May 8, 2006

Mr. Donald K. Cobb
Assistant Vice President
Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC INTEGRATED INSPECTION REPORT 05000341/2006002

Dear Mr. Cobb:

On March 31, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Fermi Power Plant, Unit 2. The enclosed report documents the inspection findings which were discussed on March 23, 2006, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and to 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, three findings of very low safety significance were identified which involved violations of NRC requirements. However, because these findings were of very low safety significance and because the issues were entered into your corrective program, the NRC is treating these findings as Non-Cited Violations in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Fermi-2 facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Thomas J. Kozak
Team Leader, Technical Support Services
Division of Reactor Projects

Docket No. 50-341
License No. NPF-43

Enclosure: Inspection Report 05000341/2006002
w/Attachment: Supplemental Information

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Michigan Department of Environmental Quality
Waste and Hazardous Materials Division
M. Yudasz, Jr., Director, Monroe County
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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	NPF-43
Report No:	05000341/2006002
Licensee:	Detroit Edison Company
Facility:	Fermi Power Plant, Unit 2
Location:	Newport, Michigan
Dates:	January 1 through March 31, 2006
Inspectors:	R. Morris, Senior Resident Inspector T. Steadham, Resident Inspector R. Smith, Resident Inspector, Davis-Besse D. Jones, Reactor Engineer
Observers:	Adam Wilson, Electrical Engineer, Headquarters
Approved by:	Thomas J. Kozak Team Leader, Technical Support Services Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000341/2006002, 01/01/2006-03/31/2006; Fermi Power Plant, Unit 2; Temporary Plant Modifications, Post-Maintenance Testing, Problem Identification and Resolution.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional-based engineering specialists. Four Green findings associated with three Non-Cited Violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the Significance Determination Process 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 3, dated July 2000.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green. The inspectors identified a finding of very low significance (Green) associated with a Non-Cited Violation of license condition 2.C(9) for the failure to appropriately control transient combustibles on multiple occasions. Personnel left aerosol cans containing flammable materials unattended on a workbench in violation of the licensee's procedure for the control of transient combustibles. Once these issues were identified, the licensee moved the cans to an appropriate flammable storage locker. The primary cause of this finding is related to the corrective action aspect of the problem identification and resolution cross-cutting area in that the NRC had previously identified issues relating to the failure to control transient combustible materials but adequate corrective actions were not put in place to prevent recurrence of this issue.

  The finding was more than minor because the repeated failure to properly control combustible materials, if left uncorrected, could become a more safety-significant concern. This finding was of very low safety significance because the quantity of transient combustibles involved was low and the applicable fire barriers and suppression systems remained operable. (Section 4OA2.3)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low significance associated with a Non-Cited Violation (NCV) of 10CFR50, Appendix B, Criterion XVI (Corrective Action) for the failure to identify and correct a condition adverse to quality related to the emergency diesel generator 12 (EDG-12) output circuit breaker cubicle. A newly installed, refurbished circuit breaker failed to open during an EDG-12 operability run on August 6, 2004. The licensee did not adequately identify and correct the conditions associated with this breaker failure, and, on February 3, 2006, a newly installed, refurbished breaker failed to open upon demand, resulting in additional unavailability time for EDG-12 and a challenge to the EDG's limiting condition for operation. The primary cause of this finding is related to the identification aspect of the problem identification and resolution cross-cutting area. The licensee replaced the refurbished

breaker with the original breaker and successfully conducted the EDG operability run. In addition, the licensee planned to thoroughly inspect the breaker cubicle when the associated bus was de-energized during the April 2006 refueling outage.

The finding is more than minor because it was associated with the equipment performance attribute and affected the reliability objective of the Mitigating Systems Cornerstone. Using the Mitigating Systems Significance Determination Process, the inspectors determined the finding to be of very low safety significance because the inspectors answered no to all five phase 1 screening questions. (Section 1R19)

- Green. The inspectors identified a finding of very low significance (Green) associated with a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the failure to adequately control cabling for cameras, vibration monitoring, and telephones in the power block. The licensee did not perform the required evaluations prior to installing 195 cables in the reactor and auxiliary buildings, 4 of which crossed divisional boundaries. The licensee entered this issue into their corrective action program and conducted a thorough walkdown of all plant areas documenting all uncontrolled cables. The cables are being evaluated and processed through the new temporary modification process for engineering evaluation or removal. The primary cause of this finding is related to the corrective action aspect of the problem identification and resolution cross-cutting area.

  The finding is greater than minor because it was associated with the design control attribute and affected the reliability objective of the Mitigating Systems Cornerstone. Using the Mitigating Systems Significance Determination Process, the inspectors determined the finding to be of very low safety significance because the finding was a design deficiency that did not result in a loss of function per GL 91-18 (rev 1). (Section 1R23.2)

B. Licensee-Identified Violations

No violations of significance were identified by the licensee during this inspection period.

REPORT DETAILS

Summary of Plant Status

Unit 2 began this inspection period at full power where, with two exceptions, it remained at or near until March 24. Reactor power was decreased to between 70 and 80 percent on February 11 and 19 for rod pattern adjustments and control rod operability testing. On March 24, Operators began a pre-planned unit shutdown for refueling outage 11 (RF-11) which began the following day at 5:15 a.m. when the reactor was shutdown. The unit remained shutdown for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Mitigating Systems

1R04 Equipment Alignments (71111.04)

.1 Partial System Walkdown (71111.04)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk significant systems:

- standby liquid control train “B”, performed on January 14;
- division 2 non-interruptible air supply, performed on February 18; and
- 120kV AC electrical distribution system, performed on March 18.

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones. The inspectors reviewed operating procedures, system diagrams, Technical Specification (TS) requirements, Administrative TSs, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components were aligned correctly.

In addition, the inspectors verified equipment alignment problems were entered into the corrective action program with the appropriate significance characterization.

These activities represented three quarterly Partial System Walkdown inspection samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection - Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection tours of the following risk-significant plant areas:

- reactor building, fifth floor;
- reactor recirculation motor generator set room;
- reactor building, equipment airlock;
- reactor building, third floor;
- control room complex, third floor;
- standby liquid control pump room;
- turbine building, truck loading bay;
- turbine building, third floor; and
- relay room below the control room.

The inspectors verified fire zone conditions were consistent with assumptions in the licensee's Fire Hazards Analysis. The inspectors walked down fire detection and suppression equipment, assessed the material condition of fire fighting equipment, and evaluated the control of transient combustible materials. In addition, the inspectors verified fire protection related problems were entered into the corrective action program with the appropriate significance characterization.

These activities represented nine quarterly Fire Protection - Tours inspection samples.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI) Activities (71111.08G)

a. Inspection Scope

From March 27 through 30, 2006, the inspectors conducted a review of the implementation of the licensee's ISI program for monitoring degradation of the reactor coolant system (RCS) boundary and the risk significant piping system boundaries during the Unit 2 outage (RF11). The inspectors selected the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI required examinations and Code components in order of risk priority, as identified in Section 71111.08-02 of IP 71111.08, "Inservice Inspection Activities," based upon the ISI activities available for review during the on-site inspection period.

The inspectors conducted an on-site review of the following types of nondestructive examination activities to evaluate compliance with the ASME Code Section XI and Section V requirements, and to verify that indications and defects (if present) were dispositioned in accordance with the ASME Code Section XI requirements. Specifically, the inspectors observed/reviewed the following examinations:

- Ultrasonic examination (UT) of a pipe-to-flange weld (SW-RS-2-B3-W5), reactor recirculation system;

- Liquid Penetrant (PT) examination of a pipe-to-flange weld (SW-RS-2-B3-W5), reactor recirculation system;

- Ultrasonic examination (UT) of a weldolet-to-pipe weld (SW-RS-2-B3-W4), reactor recirculation system;

- Liquid Penetrant (PT) examination of a weldolet-to-pipe weld (SW-RS-2-B3-W4), reactor recirculation system;

- Ultrasonic examination (UT) of an elbow-to-pipe weld (SW-E11-3158-4D), residual heat removal system;

- Magnetic Particle examination (MT) of an elbow-to-pipe weld (SW-E11-3158-4D), residual heat removal system; and

- Magnetic Particle examination (MT) of weldolet-to-pipe weld (SW-E21-3144-5WE), core spray system.

The inspectors reviewed an examination with recordable indications that was accepted for continued service, to verify that the licensee's acceptance was in accordance with the ASME Code, or an NRC approved alternative. Specifically, the inspectors reviewed the following record:

> The inspectors reviewed the reinspection of an approximately 1.75 inch long crack in the thermal sleeve to elbow weld (RS-1) on the riser of jet pump numbers. 7 and 8. The crack, which was evaluated and dispositioned, as within the flaw acceptance tolerance for this location, and acceptable for continued service without repair, had been originally found during RF06 and reinspected during RF07, RF08, RF09, and RF10. There was no change in length or width of the indication.

The inspectors reviewed the following pressure boundary weld for an ASME Code Class 2 system, which was completed during the previous refueling outage (RF10), to verify that the welding acceptance (e.g., radiography) and preservice examinations were performed in accordance with ASME Code requirements:

> The inspectors reviewed radiographs and work request, (No. B937040100) for an RHR system pipe-to-expander weld (E11-4005-RC1).

The inspectors performed a review of ISI related problems that were identified by the licensee, and entered into the corrective action program. Additionally, the inspectors' review included confirmation that the licensee had an appropriate threshold for identifying issues and had implemented effective corrective actions. The inspectors evaluated the threshold for identifying issues through interviews with licensee staff and review of licensee actions to incorporate lessons learned from industry issues related to the ISI program. The inspectors performed these reviews to ensure compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The

corrective action documents reviewed by the inspectors are listed in the attachment to this report. In addition, the inspectors verified that the licensee correctly assessed operating experience for applicability to the Inservice Inspection group.

The reviews as discussed above counted as one BWR ISI inspection sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On February 28, 2006, the inspectors observed an operations support crew during the annual requalification examination in mitigating the consequences of events in Scenario SS-OP-802-3200, Revision 0, "Loss of Bus 64B due to trip of B6 Breaker, EDG 11 Starts and Loads, LOCA," on the simulator. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

These activities represented one quarterly Licensed Operator Requalification inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- main turbine lubricating oil; and
- emergency diesel generator (EDG) breaker 12 failure.

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. Specifically, the inspectors independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b);
- characterizing system reliability issues;
- tracking system unavailability;
- trending key parameters (condition monitoring);
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification and/or re-classification; and
- verifying appropriate performance criteria for systems classified as (a)(2) and/or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization.

These activities represented two quarterly Maintenance Effectiveness inspection samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13Q)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and operational activities affecting risk-significant and safety-related equipment listed below.

- maintenance risk, week of January 1;
- risk management actions for extended EDG-12 outage;
- maintenance risk, week of February 13; and
- maintenance risk, week of February 25.

These activities were selected based on their potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst and/or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

These activities represented four quarterly Maintenance Risk Assessment and Emergency Work Control inspection samples.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events (71111.14)

.1 Loss of Communications

a. Inspection Scope

The inspectors reviewed the events and circumstances surrounding a loss-of-communications event that occurred on January 10, 2006. Communications were temporarily interrupted to the site which resulted in the loss of the Emergency Response Data System, the Emergency Notification System phones, and most commercial phone lines to the plant. All internal lines, cellular phones, the standard lines used during implementation of the Radiological Emergency Response Plan, and some commercial lines remained available during the event. The inspectors responded to the control room and monitored the licensee's contingency actions as a result of the event. The licensee investigation determined the communications disruption was caused by a severed fiber optic cable off-site due to personnel and activities unrelated to the operation of Fermi-2. The telephone company later repaired the line which subsequently restored all communications to the site.

These activities represented one Personnel Performance During Non-Routine Plant Evolutions and Events inspection sample.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following condition assessment resolution documents (CARDs) to ensure either the condition did not render the involved equipment inoperable or result in an unrecognized increase in plant risk, or the licensee appropriately applied TS limitations and appropriately returned the affected equipment to an operable status:

- CARD 06-20187, "EFA-P44-06-001, P4450F400A/B Division 1 and 2 EECW TCV Intermittently Fail Full Open";
- CARD 06-20606, "High EDG-12 Outboard Bearing Temperature"; and
- CARD 06-20571, "EDG-12 Output Breaker Failed to Open."

These activities represented three Operability Evaluation inspection samples.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A)

a. Inspection Scope

The following Engineering Design Package was reviewed and selected aspects were discussed with engineering personnel:

- PDC-8370; Division 2 control air compressor belt and sheave modifications.

This document and related documentation were reviewed for adequacy of the safety evaluation, consideration of design parameters, implementation of the modification, post-modification testing, and relevant procedures, design, and licensing documents were properly updated. The modifications were for equipment upgrades of existing equipment.

These activities represented one annual Permanent Plant Modifications inspection sample.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance testing (PMT) activities associated with the following scheduled maintenance:

- Work Request 000Z060138, “Division 2 Emergency Equipment Cooling Water Heat Exchanger Temperature Control Valve Software Modification”;
- EDG-12 safety system outage;
- WR V122960729, “Replace EDG-12 Output Breaker”;
- WR P058040100, “Control Air Compressor”; and
- emergency equipment cooling water room cooler.

The inspectors reviewed the scope of the work performed and evaluated the adequacy of the specified PMT. The inspectors verified the PMT was performed in accordance with approved procedures, the procedures clearly stated acceptance criteria, and the acceptance criteria were met. The inspectors interviewed operations, maintenance, and engineering department personnel and reviewed the completed PMT documentation.

In addition, the inspectors verified PMT problems were entered into the corrective action program with the appropriate significance characterization.

These activities represented five Post-Maintenance Testing inspection samples.

b. Findings

Introduction: The inspectors identified a finding of very low significance (Green) associated with a Non-Cited Violation (NCV) of 10CFR50, Appendix B, Criterion XVI (Corrective Action) for the failure to identify and correct a condition adverse to quality related to the emergency diesel generator 12 (EDG-12) output circuit breaker cubicle.

Description: On August 2, 2004, the original EDG-12 output breaker was replaced with a refurbished breaker as part of routine preventative maintenance. Post-maintenance testing, including successful breaker operation with the breaker racked in the test position, was satisfactorily completed. The breaker was then racked to the connect position to support final operability testing of the EDG.

On August 6, 2004, during the EDG operability run, operators could not open the breaker using the local or remote control switches. After actuating a test switch across the undervoltage relay, electricians successfully opened the breaker and the EDG was secured. The licensee returned the original breaker to the cubicle, successfully performed the operability test, and returned the EDG to service. The licensee entered this issue into their corrective action program as CARD 04-23534. The licensee's troubleshooting determined that the auxiliary contact for the manual trip function did not make-up due to dimensional differences between the refurbished breaker and the original breaker. Specifically, the cell mounted auxiliary switch (MOC) actuator lever on the refurbished breaker was mounted slightly higher on the refurbished breaker than the original breaker; however, this slight tolerance difference of approximately 1/16" - 1/32" was within the manufacturer's specifications. The licensee concluded that the tolerance differences were enough to cause the MOC contacts to rotate further than ninety degrees thus causing a loss of continuity with the contacts used to manually open the breaker. The corrective action specified for the CARD was to verify that the MOC contacts are visible within the viewing window when replacing a breaker during future maintenance. The licensee closed the CARD on August 31, 2005.

On February 2, 2006, during an EDG-12 safety system outage, the original output breaker was replaced with a different refurbished breaker and the MOC contacts were verified to be within the viewing window. No adjustments were made to the actuating lever arm and breaker post maintenance testing was completed satisfactorily. On February 3 during the first loaded run, operators were again unable to open the refurbished breaker from the local panel. Electricians opened the breaker by manually actuating the undervoltage trip relay and the licensee entered this issue into their corrective action program as CARD 06-20571. The licensee returned the original breaker to the cubicle and successfully performed the operability test. The licensee determined that the actual condition adverse to quality associated with the first breaker failure was not identified or corrected and, to identify the cause of the refurbished breakers failing to open, it would be necessary to thoroughly inspect the breaker cubicle when the associated bus was de-energized during the April 2006 refueling outage.

The failure of the refurbished breaker to properly operate during the operability run directly increased the unavailability time for EDG-12 by approximately 20 hours and therefore contributed to the longer than anticipated system outage. Due in part to the breaker failure, the licensee determined that EDG-12 may not be operable prior to the expiration of the 7-day allowed outage time. A one-time technical specification

amendment extending the allowed outage time an additional 7 days was requested by the licensee and subsequently granted by the NRC.

Analysis: The inspectors determined that the licensee's failure to properly identify and correct a condition adverse to quality associated with the breaker cubicle represents a performance deficiency. The finding is more than minor because it was associated with the equipment performance attribute and affected the reliability objective of the Mitigating Systems Cornerstone. Using the Mitigating Systems Significance Determination Process, the inspectors determined the finding to be of very low safety significance because the inspectors answered no to all five phase 1 screening questions. The primary cause of this finding was related to the identification aspect of the problem identification and resolution cross-cutting area.

Enforcement: 10CFR50 Appendix B Criterion XVI (Corrective Action) requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, as of February 3, 2006, the licensee failed to take appropriate measures to identify and correct the cause of the EDG-12 output circuit breaker failure on August 6, 2004. Because this violation was determined to be of very low safety significance and because it was entered into the licensee's corrective action program, it is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy (**NCV 05000341/2006002-01, Failure of Breaker to Open)**. This violation is in the licensee's corrective action program as CARD 06-20571. Immediate corrective actions included reinstalling the original breaker, verifying the breaker preventative maintenance was within the allowed grace period, and demonstrating breaker operability. The licensee also planned to thoroughly inspect the breaker cubicle when the associated bus was de-energized during the April 2006 refueling outage.

1R20 Refueling and Outage Activities (71111.20)

.1 Routine Refueling Outage Inspection Activities

a. Inspection Scope

The inspectors observed activities during the Unit-2, RF-11, which commenced on March 25, 2006, and continued into the next inspection period. This inspection consisted of an in-office review of the licensee's outage schedule, safe shutdown plan, and administrative procedures governing the outage; and periodic observations of equipment alignment and plant and control room outage activities. Specifically, the inspectors determined the licensee's ability to effectively manage elements of shutdown risk pertaining to reactivity control, decay heat removal, inventory control, electrical power control, and containment integrity.

The inspectors conducted the following inspection activities:

- attended outage management turnover meetings to determine if the current shutdown risk status was accurate, well understood, and adequately communicated;
- performed walkdowns of the main control room to observe the alignment of systems important to shutdown risk;

- observed the operability of reactor cooling system instrumentation and compared channels and trains against one another;
- performed in-plant walkdowns to observe ongoing work activities; and
- conducted in-office reviews of selected issues that the licensee entered into its corrective action program to determine if identified problems were being entered into the program with the appropriate characterization and significance.

Additionally, the inspectors performed the following specific in-plant activities:

- performed Mode 4 walkdowns at the start of the refueling outage to check for active leak indications;
- observed the control room staff perform the shutdown and initial cooldown;
- verified that reactor cooling system cooldown rates were within TS limits;
- observed operators align the residual heat removal system for shutdown cooling;
- monitored a pre-job briefing for fuel handling evolutions;
- monitored lifting and transport of the drywell head;
- monitored lifting and transport of the reactor head;
- reviewed shutdown margin calculations;
- reviewed spent fuel pool cooling and reactor water cleanup configurations during core offload; and
- observed operation of the fuel handling bridges on the fifth floor of the reactor building;

These activities did not constitute a Refueling Outage inspection sample. The inspection will continue into the next quarter.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22Q)

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- reactor protection system fuse replacement;
- reactor coolant system leak detection;
- reactor core isolation cooling pump operability and valve test; and
- drywell-to-suppression chamber bypass leak test.

The inspectors reviewed the test methodology and test results to verify equipment performance was consistent with safety analysis and design basis assumptions. In addition, the inspectors verified surveillance testing problems were being entered into the corrective action program with the appropriate significance characterization.

These activities represented one Routine, one Reactor Coolant Leak Detection, and two In-service Surveillance Testing samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

.1 Routine Temporary Modification Review

a. Inspection Scope

The inspectors reviewed the following two temporary modifications (TM) and to verify the installation was consistent with design modification documents and the modifications did not adversely impact system operability or availability:

- seismic monitor alarm temporary software modification
- cables and wiring in the power block

The inspectors reviewed post-installation testing and configuration control of the modification by reviewing design modification documents. The inspectors interviewed engineering and operations department personnel, and reviewed the design modification documents and 10 CFR 50.59 evaluations against the applicable portions of the TS and UFSAR.

These activities represented two Temporary Plant Modification inspection samples.

b. Findings

Introduction: The inspectors identified a finding of very low significance (Green) associated with a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the failure to adequately control cabling for cameras, vibration monitoring, and telephones in the power block.

Description: On August 17, 2004, NRC inspectors identified that there were unmarked and uncontrolled cables located throughout the plant. The licensee entered the issue into their corrective action program as CARD 04-23708. The licensee determined on September 16, 2004, there was not an official cable management program in place and determined a meeting should be conducted to discuss a resolution to the issue. The licensee determined an operability and reportability determination could not be made until the cables were identified, walked down, and evaluated. On October 12, 2005, the licensee stated in the CARD, "Still a year later no concrete resolution has been identified or derived; therefore, PSE-Electrical and Electrical Modification Group met to discuss and decide how the cables and extension cords installation currently running freely through the plant should be resolved. It was decided that the cables and extension cords will be removed...."

Unaware of the original CARD, in December 2005 another inspector identified the same issue with the cables in the plant. The licensee initiated CARD 05-26697 to document

the inspector's concerns. Initially, the licensee indicated that the cables were not marked or controlled because of an exemption from the requirements in procedure MMA21, "Temporary Power and Extension Cords" and procedure MES12, "Performing Temporary Modifications."

In response to this issue, the licensee performed extensive walkdowns of the secondary containment and turbine buildings and identified that 195 cables were placed in the plant without controls and evaluation. Of those, 112 were in the reactor and auxiliary building and 4 crossed divisional boundaries. This condition was contrary to UFSAR, Section 9A.4.1.6.2, "Fire Protection." The cables were neither installed in conduit nor had they been previously evaluated by engineering. Fire Protection Engineering Evaluation FPEE-06-0001, Revision 1, was written as an initial assessment of the as-found conditions and determined that the mitigating factors in effect while the cables were in the exclusion zone assured there was no adverse effect on the ability of the plant to achieve and maintain safe shutdown in the event of a fire.

The licensee initiated a program to identify the required cables, perform the appropriate engineering evaluation, and label them. The licensee then closed CARD 05-26697 to CARD 04-23708, which was expanded to include cabling throughout the plant and to revise the temporary cable procedure.

Analysis: The inspectors determined that the failure to perform an engineering analysis and provide controls for cables being used throughout the plant is a performance deficiency warranting a significance determination. The finding is greater than minor because it was associated with the design control attribute and affected the reliability objective of the Mitigating Systems Cornerstone. Using the Mitigating Systems Significance Determination Process, the inspectors determined the finding to be of very low safety significance because the finding was a design deficiency that did not result in a loss of function per GL 91-18 (rev 1). The primary cause of this finding is related to the corrective action aspect of the problem identification and resolution cross-cutting area.

Enforcement: 10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures be established to assure applicable regulatory requirements and the design basis for structures, systems, and components are correctly translated into specifications, drawings, procedures and instructions. Procedure MES12, "Performing Temporary Modifications," Enclosure A, requires an evaluation of temporary modifications to determine the potential plant impacts of the TM. Contrary to the above, the licensee did not perform the required evaluations prior to installing 195 cables in the reactor and auxiliary buildings, 4 of which crossed divisional boundaries. However, because this violation was of very low safety significance and because it was entered into the licensee's corrective action program, this violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the NRC Enforcement Policy. **(NCV 05000341/2006002-02, Failure to Maintain Control of Cables**)

This issue was entered into the licensee's corrective action program as CARD 05-26697. The immediate corrective actions included labeling of the cables and changing the TM procedure.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the licensee perform a red team emergency preparedness drill on January 18, 2006. The inspectors observed activities in the control room simulator, technical support center, and emergency operations facility. The inspectors also attended the post-drill facility critiques in the technical support center and emergency operations facility immediately following the drill and the overall drill critique. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the drill performance and ensure the licensee evaluators noted the same weaknesses and deficiencies and entered them into the corrective action program. The inspectors placed emphasis on observations regarding event classification, notifications, protective action recommendations, and site evacuation and accountability activities. As part of the inspection, the inspectors reviewed the drill package included in the list of documents reviewed at the end of this report.

These activities represented one Drill Evaluation inspection sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors sampled the licensee's submittals for the performance indicator (PI) listed below. The inspectors used PI definitions and guidance contained in Revision 2 of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," to verify the accuracy of the PI data. The following PI was reviewed:

- Safety System Functional Failure PI Verification.

The inspectors reviewed selected applicable conditions and data from logs, licensee event reports and CARDs from January 2004 through January 2006 for the PI area specified above. The inspectors independently re-performed calculations where applicable. The inspectors compared that information to the information required for the PI definition in the guideline to ensure the licensee reported the data correctly.

These activities represented one Performance Indicator Verification, Safety System Functional Failures, inspection sample.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's corrective action system at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Some minor issues entered into the licensee's corrective action program as a result of the inspectors' observations are included in the list of documents reviewed which is attached to this report.

These activities did not represent any additional inspection samples.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review of Main Steam Isolation Valve Position Switch Failures (71152)

Introduction

The inspectors reviewed the events and circumstances surrounding the as-found calibration failure of the "D" outboard main steam isolation valve position limit switch, B21N574D, on November 20, 2004, during preventative maintenance. The inspectors reviewed past performance problems associated with the switch as well as work performed to re-calibrate the switch. Because the setpoint was found outside the acceptable calibration range on four of the past five tests, the inspectors reviewed corrective actions taken or planned as a result of this event.

These activities represented one annual Identification and Resolution of Problem, In-depth Review, inspection sample.

a. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed CARD 04-25832. The inspectors considered the licensee's evaluation and disposition of performance issues, evaluation and disposition of operability issues, and application of risk insights for prioritization of issues.

(2) Issues

During the performance of WR 0518041022 in refueling outage 10 (RF-10), B21N574D had an as-found reading of 12.9 percent full open which was greater than the allowable value. The licensee successfully calibrated the switch to within the acceptable range and entered the issue into their corrective action program as CARD 04-25832. The licensee performed a functional failure evaluation and determined the function to initiate a reactor scram within the allowed time was not lost because only a single switch was affected.

The inspectors reviewed the maintenance history of the main steam isolation valve limit switches and determined that B21N574D had been found out of calibration two consecutive times prior to the November 20, 2004, discovery. During the performance of WRs 0518030818 and 0518030328 on August 19, 2003, and April 14, 2003, respectively, the switch was found outside the allowable performance range but within the TS allowable value.

Because of the past performance problems with this switch, the licensee initiated WR 000Z044189 to replace it during RF-11. The inspectors reviewed the licensee's evaluation and determined the licensee did not sufficiently document the justification for waiting until RF-11 to replace the switch in lieu of replacing it during RF-10. The inspectors will review the final corrective actions and switch replacement during RF-11 as part of a specific baseline inspection sample.

.3 Annual Sample Review of Combustible Material Controls (71152)

Introduction

As documented in Section 1R05 of this report, the inspectors performed a fire protection walkdown of the turbine building truck loading bay. During that inspection, the inspectors found cans containing flammable liquids left unattended on a workbench. During subsequent plant tours, the inspectors noticed similar cans on three more occasions in the same area. Therefore, the inspectors reviewed the licensee's corrective actions as a result of this issue.

a. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed CARD 06-20749. The inspectors considered multiple related events to determine if this CARD addressed generic implications and the corrective actions were appropriately focused to correct the problem.

These activities represented one annual Identification and Resolution of Problems, In-depth Review, inspection sample.

(2) Findings

Introduction: The inspectors identified a finding of very low significance (Green) associated with a Non-Cited Violation of license condition 2.C(9) for the failure to appropriately control transient combustibles.

Description: During a routine plant walkdown on February 14, 2006, the inspectors identified 12 spray cans labeled “extremely flammable” on a workbench in the truck loading area at the main personnel entrance to the turbine building. The cans were unattended and not being stored in an approved fire protection locker. The inspectors notified the licensee who immediately placed the cans in the nearby approved flammable storage locker and entered this issue into their corrective action program as CARD 06-20749.

The following day, the inspectors identified two similar cans unattended on the same workbench and again notified the licensee who placed them in the flammable storage locker. The general area was used by radiation protection to release materials from the radiation restricted area but radiation protection was not informed that the cans were placed on the bench. The licensee concluded that personnel placed the cans on the bench and walked away without notifying the appropriate personnel to ensure the cans were adequately controlled.

On February 23, 2006, the inspectors identified three similar spray cans on the same workbench and notified the licensee who again placed the cans in the flammable storage locker. The licensee communicated the requirements to adequately control combustible materials to contract personnel during stand down meetings. In addition, contract personnel began monitoring the area twice a shift for inappropriately stored flammable materials.

On March 7, 2006, the inspectors again identified three similar spray cans on the same workbench. The cans were again placed in the flammable storage locker and this occurrence was entered into the licensee’s corrective action program as CARD 06-21134. The licensee communicated this issue site-wide, included the issue in initial plant access training, and performed a walkdown of all work locations to scrub the areas of all spray cans containing flammable materials.

The inspectors determined the area in question contained electrical cables for the standby feedwater system, a risk-significant system used to help ensure the safe shutdown of the plant in the event of a fire. However, the standby feedwater system is not required to mitigate the effects of a fire in the area where the unattended spray cans were identified.

Analysis: The inspectors determined that the licensee’s failure to properly control transient combustible materials represents a performance deficiency as defined in NRC IMC 0612, Appendix B. The inspectors determined the issue was more than minor because the repeated failure to properly control combustible materials, if left uncorrected, could become a more safety-significant concern. The inspectors assessed the finding using the Fire Protection SDP and determined the finding to be of very low safety significance because the quantity of transient combustibles involved was low and the applicable fire barriers and suppression systems remained operable. The primary

cause of this finding is related to the corrective action aspect of the problem identification and resolution cross-cutting area.

Enforcement: Fermi-2 Facility Operating License NPF-43, condition 2.C(9), required, in part, the licensee implement and maintain in effect all provisions of the approved fire protection program as described in Section 9A of the Updated Final Safety Analysis Report (UFSAR) as amended and approved in the Fermi-2 safety evaluation report through supplement 6. UFSAR 9A.5.b.1 required administrative procedures for the control of combustibles. Procedure MOP11, "Fire Protection," step 3.3.1 required flammable liquids stored within the protected area be kept in a designated storage area and that prior written approval from the Nuclear Fire Protection Specialist be obtained for storage outside the approved storage area for limited periods of time. Contrary to the above:

- On February 14, 2006, personnel stored twelve cans containing flammable liquids outside the approved storage area without prior written approval;
- On February 15, 2006, personnel stored two cans containing flammable liquids outside the approved storage area without prior written approval;
- On February 23, 2006, personnel stored three cans containing flammable liquids outside the approved storage area without prior written approval; and,
- On March 7, 2006, personnel stored three cans containing flammable liquids outside the approved storage area without prior written approval.

Because this violation was determined to be of very low safety significance, it is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. (**NCV 05000341/2006002-03, Failure to Control Transient Combustibles**)

This violation is in the licensee's corrective action program as CARDs 06-20749 and 06-21134. Immediate corrective actions included properly storing the cans and communicating the requirements regarding the control of combustibles.

4OA5 Other Activities

.1 Implementation of Temporary Instruction 2515/165 - Operational Readiness of Offsite Power and Impact on Plant Risk

a. Inspection Scope

The objective of Temporary Instruction (TI) 2515/165, "Operational Readiness of Offsite Power and Impact on Plant Risk," was to confirm, through inspections and interviews, the operational readiness of offsite power systems in accordance with NRC requirements. On March 13 through 17, 2006, the inspectors reviewed licensee procedures and discussed the attributes identified in TI 2515/165 with licensee personnel. In accordance with the requirements of TI 2515/165, the inspectors evaluated the licensee's operating procedures used to assure the functionality/operability of the offsite power system, as well as the risk assessment, emergent work, and/or grid reliability procedures used to assess the operability and readiness of the offsite power system.

The information gathered while completing this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation.

B. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

On March 23, 2006, the inspectors presented the inspection results to Mr. Cobb and other members of licensee management at the conclusion of the inspection. The inspectors asked the licensee whether any material examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Inservice inspection (IP 71111.08) with Mr. Kevin Hlavaty on March 30, 2006.

4OA7 Licensee-Identified Violations

No violations of significance were identified by the licensee during this inspection period.

ATTACHMENT: SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Gipson, Chief Nuclear Officer
D. Cobb, Assistant Vice President, Nuclear Generation
K. Hlavaty, Plant Manager
D. Bergmooser, Maintenance Manager
A. Brooks, Performance Engineering, NDE Level III
L. Bugoci, Nuclear Fuels Manager
J. Davis, Outage Management Manager
R. Gaston, Licensing Manager
R. Hambleton, Lead ISI / IVVI Level III
H. Higgins, Radiation Protection Manager
J. Korte, Nuclear Security Manager
E. Kokosky, Training Manager
R. Libra, Director, Nuclear Engineering
J. Moyers, Quality Assurance Manager
N. Peterson, Corrective Action - Performance Assessment Manager
M. Philippon, Operations Manager
B. Salmon, Principal Engineer / Nuclear Licensing
P. Smith, Director, Nuclear Assessment
S. Stasek, Director, Nuclear Projects

NRC

T. Kozak, Team Leader, Technical Support Services, Division of Reactor Projects

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000341/2006002-01	NCV	Failure of Breaker to Open, Section 1R19
05000341/2006002-02	NCV	Control of Cables and Wiring in the Power Block, Section 1R23.2
05000341/2006002-03	NCV	Failure to Control Transient Combustibles, Section 4OA2.3

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

Section 1R04: Equipment Alignment

50.59 Screen #05-0532, Rev. 0, 9/2/2004; EDP-31880 Pre-Outage Installation Sequence Requires a 50.59 Screening
Drawing 6M721-5730-3, Rev. AG, 06/20/05; Non-Interruptible Control Air Sys. Division I & II Functional Operating Sketch

CARDS
03-17874, 06/02/2003; Inadequate PMT for PM P021020100 - NRC concern
05-25171, 09/09/2005; Post Accident NIAS Room Temperature Exceeds NIAS Compressor Design Rating
05-26555-01, 12/15/2005; perform 50.59 screening
06-20344, 01/25/2006; Div 1 Control Air Compressor did not unload resulting in failed PMT.

Procedures
23.129, Rev. 79, 10/14/05; Station and Control Air System
24.129.01, Rev. 35, 12/11/03; Station and Control Air System Valve Operability Test
35.622.003, Rev. 25, 02/05/05; Control Air Compressor Maintenance

Section 1R05: Fire Protection

CARDS
06-20749, 2/14/2006; NRC concern with storage of flammable material
06-21134, 3/7/2006; NRC inspector concern of unlabeled cans in RRA

Procedures
FP-RB-4-17b, Rev. 3; Reactor Building Recirculation System Motor Generator Area, Zone 17, El. 659'6"
FP-RB-5-17c, Rev. 3; Reactor Building Refuel Floor, EL. 684'6"

Section 1R08: Inservice Inspection Activities (IP 71111.08)

GE-PDI-UT-1; Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds, August 2001

GE-PDI-UT-2; Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds, August 2001

39.NDE.001; Liquid Penetrant Examination; Solvent Removable; February 2000

39.NDE.002; Magnetic Particle Examination, February 2000

CARD 04-25870; Surface Linear Indications Found During ISI Nondestructive Examination of Weld SW-E41-3162-2WC
CARD 04-25787; ISI weld SW-E41-3162-1WU Has Physical Obstructions That Prevent Full NDE Coverage
CARD 05-22440; Investigate Hope Creek Recirc Decon Line Crack Cause Determination for Applicability to Fermi

Section 1R11: Licensed Operator Requalification

Nuclear Training Work Instruction 5.12, Rev. 5, Attachment 1; Crew Operational Assessment Summary
Scenario SS-OP-802-3200, Rev. 0; Loss of 64B due to a trip of B6, EDG 11 starts and loads, 02/28/06

Section 1R12: Maintenance Effectiveness

Procedure MWC10, Rev. 3, 2/22/2006; Work Package Preparation
Equivalent Replacement Evaluation ERE33826, Rev. 0, 10/21/05; goodyear Belt Material Change
Equivalent Replacement Evaluation 33146, Rev. 0, 9/21/05; EECW Pump Room Cooling Units Motors Replacement
Potential Design Change 11053, Rev. B, 5/25/93; Installation of cogged drive belts in place of smooth belts
NE-6.6-EQMS.086, Rev. 4, for EQ1-EF2-277 & EQ2-EF2-009 for the Thermal Recombiner and EECW Room Coolers

CARDS
06-21143, 3/7/2006; Vibration levels for the Div 2 EECW Room Cooler T4100B035 Exceeded the PMT Acceptance Criteria
06-21164, 3/8/2006; Questions on the Div 2 EECW area cooler, NRC identified issue

Work Requests
WR 000Z042265, 03/06/2006; Replace T4100B035 Div 2 EECW Pump Rm Clr motor, per NUREG 1.89
WR 000Z053358, 03/01/2006; Discrepancy between the room coolers in the plant and seismic qualification repo
WR 000Z060200, 01/24/2006; North MLO Pump low pressure / high amps

Section 1R13: Maintenance Risk Assessment and Emergent Work Evaluation

Fermi 2 Daily Plant Status, January 27, 2006
Scheduler's Evaluation for Fermi 2, 2/24/2006
POD Daily Scaffold Build Log, January 3, 2006
Plan of the Day, January 3, 2006
Procedure 23.324, Rev 54, 12/19/05; Supervisory Control - 120 kV Switchyard and CTG11 Generators
Protected Systems Form, Job instructions for PST Event DD22 for EDG 12 System Outage

Drawings
6I721N-2578-08, Rev. X; Relaying & Metering Diagram Diesel Generator #12

6I721N-2711-17, Rev. M; Schematic Diagram Emerg Diesel Generator 11, 12, 13, & 14, Exciter - Voltage Regulator
6I721N-2711-28, Rev. AB; Schematic Diagram Exciter & Voltage Regulator and Governor Control Diesel Generator #12

Section 1R14: Non-Routine Events

Fermi 2 Event Notification Worksheets
06-0001, 1/10/06; Loss Comm/Asmt/Resp ACOM
06-0002, 1/10/06; Loss Comm/Asmt/Resp ACOM

Section 1R15: operability Evaluations

Engineering Functional Analysis P44-06-001, Rev. 0, 01/14/2006; P4450F400A/B Division 1 & 2 EECW TCV Intermittently Fail Full-Open

CARDS
05-27146, 12/24/2005; Valve not operating smoothly
05-27144, 12/24/2005; Failed PMT-Div. 1 EECW TCV Fully Opened Unexpectedly in Auto During System Operation
05-27138, 12/23/2005; Div 1 and Div 2EECW Temp Control Valves Not Full Open
05-27137, 12/23/2005; Div 1 and Div 2 EECW Temperature Control Valves Not Full Open
06-20606, 02/06/2006; EDG 12 O.B. Generator Bearing High Temperature - 9D50
06-20080, 01/07/2006; Discrepancies found in power supplies to Scram pilot solenoid valves

Section 1R16: Operator Workarounds

Operator Challenge Screening Form, Rev. 5; Number 2005-24, Nuisance alarm, repeat alarm clearing after short duration

Section 1R17: Permanent Plant Modifications

CARD 06-21437, 03/22/2006; NRC Question on Affect of Radiation on V-Belt
Potential Design Change 8370, 02/18/1988; Joy Air Compressor Part Number and Material Changes
Vendor Manual Number VMB11-4.1, Rev. A, 08/02/2005; Joy Manufacturing, Class WGO-9, 5" Stroke Oil Free Air Compressor

Section 1R19: Post-Maintenance Testing

Procedure 35.000.224, Rev. 34, 10/26/2005; Alignment and Tension Adjustment of V-Belt Driven Equipment
Drawing 6I721N-2572-11, Rev. W; Schematic Diagram 4160V ESS Diesel Bus 12EB Pos EB 3
Equivalent Replacement Evaluation ERE 32278, Rev. 0, 2/22/01; Diaphragm Replacement for 3" Generator Seal Oil Valves

CARDS
00-16877, 12/19/01; Replace Diaphragms in Valves N3000F070B, F072A, F098, and F099
00-25430, 12/18/00; SWCS Diaphragm Valve Failures (Potential Adverse Trend)
02-16956, 08/07/2002; During 24.204.21 E1150 FN7A did not open as expected

04-23534, 08/06/2004; EDG #12 breaker refurb problems
06-20571, 02/03/2006; Output breaker fails to open

Design Calculations
DC-5367, Rev. A, 4/21/1993; Seismic Evaluation of 480V & 4160 v Switchgears and MCC Breakers
DC-5367, Rev. 0, 11/15/1996; Seismic Evaluation of 480V & 4160V Switchgears and Breakers

Work Requests
WR 000Z060350, 02/03/2006; Troubleshoot Output String of EDG 12
WR P058040100, 05/20/2005; Check Belts, and Sample the Oil in the Compressor, Div 2 Control Air Compressor
WR V122140100, 01/24/2006; Refurbish 4160V Breaker 12EB Pos EB3
WR V122960729, 07/20/2004; Refurbish 4160V Breaker 12EB - EB3
WR 000Z0600047, 01/12/2006; Install TM 60-0001 on Div.2 EECW
WR 000Z060138, 01/16/2006; EECW temperature controller causing valve to fully open sporadically

Section 1R20: Refueling and Outage Activities

CARDS
06-21518, 3/26/2006; Drywell head movement without traversing over spent fuel pool
06-21513, 3/26/2006; NRC question regarding loose signal wire ty-wrapped to unidentified cable
06-21493, 3/25/2006; DO Disconnect arcing

Section 1R22: Surveillance Testing

Surveillance Performance Form 0268060228, 2/27/06; Perform 24.206.01 RCIC System Operability and Valve Test @ 1000 PSIG
Work Request 000Z976027, 4/10/99; Replace SSPV's with New Valves

CARDS
99-13197, 4/10/99; Crossed Cables on Scram Solenoid Pilot Valves
06-20080, 1/7/2006; Discrepancies found in power supplies to Scram pilot solenoid valves
06-20080, 1/12/2006; Engineering Analysis of SSPV Not Wired Per Drawing
06-20922, 02/21/2006; NRC Question - RCS Leakage Rate

Procedures
24.000.02, Rev. 112; Shiftly, Daily, and Weekly Required Surveillances
24.402.06, Rev. 32; Drywell-to-Suppression Chamber Bypass Leak Test

Section 1R23: Temporary Plant Modifications

Fire Protection Engineering Evaluation FPEE-06-0001, Rev. 1, 1 Feb 2006; Evaluation of intervening cable combustibles on reactor building 1st, 2nd, and 3rd floors and auxiliary building 1st floor
Temporary Modification 05-0030, 12/2/2005; Disable Internal Sensor Test for D30N002 on the Seismic Play Back Computer D30K801

50.59 Screen 05-0498, Rev 0, 12/9/2005; Disable Self Test Sensor Check for D30N002 at the Seismic Play Back Computer D30K801

CARDS
04-23708, 8/17/2004; NRC Question - How are we keeping track of non-qualified cables
04-23708-02, 10/10/2005; Action Plan - How are we keeping track of non-qualified cables
04-24635, 10/6/2004; Spurious Seismic event trouble alarms
05-25480, 9/29/2005; Active Seismic RPV Pedestal Sensor Cannot Be Fixed Within 30-day TRM Section 3.3.7.2 Condition A Requirement
05-26697, 12/1/2005; NRC concern, No Engineering evaluation for semi-permanent cables in plant
06-20901, 2/21/2006; Active Seismic Recorder Obsolete
06-20934, 2/22/2006; Performance of scheduled PM D017, inadvertently deleted a software change (TM 05-0030)
06-20954, 2/23/2006; Cable Identification for Miscellaneous Cables Located in the Drywell and Other Non-Accessible Areas
06-20155, 1/12/2006; Remove Temporary Cable in RB-1 Used for Cameras / Computer Equipment

Procedures
MOP21, Rev. 0; Housekeeping
MES12, Rev. 12; Performing Temporary Modifications
MES12, Enclosure A, Rev. 12; Non-Intrusive Temporary Monitoring Equipment Guidelines

Work Requests
WR 000Z042851, 10/6/2004; Troubleshoot & installation of current sensor - RF-10
WR 000Z053191, 12/14/2005; Installation of Temp Mod 05-0030 to defeat instrument self-test
WR 000Z060405, 2/10/2006; Spurious seismic event trouble alarms

Section 1EP6: Drill Evaluation

Scenario SS-OP-802-3200, Rev. 0; Loss of Bus 64B due to a trip of B6, EDG 11 starts and loads, LOCA - crew sprays containment and emergency depressurizes

Section 4OA1: Performance Indicator Verification

2004 LER Log
2005 LER Log
Maintenance Rule Functional Failure Evaluation Responses
K3 Cause Code Review
LER 02-003, August 26, 2002; Breaching of Control Room Emergency Filtration System Ductwork Integrity
LER 03-001, August 29, 2003; Loss of the High Pressure Coolant Injection Safety Function Due to Closure of a Steam Supply Valve
First Quarter 2004 NRC Performance Indicator Data, April 13, 2004
Second Quarter 2004 NRC Performance Indicator Data, July 7, 2004
Third Quarter 2004 NRC Performance Indicator Data, October 4, 2004
Fourth Quarter 2004 NRC Performance Indicator Data, January 6, 2005
First Quarter 2005 NRC Performance Indicator Data, April 1, 2005
Second Quarter 2005 NRC Performance Indicator Data, July 6, 2005

Third Quarter 2005 NRC Performance Indicator Data, October 3, 2005
Fourth Quarter 2005 NRC Performance Indicator Data, January 5, 2006

CARDS
06-21015, 2/27/2006; NRC Identified Issue - Unknown Maintenance Preventable Determinations
06-21099, 3/3/2006; Review RBHVAC MR Functions

Maintenance Rule Functional Failure Evaluations
Doc ID 1193791, 21-May-2004; CARD 04-22169
Doc ID 1206260, 20-Oct-2004; CARD 04-24540
Doc ID 1230209, 18-Aug-2005; CARD 05-24619
Doc ID 1235519, 06-Sep-2005; CARD 05-24907
Doc ID 1238231, 20-Oct-2005; CARD 05-25615
Doc ID 1238514, 27-Oct-2005; CARD 05-25894
Doc ID 1243288, 05-Jan-2006; CARD 05-27172
Doc ID 1243940, 13-Jan-2006; CARD 06-20015
Doc ID 1244631, 27-Jan-2006; CARD 06-20161

Section 4OA2: Identification and Resolution of Problems

Cards
04-25832, 11/20/2004; Tech Spec Allowable Value exceeded during performance of 44.010.063
05-20262, 1/13/2005; C71A-K3A - MSIV Scram Trip relay is de-energized while at 100% power

Procedures
24.137.01, Rev. 34, 6/2/05; Main Steam Line Isolation Channel Functional Test

Work Requests
000Z050150, 01/25/2005; Outboard MSIV limit switch wiring problem

Section 4OA5: Other Activities

FBP-32 Critical Load Days, Rev. 1, 8/16/01
Engineering Support Conduct Manual MES27, Rev. 11, 11/19/05; Verification of System Operability
Engineering Support Conduct Manual MES20, Rev. 19, 11/07/05; Implementation of Modifications
Operations Conduct Manual MOP04, Rev. 24, 12/21/05; Shift Operations
Maintenance Rule Conduct Manual MMR12, Rev. 3, 12/01/05; Equipment Out of Service Risk Management
Maintenance Rule Conduct Manual MMR Appendix H, Rev. 1; On-Line Maintenance Risk Matrix
Quality Assurance Conduct Manual, MQA 11, Rev. 15, Chapter 11; Condition Assessment Resolution Document
Operations Department Expectation ODE-12, Rev. 6, 11/21/05; LCOs
Letter dated 12/12/2003 from International Transmission Company, Subject: Emergency Response for ITC Assets
Augmented Quality Program AQP-0002, ITC-Fermi-2 Interface, 120kV and 345 kV Switchyards, AQP-0002, Rev. 0, May 10, 2004

Augmented Quality Program AQP-0001, Fermi-2 DTE-Owned Switchyard, Transformers, and Peaker CTG11-1 Equipment Configuration, AQP-0001 Rev. B, December 15, 2005

Procedures

22.000.04, Rev. 55, 2/15/2006; Plant Shutdown from 25% Power
23.324, Rev. 54, 12/20/05; Supervisory Control - 120 kV Switchyard and CTG11 Generators

LIST OF ACRONYMS USED

ASME	American Society of Mechanical Engineers
CARD	condition assessment resolution document
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	emergency diesel generator
IMC	Inspection Manual Chapter
ISI	Inservice Inspection
MOC	cell mounted auxiliary switch
MT	Magnetic Particle Examination
NCV	Non-Cited Violation
NDE	Nondestructive Examination
NRC	Nuclear Regulatory Commission
PI	performance indicator
PMT	post-maintenance testing
RHR	Residual Heat Removal
SDP	significance determination process
TI	temporary instruction
TM	temporary modification
TS	Technical Specifications
UFSAR	Updated Final Safety Assessment Report
UT	Ultrasonic Examination
WR	Work request