	licensee event report
LHRA	locked high radiation areas
MH	manhole
MPC	multi-purpose canister
MSPI	mitigating systems performance index
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	other activities
PARS	Publicly Available Record
PI	performance indicator
PM	preventive maintenance
RCIC	reactor core isolation cooling
RCS	reactor coolant system
RHR	residual heat removal
RWP	radiation work permit
SDP	significance determination process
SLC	standby liquid control
SSC	structures, systems, or components
ST	surveillance test
SW	service water
TS	technical specification
UFSAR	updated final safety analysis report
VHRA	very high radiation areas
WO	work order