

August 5, 2008

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

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - NRC INTEGRATED
INSPECTION REPORT 05000333/2008003

Dear Mr. Dietrich:

On June 30, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your James A. FitzPatrick Nuclear Power Plant. The enclosed inspection report documents the inspection results, which were discussed on July 7, 2008, with Mr. Kevin J. Mulligan 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, two findings of very low safety significance (Green) were identified. One of these findings was also determined to be a violation of NRC requirements. However, because of the very low safety significance, and because the violation was entered into your corrective action program, the NRC is treating the violation as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a written response within 30 days of the date of this inspection report with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Senior Resident Inspector at the James A. FitzPatrick Nuclear Power Plant.

In accordance with 10 CFR Part 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

P. Dietrich

2

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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 05000333/2008003
w/Attachment: Supplemental Information

cc w/encl:

Senior Vice President and COO, Entergy Nuclear Operations
Vice President, Oversight, Entergy Nuclear Operations
Senior Manager, Nuclear Safety and Licensing, Entergy Nuclear Operations
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P. Church, Oswego County Administrator
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C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
S. Lousteau, Treasury Department, Entergy Services
J. Spath, Program Director, New York State Energy Research and Development Authority

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-333

License No.: DPR-59

Report No.: 05000333/2008003

Licensee: Entergy Nuclear Northeast (Entergy)

Facility: James A. FitzPatrick Nuclear Power Plant

Location: 268 Lake Road
Scriba, New York 13093

Dates: April 1, 2008 through June 30, 2008

Inspectors: G. Hunegs, Senior Resident Inspector
S. Rutenkroger, PhD, Resident Inspector
J. D'Antonio, Senior Operations Engineer
J. Noggle, Senior Health Physicist

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

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SUMMARY OF FINDINGS

IR 05000333/2008-003; 04/01/2008 - 06/30/2008; James A. FitzPatrick Nuclear Power Plant; Maintenance Risk Assessments and Emergent Work Control, and Post-Maintenance Testing.

The report covered a three-month period of inspection by resident inspectors and announced inspections by region based inspectors. Two Green findings, one which was a non-cited violation (NCV), were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process (SDP). 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.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Green. A self-revealing finding was identified when one of the 115 kV offsite power transformer 71T-3 surge arresters failed in-service. Specifically, Entergy did not adequately implement maintenance program expectations outlined in EN-DC-324, "Preventive Maintenance Program," Revision 4 and ensure replacement of the surge arrester upon exceeding its reliable service life. The surge arrester failure contributed to a loss of offsite power.

The inspectors determined that this finding is more than minor because it is associated with the protection against external factors attribute (grid stability) of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At Power Situations," and determined it to be of very low safety significance (Green) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available.

This finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not take appropriate corrective actions to promptly replace the surge arrester when it was identified to be past its reliable service life. (P.1(d)) (Section 1R13)

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," because Entergy did not ensure that appropriate quality standards were specified and included in design documents and that deviations from such standards were controlled. Specifically, Entergy did not ensure that the cable bend

Enclosure

radius for the 'B' low pressure coolant injection (LPCI) battery inter-tier jumper cables was in accordance with the design. Entergy entered the condition into their corrective action program, issued a work request to establish appropriate bend radii and inspected all other batteries for extent of condition.

The inspectors determined that this finding is more than minor because it is associated with the Design Control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, reliability was affected because of additional stresses imposed at the u-bend of the cable which impacts long-term cable reliability. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined it to be of very low safety significance (Green) because the finding represented a design or qualification deficiency confirmed not to result in loss of operability.

The inspectors determined that this finding had a cross-cutting aspect in the area of human performance because the completeness of the design documents, procedures, and work packages used during the maintenance activities in April 2008, were not sufficiently complete to ensure design standards were implemented. (H.2(c)) (Section 1R19)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

The James A. FitzPatrick Nuclear Power Plant began the inspection period operating at 100 percent reactor power. On April 4, 2008, Entergy reduced reactor power to 55 percent to remove the 'A' feedwater pump from service to facilitate repairs of the inboard seal. On April 5, 2008, the main generator was removed from service and the plant was shutdown to repair a leak on the 'B' feedwater system. Following repairs, the plant was started up and returned to service on April 7, 2008 and reactor power was raised to 100 percent on April 13, 2008. On May 4, 2008, Entergy reduced reactor power to 55 percent to remove the 'A' feedwater pump from service to facilitate repairs of the inboard seal and bearing replacement. Following repairs, reactor power was raised to 100 percent on May 9, 2008. The plant continued to operate at or near 100 percent reactor power for the remainder of the inspection period.

1. REACTOR SAFETY**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

1R01 Adverse Weather Protection (71111.01 - 2 samples)

.1 Evaluate Summer Readiness of Offsite and Alternate AC Power Systems

a. Inspection Scope

The inspectors reviewed operating procedures to verify continued availability of offsite and alternate AC power systems. The inspectors also reviewed agreements and protocols established with the transmission system operator to verify that the appropriate information is exchanged when issues arise that could impact the offsite power system. The documents reviewed are listed in the Attachment. This inspection represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Other Weather Occurrence

a. Inspection Scope

On June 10, 2008, the National Weather Service issued a tornado watch for the Oswego County area and portions of Lake Ontario. The inspectors reviewed Entergy's preparations and response to the condition including actions specified in AOP-13, "High Winds, Hurricanes and Tornadoes," Revision 18. In addition, the inspectors walked down portions of the switchyard to inspect for unsecured material or debris that could

Enclosure

create a hazard to plant equipment. This inspection represented one inspection sample for the onset of adverse weather.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q - 4 samples)

a. Inspection Scope

The inspectors performed four partial system walkdowns to verify the operability of redundant or diverse trains and components during periods of system train unavailability or following periods of maintenance. The inspectors referenced the system procedures, the Updated Final Safety Analysis Report (UFSAR), and system drawings in order to verify that the alignment of the available train was proper to support its required safety functions. The inspectors also reviewed applicable condition reports (CRs) and work orders to ensure that Entergy had identified and properly addressed equipment discrepancies that could potentially impair the capability of the available 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 which represented four inspection samples:

- 'A' standby liquid control system when the 'B' standby liquid control system was out of service for surveillance testing;
- 125 Vdc station batteries 71SB-1 and 71SB-2 when the high pressure coolant injection system and the reactor core isolation cooling system were out of service, in series, for planned testing;
- Emergency diesel generator system when an offsite power source, the 115 kV line number four, was removed from service due to an unplanned circuit breaker outage; and
- Offsite power source 115 kV line number three when offsite power source 115 kV line number four was inoperable due to the reserve station service transformer failure.

b. Findings

No findings of significance were identified.

The inspectors identified indications on the negative plate straps of multiple cells of station battery 71SB-1 and one cell of station battery 71SB-2 that visually appear to be cracks. The inspectors first identified an indication on cell 23 of station battery 71SB-1 on May 1, 2008, and Entergy initiated CR-JAF-2008-01453. Subsequently, the inspectors identified cells 6, 33, and 56 on station battery 71SB-1 and cell 56 on station battery 71SB-2 as also having similar indications. As a result, Entergy initiated CR-JAF-2008-01475 for multiple cells having indications with the appearance of cracks. Entergy prepared an operability evaluation and performed a calculation that assumed

every indication to be a crack that proceeded completely through each plate strap, losing the capacity of a number of plates in each affected cell. The operability determination demonstrated that the station batteries were capable of performing their design function.

Entergy plans to remove cell 23 from service in their next refueling outage. Cell 23 will be disassembled and the negative plate strap thoroughly inspected in order to characterize the indication. The results of these planned inspections are required in order for the NRC to complete the inspection. Pending this review, the issue is considered an unresolved item (URI): **URI 05000333/2008003-01, Station batteries with indications on the negative plate straps.**

1R05 Fire Protection (71111.05Q - 5 samples)

a. Inspection Scope

The inspectors conducted tours 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 against the requirements of Licensee Condition 2.C.3. The documents reviewed are listed in the Attachment.

This inspection represented five inspection samples for fire protection tours and was conducted in the following plant areas:

- Fire Area/Zone IX/RB-1, elevation 272 foot;
- Fire Area/Zone X/RB-1, elevation 272 foot;
- Fire Area/Zone IX/SG-1, elevation 272 foot;
- Fire Area/Zone IX/RB-1A, elevation 326 foot; and
- Fire Area/Zone IX/RB-1A, elevation 344 foot.

b. Findings

No findings of significance were identified.

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

.1 Resident Inspector Quarterly Review (71111.11Q - 1 sample)

a. Inspection Scope

On May 13, 2008, the inspectors observed licensed operator simulator training to assess operator performance during several scenarios to verify that operator performance was adequate and evaluators were identifying and documenting crew performance problems. The inspectors evaluated the performance of risk significant operator actions, including the use of emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, the implementation of appropriate actions in response to alarms, the performance of timely control board operation and manipulation, and the oversight and direction provided by the shift manager. The inspectors also reviewed simulator fidelity to evaluate the degree of similarity to the actual control room. Licensed operator training was evaluated against the requirements of 10 CFR Part 55, "Operators' Licenses." The documents reviewed are listed in the Attachment. This observation of operator simulator training represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Biennial Review (71111.11B - 1 sample)

a. Inspection Scope

The effectiveness of the licensed operator requalification training program was evaluated through reviews of the following documents related to the facility operating history for the previous two years:

- NRC inspection reports and plant issue matrix;
- Licensee event reports (LERs); and
- Operator and training related CRs.

The quality and content of the requalification examinations were evaluated during reviews of two reactor operator and two senior reactor operator written tests from the last biennial comprehensive exam, observations of operating examinations administered during the week of this inspection, and a survey of the facility's requalification scenarios and job performance measures. This review assessed the coverage of the exams as specified in 10 CFR Parts 55.41, 43, and 59 and the inclusion of probabilistic risk assessment insights. The discrimination level and construction of the exams were also evaluated against the criteria set forth in NUREG -1021, Operator Licensing Examination Standards for Power Reactors.

Licensed operator training on important tasks identified in the Individual Plant Examination was verified by reviewing a listing of risk significant operator actions and verifying a link to a training item for these tasks.

Observations of licensee exam administration and grading practices for one crew were conducted, including evaluator review of final grading reports. Control of test item overlap between exam weeks was evaluated against the established criteria for consideration of potential compromise of examination security.

Remediation practices were assessed by review of instances where operators or crews had failed either a written examination or simulator evaluation during the current requalification program. The inspectors verified appropriate remediation and reexamination had been done for the one failed annual exam that had occurred.

Utilization of feedback to update and modify the requalification program was evaluated by verification of training on plant and industry events. Operators were interviewed to discuss the effectiveness of the feedback process.

Compliance with license conditions was verified through review of medical records for 10 percent of the operators and review of watchstanding proficiency and reactivation documentation for one year for all licensed operators.

For the site specific simulator, the inspectors observed simulator performance during the conduct of the examinations, reviewed simulator performance tests and simulator action requests to verify compliance with the requirements of 10 CFR Part 55.46. The documents reviewed are listed in the Attachment.

On May 27, 2008, the results of the annual operating tests for year 2008 and the written exam for 2007 were reviewed for whether pass fail rates are consistent with the guidance of NUREG-1021, Supplement 1, "Operator Licensing Examination Standards for Power Reactors", Revision 9. Assessment of the exam results using NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process" was performed. The review verified the following:

- Crew pass rate was 100 percent;
- Individual pass rate on the written exam was 100 percent;
- Individual pass rate on the job performance measures of the operating exam was 100 percent; and
- Individual pass rate for passed all portions of the exam was 100 percent.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - 2 samples)a. Inspection Scope

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

- 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 inspectors evaluated the maintenance program against the requirements of 10 CFR Part 50.65. The documents reviewed are listed in the Attachment. The following maintenance effectiveness samples were reviewed and represented two inspection samples:

- Emergency diesel generator ventilation system; and
- Reactor building floor drain sump 'B' level switch 20LS-355B.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)a. Inspection Scope

The inspectors reviewed 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 review of the following activities represented five inspection samples.

- The week of April 7, 2008, which included reduced power operation during repair work on 'A' reactor feed pump, leak repair involving a 5th point feedwater heater, and reactor core isolation cooling system testing;
- The week of May 5, 2008, which included reduced power operation during repair work on 'A' reactor feed pump, an unplanned outage of the 115 kV offsite power

source line number four, emergent work on containment vacuum breaker 27AOV-118, planned surveillance testing involving instrumentation for the high pressure coolant injection system and the scram discharge instrument volume, and preventive maintenance on an air compressor serving a circuit breaker for the 115 kV offsite power source line number three;

- The week of May 12, 2008, which included loss of both 115 kV offsite power sources and subsequent troubleshooting and repair of 115 kV offsite power source line number four transformer;
- The week of June 9, 2008, which included 115 kV offsite power source line number three transformer scheduled maintenance, 'B' service water pump repair and severe weather; and
- The week of June 16, 2008, which included preventive maintenance on diesel fire pump 76P-1, planned maintenance on instrument air compressor 39AC-2B, and severe weather conditions including high winds, thunderstorm warnings, and increased debris including cladophora algae impacting the traveling water screens.

b. Findings

Introduction: A Green, self-revealing finding was identified when one of the 115 kV offsite power transformer 71T-3 surge arresters failed in-service. Specifically, Entergy did not adequately implement maintenance program expectations outlined in EN-DC-324, "Preventive Maintenance Program," Revision 4 and ensure replacement of the surge arrester upon exceeding its reliable service life. The surge arrester failure contributed to a loss of offsite power.

Description: On May 12, 2008, FitzPatrick lost both 115 kV offsite power lines resulting in the loss of offsite power for approximately one minute. Additionally, all offsite power was lost at Nine Mile Point Unit 1 for a period of about 40 minutes, requiring a declaration of a Notification of Unusual Event at that site.

The 115 kV distribution system consists of two lines, each from an independent offsite power source, that provide power to reserve station transformers 71T-2 (supplied by line three) and 71T-3 (supplied by line four). The two lines are cross-tied by an electrically operated disconnect in the 115 kV switchyard. When the plant is in normal operation, the system provides standby power through 71T-2 and 71T-3. During shutdown or startup mode, the system provides power to the plant equipment. The 115 kV system is monitored under the Maintenance Rule at the system and plant level and is considered to be risk significant. In addition, the 115 kV lines are interconnected with Nine Mile Point Unit 1.

Troubleshooting determined that the cause for the loss of 115 kV offsite power was that the 71T-3 transformer 'B' phase surge arrester was degraded. During a voltage surge caused by a routine grid maintenance switching action, the surge arrester shunted the voltage surge to ground. This resulted in protective relay actuation including the 'B' phase differential relay actuation. The supply breaker for 115 kV line three auto reclosed and line four remained isolated. Repairs and system restoration were completed within the Technical Specification limiting condition for operation.

Surge or lightning arresters are devices installed to protect electrical equipment from damage due to high voltage transients. The surge arresters installed on 71T-3 were Silicon Carbide and were original 33 year old plant equipment. The Silicon Carbide surge arrester is vulnerable to progressive degradation mechanisms resulting in failure, and has a recommended replacement frequency on the order of 20 years. In 2004, Entergy assessed the adequacy of the switchyard preventive maintenance program and recognized that the surge arresters were past the end of their reliable service life. Corrective actions were initiated under preventive maintenance item number 5054326 to replace all surge arresters on transformers in 2004 with a completion date of 2006. However, due to corrective action program performance deficiencies, this was not completed.

A performance deficiency was identified in that Entergy did not adequately implement maintenance program expectations as outlined in EN-DC-324, "Preventive Maintenance Program," Revision 4.

Analysis: This finding is more than minor because it is associated with the protection against external factors attribute (grid stability) of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors determined that this finding increased the likelihood of a scram and was reasonably within Entergy's ability to foresee and prevent because there is extensive industry operating experience highlighting age related and progressive degradation mechanisms for Silicone Carbide surge arrestors. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situation," and determined it to be of very low safety significance (Green) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available.

The problem was entered into Entergy's corrective program as CR-JAF-2008-01548. Corrective actions included replacing all 71T-3 transformer surge arrestors prior to returning line number four to service; replacement of 71T-2 (115 kV independent off site power source line number three transformer) surge arrestors on June 10, 2008; scheduled replacement of remaining Silicon Carbide surge arresters in the switchyard by October 31, 2008; and conducting additional preventive maintenance program assessment and reviews.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, Entergy did not replace the surge arrester when it was identified to be past its reliable service life. (P.1(d))

Enforcement: Enforcement action does not apply because the surge arrestor was non-safety related and the performance deficiency did not involve a violation of a regulatory requirement. **(Finding (FIN) 05000333/2008003-02, Surge arresters not replaced in accordance with preventive maintenance program.)**

1R15 Operability Evaluations (71111.15 - 6 samples)

a. Inspection Scope

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

- CR 2008-01558, concerning a crack on the 'A' phase connector of the load side of 115 kV independent offsite power supply line number four breaker;
- CR 2008-01366, concerning pipe stresses in a 24 inch diameter containment vent and purge line exceeding the stresses allowed by the design code;
- CR 2008-01453 and CR 2008-01475, concerning indications having the appearance of cracks on the negative plate straps of multiple cells of the 125 V station batteries;
- CR 2008-00994 concerning 'B' reactor feed pump discharge header root valve leak;
- CR 2008-01548 concerning the May 12, 2008 loss of both 115 kV independent offsite power supplies and the impact on the reserve station service transformer 71T-3 and protective relaying; and
- CR 2008-01914 concerning a pinhole leak on emergency service water piping 15-8"-WES-151-110 located on the upstream weld of valve 46ESW-9B.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18 - 1 sample)

a. Inspection Scope

The inspectors reviewed Temporary Modification 7581, which was implemented in order to provide an alternate pressure measurement for jet pump number 20 into the jet pump flow instrument loop to assure all jet pump differential pressure and flow indications were reliable. The existing transmitter had failed and could not be safely removed due to a leaking instrument isolation valve. The inspectors assessed the adequacy of the 10 CFR Part 50.59 evaluation for the temporary modification. 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

Enclosure

testing was adequate. The documents reviewed are listed in the Attachment. This review represented one inspection sample.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 5 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 documentation; 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 against the requirements of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." The documents reviewed are listed in the Attachment. The following post-maintenance test activities were reviewed and represented five inspection samples:

- Work order 00112847, involving replacement of the inboard and outboard mechanical seals of the 'A' reactor feed pump, 34P-1A;
- Work order 51104407, involving replacement of all of the cells in the 'B' low pressure coolant injection (LPCI) battery, 71BAT-3B;
- Work order 00138738, involving replacement of pressure relief rupture disks in the high pressure coolant injection system;
- Work order 51187912, involving replacement of surge arrestors on offsite 115 kV line four T-3 transformer; and
- Work order 60151772, involving repair of 115 kV line 71 breaker 10012 'A' phase connector.

b. Findings

Introduction: A Green, NRC identified NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified when Entergy did not assure that appropriate quality standards were specified and included in design documents and that deviations from such standards were controlled. Specifically, Entergy did not ensure the appropriate cable bend radius for the 'B' LPCI battery inter-tier jumper cables was in accordance with the design.

Description: While performing a walkdown of the 'B' LPCI battery on May 1, 2008, following Entergy's planned replacement of the battery cells in April 2008, the inspectors

observed that the bend radii of several inter-tier jumpers between individual cells exceeded normally allowable minimum bend radius standards.

Entergy personnel measured the worst case bend radius of the inter-tier jumper connecting to cell 123 as 1.125 inches with a cable outer diameter (OD) of 0.870 inches. For comparison, this represents a bend radius of approximately 1.3 times the OD of the cable, whereas the current standard from Insulated Cable Engineer's Associated (ICEA) S-95-658/ National Electrical Manufacturer's Associated (NEMA) WC 70-1999, "Standard for Non-Shielded Power Cables Rated 2000V or Less for the Distribution of Electrical Energy," recommends a minimum four times the cable OD for this application. In addition, plant procedures currently in effect for the installation of cable require a minimum bend radius of three times the cable OD for this application.

A battery cell replacement was performed at the station in December 1997 under work order JF-960533300 using maintenance procedure MP-057.06, "Battery Maintenance," Revision 20. Since the jumper cables were removed from the battery plates that connect to the battery cells, the associated modification MOD D1-96-058, Revision 3, specified the use of portions of procedure IS-E-07, "Installation of Electrical Terminations," Revision 7. However, since the procedure applied to new installations of cable, the work order did not require the use of the entire procedure and omitted the section that specifies minimum bend radius criteria and also omitted the section that referenced procedure IS-E-06, "Installation and Removal of Electrical Cable," Revision 8, which also contained minimum bend radius criteria.

The recent replacement of the battery cells, performed in April 2008, under work order 51104407 using MP-057.06, "Battery Maintenance," Revision 37, did not require the use of either IS-E-07, Revision 8, or IS-E-06, Revision 8. However, it was reasonable for Entergy to include cable bend parameters specified in current plant procedures for this maintenance activity since the work orders directed manipulation of the battery inter-tier jumper cables. The work instructions did not include steps or criteria which could have ensured the establishment of proper bend radii for the inter-tier jumper cables.

Although a bend radius of 1.3 times OD greatly exceeds the industry standard of minimum four times OD and the current procedure standard of minimum three times OD, the jumper cables consist of welding cable for which comparable manufacturer criteria specify a minimum two times OD. Therefore, the current condition of the insulation jackets, which are not compromised at this time, should not be expected to degrade within any short timeframe since the temperature of the room is mild. However, additional stress imposed on the conductors and insulation does shorten the life of electrical cable, and the long term operability of such cables cannot be ensured for their expected lifetime usage without establishing proper bend radii.

The inspectors determined that the failure to ensure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled was a performance deficiency.

Analysis: This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, reliability was affected because of additional stresses imposed at the u-bend of the jumper cable which impacts cable long-term reliability. This was reasonably within Entergy's ability to foresee and prevent because there were opportunities to correct the deficiency during battery maintenance in April 2008. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined it to be of very low safety significance (Green) because the finding represented a design or qualification deficiency confirmed not to result in loss of operability.

The issue was entered into Entergy's corrective action program as CR-JAF-2008-01456. Corrective actions included establishing a work request to establish appropriate bend radii on the 'B' LPCI battery cables and inspecting all other batteries for extent of condition with respect to inter-tier jumper cables.

The inspectors determined that this finding had a cross-cutting aspect in the area of human performance because the completeness of the design documents, procedures, and work packages used during the maintenance activities in April 2008, were not sufficiently complete to ensure design standards were implemented. (H.2(c))

Enforcement: 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Contrary to the above, Entergy did not ensure appropriate quality standards were specified and controlled to ensure the appropriate cable bend radii for LPCI battery cell inter-tier jumper cables were installed in April 2008. Because the finding was of very low safety significance and Entergy entered the finding into their corrective action program as CR-JAF-2008-01456, this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: **(NCV 05000333/2008003-03, Quality standards not specified in design documents that resulted in deficient B LPCI battery cable bend radii)**

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

a. Inspection Scope

The inspectors observed and reviewed the following activities during the planned outage conducted from April 5, 2008 through April 7, 2008 to repair a 'B' feedwater system leak. The inspectors observed and reviewed activities to confirm that Entergy had appropriately considered risk, industry experience, and previous site-specific problems in their outage plan. During the outage, the inspectors observed portions of the shutdown and cooldown and monitored licensee controls over the outage activities listed below. This review represented one inspection sample.

- The inspectors reviewed outage schedules and procedures and verified that TS required safety system availability was maintained, shutdown risk was considered, and that contingency plans existed to restore key safety functions such as electric power and water inventory control;
- The inspectors observed portions of the plant shutdown and cooldown and verified that the TS cooldown rate limits were not exceeded;
- The inspectors periodically verified the proper alignment and operation of the shutdown cooling and reactor coolant makeup systems; and
- The inspectors observed portions of the reactor startup following the outage, and verified that safety-related equipment required for mode changes was operable, containment integrity was maintained, and reactor coolant boundary leakage was within TS limits.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 5 samples)

a. Inspection Scope

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

- ST-24J, "Reactor Core Isolation Cooling Flow Rate and Inservice Test," Revision 37;
- ST-5H, "SRM Signal to Noise Ratio Determination Test," Revision 0;
- ISP-29, "Suppression Chamber Water Level HPCI Instrument Functional Test/Calibration," Revision 28;
- TST-139, Alternate Methods of Determining RCS Leakage," Revision 0; and
- ST-9BA, "A and C Full Load Test and ESW Pump Operability Test," Revision 9.

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 May 13, 2008. The inspectors verified that emergency classification declarations and notification activities were properly completed. The inspectors evaluated the drill against 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: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02 – 6 samples)

a. Inspection Scope

During the period April 28, 2008 through May 1, 2008, the inspectors conducted the following activities to verify that Entergy's radioactive material processing and transportation programs complied with the requirements of 10 CFR Parts 20, 61, and 71; and Department of Transportation (DOT) regulations 49 CFR Parts 170-189.

- 1) The inspectors reviewed the solid radioactive waste system description in Section 11.1 - 11.3 of the UFSAR, the 2006 radiological effluent release report for information on the types and amounts of radioactive waste disposed, and the scope of Entergy's audit program to verify that it meets the requirements of 10 CFR Part 20.1101.
- 2) The inspectors walked-down the liquid and solid radioactive waste processing systems to verify and assess that the current system configuration and operation agree with the descriptions contained in the UFSAR and in the Process Control Program; reviewed the status of any radioactive waste process equipment that is not operational and/or is abandoned in place; and verified that the changes were reviewed and documented in accordance with 10 CFR Part 50.59, as appropriate. The inspectors reviewed the current processes for transferring and dewatering of radioactive waste resin and sludge discharges into shipping/disposal containers to determine if appropriate waste stream mixing

and/or sampling procedures, and methodology for waste concentration averaging provide representative samples of the waste product for the purposes of waste classification as specified in 10 CFR Part 61.55 for waste disposal.

- 3) The inspectors reviewed the radio-chemical sample analysis results for each of Entergy's radioactive waste streams (powdered resin, bead resin, and waste sludge); reviewed Entergy's use of scaling factors and calculations with respect to these radioactive waste streams to account for difficult-to-measure radionuclides; verified that Entergy's program assures compliance with 10 CFR Part 61.55 and 10 CFR Part 61.56 as required by Appendix G of 10 CFR Part 20; and, reviewed Entergy's program to ensure that the waste stream composition data accounts for changing operational parameters and thus remains valid between the annual or biennial sample analysis update.
- 4) There were no radioactive material shipments during the inspection week of April 28, 2008 for the observation of shipment packaging preparation activities.
- 5) The inspectors sampled the following non-excepted package shipment records and reviewed these records for compliance with NRC and DOT requirements.
 - 2008-020, shipment date of March 25, 2008;
 - 2008-012, shipment date of February 19, 2008;
 - 2008-002, shipment date of January 16, 2008;
 - 2008-1295, shipment date of April 9, 2008;
 - 2008-1294, shipment date of April 8, 2008;
 - 2008-1289, shipment date of February 12, 2008; and
 - 2008-1287, shipment date of February 19, 2008.
- 6) The inspectors reviewed Entergy's LERs, Special Reports, audits, state agency reports, and self-assessments related to the radioactive material and transportation programs performed since the last inspection and determined that identified problems are entered into the corrective action program for resolution. The inspectors also reviewed corrective action reports written against the radioactive material and shipping programs since the previous inspection.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

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

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. Additionally, NRC specialist inspectors reviewed 14 CRs associated with the radiation protection and radioactive waste transportation program areas that were initiated between April 2007 and April 2008. The inspectors assessed Entergy's threshold for problem identification, the adequacy of the cause analyses, and extent of condition review, operability determinations, and the timeliness of the specified corrective actions. The CRs reviewed are listed in the Attachment.

b. Assessment and Observations

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

.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 Corrective Action Program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment and corrective maintenance issues but also considered the results of daily inspector corrective action program 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 January 2008 through June 2008, although some examples expanded beyond those dates when the scope of the trend warranted. The inspectors compared and contrasted their results with the results contained in Entergy's latest integrated quarterly assessment report. Corrective actions associated with a sample of the issues identified in the trend report were reviewed for adequacy. The inspectors also evaluated the 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. Assessment and Observations

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

4OA5 Other Activities

.1 Independent Spent Fuel Storage Installation (60855 – 1 sample)

a. Inspection Scope

An independent spent fuel storage installation inspection (ISFSI) was conducted on April 28 through May 1, 2008, 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 nine Holtec Hi-Storm 100 casks currently storing spent fuel; independent radiation survey of the nine spent fuel storage casks; and review of surveillance records including annual special nuclear material inventory inspection, monthly air vent inspections, and recent daily air vent outlet temperature readings. The documents reviewed are listed in the Attachment. This inspection represented one inspection sample.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

Exit Meeting Summary

On July 7, 2008, the inspectors presented the inspection results to Mr. Kevin J. Mulligan and other members of his staff. The inspectors asked Entergy whether any of the material examined during the inspection should be considered proprietary. Entergy did not identify any material as proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

P. Dietrich, Site Vice President
C. Adner, Manager Operations
M. Woodby, Director Engineering
J. Costedio, Manager, Regulatory Compliance
P. Cullinan, Manager, Emergency Preparedness
A. Mitchell, Manager, System Engineering
B. Finn, Director Nuclear Safety Assurance
D. Johnson, Manager, Training
J. LaPlante, Manager, Security
K. Mulligan, General Manager, Plant Operations
G Pitts, Operations Training Manager
J. Solowski, Radiation Protection

LIST OF ITEMS OPEN, CLOSED, AND DISCUSSED

Opened

05000333/2008003-01	URI	Station batteries with indications on the negative plate straps (Section 1R04)
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Opened and Closed

05000333/2008003-02	FIN	Surge arresters not replaced in accordance with preventive maintenance program (Section 1R13)
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05000333/2008003-03	NCV	Quality standards not specified in design documents that resulted in deficient B LPCI battery cable bend radii (Section 1R19)
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Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

AOP-72, "115 kV Grid Loss, Instability, or Degradation," Revision 7
 AP-10.10, "On-Line Risk Assessment," Revision 6
 AP-12.13, "345/115 kV Transmission Line Operations and Interface," Revision 2
 OP-44, "115 kV System," Revision 16
 Power Control Policy 4.8, "Nine Mile Point 1 & 2 and Fitzpatrick Post Contingency Voltage Alarm," Revision 2
 Support Services Agreement between National Grid and Entergy regarding "...bus voltage contingency analyses on Entergy's James A. Fitzpatrick 115 kV transmission line...," effective April 20, 2006
 Letter from National Grid to Entergy regarding "Amendment to Voltage Contingency Analysis Support Services Agreement Between Entergy Nuclear Operations, Inc. and National Grid," dated August 6, 2007
 Letter from National Grid to Entergy regarding "National Grid services for 115 kV system post-trip voltage support for the J.A. Fitzpatrick Nuclear Station," dated August 28, 2006
 Service Agreement between Erie Boulevard Hydropower and Entergy regarding "Agreement For 115kV Lighthouse Hill Line Voltage Support Services," dated January 11, 2007.

Section 1R04: Equipment Alignment

OP-17, "Standby Liquid Control," Revision 46
 OP-43A, "125 Vdc Power System," Revision 22
 OP-22, "Diesel Generator Emergency Power," Revision 52
 OP-44, "115 kV System," Revision 16

Section 1R05: Fire Protection

Fire Area/Zone IX/RB-1, elevation 272 foot – PFF-PWR 20
 Fire Area/Zone X/RB -1, elevation 272 foot - PFF-PWR 21
 Fire Area/Zone IX/SG-1, elevation 272 foot – PFF-PWR 22
 Fire Area/Zone IX/RB-1A, elevation 326 foot– PFF-PWR 24
 Fire Area/Zone IX/RB-1A, elevation 344 foot– PFF-PWR 27

Section 1R11: Licensed Operator Regualification Program

Evaluation 2008-K, Small LOCA with Loss of High Pressure Injection, Degraded Emergency Depressurization

Procedures

TP-5.05, "Licensed Operator Regualification Training Program TP-5.05," Revision 10
 TP-5.07, "Licensed Operator Regualification Examination Development and Administration," Revision 14
 EN-TQ-202 "Simulator Configuration Control"
 TP-7.03 "Simulator Test Program"
 ODSO-30 "Maintenance of NRC Licenses and STA Qualifications," Revision 15

Miscellaneous

SOER 99-1 "Loss of Grid" (OE training presentation)
Watchstation Data Sheets - Quarter 1-4, 2007
LO-JAFLO-2007-00022, JAF Focused Self-Assessment Report, 2/12-14/07
List of Open Simulator DRs
Simulator Advisory Committee Minutes for Mar, Jun, Sept 07 and Mar 08
DR-6633, "LPSI MOV Alternate Power Supply Modification FI-91-305"
DR-9473, "HPCI & RCIC Instrumentation Non-density Comp Ind MOD ER-JAF-03-01858"

Simulator Malfunction Tests

Simulator Transient Test, Trip of Both RWR Pumps Test B2.2.1(4)
Simulator Transient Test, Turbine Trip Without Scram Test B2.2.1(6)
Simulator Normal Shutdown Test
Simulator Post Event Test for Plant Downpower on 2/6/07
Simulator 60 Minute Steady State Test
Simulator Malfunction Test ED06E, (TBACB6) Failure, Revision 5.
Simulator Malfunction Test RR23, RWR Flow Unit Fails
DR 9603, Ext Stm Vlv Position Ind Problem during Malfunction Test
Simulator 4 Year Test Plan

Section 1R12: Maintenance Effectiveness

Maintenance Rule Quarterly Report, 1st Quarter 2008
092 Emergency Diesel Generator Ventilation System Health Report, 1st Quarter 2008
JAF-RPT-DGV-02301, "Maintenance Rule Basis Document System 92 Emergency Diesel Generator Ventilation," Revision 3
020 Radwaste System Health Report, 2nd Half 2007
JAF-RPT-RADW-02355, "Maintenance Rule Basis Document for System 020 Radwaste System," Revision 5
JENG-APL-04-003, "Rx Bldg Floor Drain Sump B Level Switch Action Plan CR-JAF-2003-05533," Revision 1

CR-2003-05691	CR-2004-00899	CR-2005-03091
CR-2004-00455	CR-2004-01335	CR-2008-00932
CR-1996-00912	CR-2003-04673	CR-2004-05472
CR-1996-00913	CR-2003-05529	CR-2007-00384
CR-1998-01598	CR-2003-05533	CR-2007-01661
CR-2001-02485	CR-2004-01621	CR-2007-02037
CR-2003-04509	CR-2004-01623	CR-2007-02750

093 Emergency Diesel Generator System Health Report, 4th Quarter 2007
JAF-RPT-EDG-02303, "Maintenance Rule Basis Document System 93 Emergency Diesel Generator," Revision 7

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

71T-2 LCO/On-Line Contingency Planning
PMID Specified for Transformer 71T-3

A-2

Root Cause Analysis Report, "Actuation of 115 kV Differential Relay 71-87-B-1ZLCN02 Causes Loss of 115 kV Bus"

Report No. JAF-RPT-ELEC-02300, "Maintenance Rule Basis Document for 071AC Electrical Distribution System," Revision 7

71T-3 Transformer Lightning Arrester Power Factor Tests dated, July 1, 2003

FE-1B, "Main One Line Diagram Sheet 2 Station Service Transformers," Revision 12

FE-1D, "Main One Line Diagram Sheet 4 115 kV Switchyard," Revision 10

ESK-8FM, "DC Elementary Diagram 115 kV Bus Differential and Breaker Protection," Revision 19

EN-DC-324, "Preventive Maintenance Program," Revision 4

EN-DC-335, "PM Basis Template," Revision 2

PM Basis Template EN – Transformer – Oil Immersed, Revision 0

Section 1R15: Operability Evaluations

14620-EM-9011-2, "Seismic Analysis of Vent Line 30"-N-151A-21 for Severe Accident Containment Venting," Revision 1

FM-48A, "Flow Diagram Standby Gas Treatment System 01-125," Revision 29

FM-18B, "Flow Diagram Drywell Inerting C. A. D. Purge and Containment Differential Pressurization System 27," Revision 39

TR-100248, "Stationary Battery Guide: Design, Application, and Maintenance," EPRI, Revision 2

Operational Decision Making Instruction RFP 'A' Degraded Seal Monitoring and Resolution

JAF-CALC-08-00009, "Structural Evaluation of Through-Wall Leak at 15-8"-WES-151-100," Revision 0

CR-2005-05180

Section 1R19: Post Maintenance Testing

Work Order 00146410, "In Board Mechanical Seal Water Supply Pipe Leaks"

ST-4N, "HPCI Quick-Start, Inservice, and Transient Monitoring Test (IST)," Revision 54

FM-25A, "Flow Diagram High Pressure Coolant Injection System 23," Revision 70

CMP No. 9.3-3.76, "Construction Methods Procedure for Insulated Electrical Cable Installation," 03/1976

EDP-6, "Installation Specifications," Revision 0

IS-E-06, Installation and Removal of Electrical Cable, Revision 0

IS-E-06, Installation and Removal of Electrical Cable, Revision 8

F1-77-009, "Uninterruptible Power for LPCI MOV'S," 03/07/1977

Certificate of Compliance, P.O. No. E28078, "#4/0 (5341/W) Neop. Welding 600V," 08/08/1977

Nonconformance and Disposition Report No. 9920, "Supports, Battery Conn. Cables LPCI Uninterrupted Power Supply," 08/26/1977

S46-005.cdr, "Emergency Service Water," Revision 0

CR-2008-01456

Section 2PS2: Radioactive Material Processing and Transportation

Quality Assurance Audit No. QA-15-2007-JAF-1: Radwaste Audit, December 17, 2007 – January 31, 2008

2008 SNM Physical Inventory, February 27, 2008, JENG-08-0034

Procedures:

AP-06.01, Process Control Program, Revision 5
 RP-OPS-05.04, Radioactive Waste Data Base Control Program, Revision 4
 S ENN-RW-102, Setup and Operating Procedure for RDS-1000, Revision 0
 MP-019.14, Hi-Storm System Operability Tracking, Revision 2
 ST-32B, Overpack Heat Removal System Operability Test, Revision 3
 RP-OPS-05.13, CNS 14-215H Cask Handling Procedure, Revision 1
 RP-OPS-5.07, CNS 3-55 Cask Handling Procedure, Revision 3
 RP-OPS-05.14, CNS 8-120B Cask Handling Procedure, Revision 0
 Holtec Hi-Storm Certificate of Compliance No. 1014 and Safety Evaluation Report
 Hi-Storm 100 Final Safety Analysis Report, Revision 3

Section 4OA2: Identification and Resolution of ProblemsCondition Reports

2007-1838	2008-1330	2008-1561
2007-4082	2008-1340	2008-1571
2007-2695	2008-1356	2008-1580
2007-4200	2008-1357	2008-1595
2007-3500	2008-1436	2008-1597
2007-4545	2008-1446	2008-1770
2007-4053	2008-1448	2008-1786
2008-0024	2008-1449	2008-1787
2008-0025	2008-1453	2008-1859
2008-0138	2008-1456	2008-1868
2008-0026	2008-1471	2008-1921
2008-1266	2008-1479	2008-2059
2008-0055	2008-1480	2008-2096
2008-0073	2008-1481	2008-2099
2008-1548	2008-1488	
2004-2727	2008-1511	
2008-1049	2008-1514	
2008-1328	2008-1555	

LIST OF ACRONYMS

AC	Alternating Current
ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CR	condition report
DOT	Department of Transportation
EDG	emergency diesel generator
ICEA	Insulated Cable Engineer's Association
ISFSI	independent spent fuel storage installation inspection
IMC	inspection manual chapter
IST	inservice test
LER	licensee event report
LPCI	low pressure coolant injection
NCV	non-cited violation
NEMA	National Electrical Manufacturer's Association
NRC	Nuclear Regulatory Commission
OA	other activities
OD	outer dosimeter
PARS	Publicly Available Records
PI&R	problem identification and resolution
SDP	significance determination process
SSC	structures, systems, or components
ST	surveillance test
TS	technical specification
UFSAR	updated final safety analysis report