July 27, 2004

Mr. William O'Connor, Jr.
Vice President
Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2
NRC INTEGRATED INSPECTION REPORT 05000341/2004004

Dear Mr. O'Connor:

On June 30, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Fermi Power Plant, Unit 2. The enclosed report documents the inspection findings which were discussed on June 29, 2004, 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, one finding of very low safety significance which involved a violation of NRC requirements was identified. However, because this finding was of very low safety significance and because the issue was entered into your corrective action program, the NRC is treating this violation as a Non-Cited Violation 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/

Eric R. Duncan, Chief
Branch 6
Division of Reactor Projects

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

Enclosure: Inspection Report 05000341/2004004
w/Attachment: Supplemental Information

cc w/encl: N. Peterson, Manager, Nuclear Licensing
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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	DPR-43
Report No:	05000341/2004004
Licensee:	Detroit Edison Company
Facility:	Fermi Power Plant, Unit 2
Location:	6400 N. Dixie Hwy. Newport, MI 48166
Dates:	April 1 through June 30, 2004
Inspectors:	S. Campbell, Senior Resident Inspector T. Steadham, Resident Inspector W. Slawinski, Senior Radiation Specialist
Approved by:	E. Duncan, Chief Branch 6 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000341/2004004; 04/01/2004-06/30/2004; Fermi Power Plant, Unit 2; Event Follow-Up.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections on radiation protection. The inspection was conducted by Region III inspectors and the resident inspectors. One Green finding with an associated Non-Cited Violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." 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 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Barrier Integrity

- Green. A finding of very low safety significance was identified during surveillance testing when a High Pressure Coolant Injection outboard steam isolation valve failed to close on demand due to the improper installation of contactors in the valve closing circuit. The primary cause of this finding was related to the cross-cutting area of Human Performance.

  This finding was more than minor because the finding was associated with the SSC [Structures, Systems and Components] and Barrier Performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The finding was of very low safety significance because the finding did not represent a degradation of the barrier function of the control room against smoke or a toxic atmosphere, an actual open pathway in the physical integrity of the reactor containment, or an actual reduction of the atmospheric pressure control function of the reactor containment. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings," was identified. Corrective actions to address this issue included replacing the contactors and training station electricians on the lessons learned from this event. (Section 4OA3.1).

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 2 operated at or near full power throughout the inspection period.

1. REACTOR SAFETY

Cornerstone: Mitigating Systems

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors reviewed licensee procedures and preparations for mitigating the effects of hot weather. The inspectors reviewed severe weather procedures, emergency plan implementing procedures related to severe weather, annunciator response procedures, and performed walkdowns. Additionally, the inspectors reviewed Condition Assessment Resolution Documents (CARDs) and verified that problems associated with adverse weather were entered into the corrective action program with the appropriate significance characterization. This activity represented one inspection sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q)

a. Inspection Scope

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

- Division 1 Engineered Safety Feature Direct Current (DC) power performed during the weeks of April 25, 2004, and May 9, 2004
- Emergency Diesel Generator (EDG) 12 performed during the week of May 2, 2004.

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 that equipment alignment problems were entered into the corrective action program with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Fire Brigade Drill (71111.05A)

a. Inspection Scope

The inspectors' observation of an unannounced fire drill on March 23, 2004 was documented in Section 1R05.2 of inspection report 05000341/2004002. The inspectors performed follow-up reviews of the licensee's fire brigade training records, procedures, Updated Final Safety Analysis Report (UFSAR), and other documents to evaluate the training of fire brigade members to ensure the readiness of licensee personnel to fight fires.

b. Findings

No findings of significance were identified.

.2 Routine Fire Protection Walkdowns (71111.05Q)

a. Inspection Scope

The inspectors performed eight fire protection walkdowns of the following risk significant plant areas:

- Circulating Water Pump House;
- Division 2 Switchgear Room;
- Division 1 Switchgear Room;
- Division 1 and 2 Battery Rooms;
- Reactor Building - First Floor;
- Reactor Building - Second Floor;
- Torus Room; and
- General Service Water Pump House.

The inspectors verified that 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 that fire protection related problems were entered into the corrective action program with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1R06 Flood Protection (71111.06)

a. Inspection Scope

The inspectors performed two inspection samples related to the licensee's precautions to mitigate the risk from internal flooding events. The inspectors performed a walkdown of the Division 1 and 2 Residual Heat Removal (RHR) system rooms, the Division 1 and 2 Core Spray and Reactor Core Isolation Cooling (RCIC) system rooms, the HPCI room, and the Torus room to assess the adequacy of watertight doors and verify that drains and sumps were clear of debris and were operable. The inspectors also reviewed the work activities associated with the reactor building and torus room sumps to verify that identified problems were entered into the corrective action program with the appropriate characterization and significance.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On May 18, 2004, the inspectors observed an operations support crew during the annual requalification examination in mitigating the consequences of events in Scenario SS-OP-904-0182, "Main Steam Isolation Valve Closure/Frequency Low/Turbine Trip/Anticipated Transient Without Scram/Steam Leak Inside Containment," on the simulator. The inspectors evaluated the following areas:

- licensed operator performance;
- crew 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. This activity represented one quarterly inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12Q)

a. Inspection Scope

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

- Alternate Boron Injection
- High Pressure Control Valves 2 and 3

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

- 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);
- 10 CFR 50.65(a)(1) or (a)(2) classification and/or re-classification; and
- 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 that maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the following eight maintenance and operational activities affecting safety-related equipment:

- HPCI safety system outage;
- Division 2 Emergency Equipment Cooling Water (EECW) testing;
- Division 2 Standby Gas Treatment safety system outage and hardened vent isolation valve maintenance;
- EDG 14 slow start surveillance and Bus 65F undervoltage test;
- Division 1 and 2 Residual Heat Removal (RHR) valve stroke time testing;
- Division 2 RHR safety system outage;

- EDG 11 safety system outage; and
- Division 1 Core Spray safety system outage.

These activities were selected based on their potential risk significance relative to the reactor safety cornerstones. As applicable for each of the above activities, 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 that 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 that risk analysis assumptions were valid and applicable requirements were met.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following three CARDs to ensure that 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 04-22658 Potentially Damaged Concrete
- CARD 04-22663 Relays Missing From Temporary Modification 04-0011
- CARD 04-21775 Measurements Taken Under 47.000.05 Identified Low Division 2 Engineered Safety Feature Cooler Air Flows

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds (71111.16)

a. Inspection Scope

The inspectors reviewed the “Active Operations Challenge Index,” dated April 23, 2004 and Nuclear Generation Memorandum NPOP-04-022, “Aggregate Assessment of Operator Work Arounds,” dated March 14, 2004. The inspectors evaluated the cumulative effect of operator work-arounds, control room deficiencies, and degraded conditions on equipment availability, initiating event frequency, and the ability of the operators to implement abnormal or emergency operating procedures. In particular, the cumulative effects of operator work-arounds on the following attributes were considered:

- the reliability, availability and potential for mis-operation of a system;
- the ability of operators to respond to plant transients or accidents in a correct and timely manner; and

- the potential to increase an initiating event frequency or affect multiple mitigating systems.

In addition, the inspectors verified that operator work-around issues were entered into the corrective action program with the appropriate significance characterization. This activity represented one inspection sample.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed three post maintenance testing activities associated with the following scheduled maintenance:

- Work Request (WR) 000Z032283, Replace Valve R3000F083C
- WR 000Z041028, West Station Air Compressor Lube Oil Thermostatic Valve Replacement
- Procedure 24.307.14 Performed for the Fast Start Testing Following the July 2004 EDG 11 Safety System Outage

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

In addition, the inspectors verified that post maintenance testing problems were entered into the corrective action program with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the test results for the reactor water clean-up delta-T tests to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify that testing was conducted in accordance with applicable procedural and TS requirements.

The inspectors reviewed the test methodology and test results to verify that equipment performance was consistent with safety analysis and design basis assumptions. In

addition, the inspectors verified that surveillance testing problems were entered into the corrective action program with the appropriate significance characterization.

This activity represented one inspection sample.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the following two temporary modifications (TMs) and verified that the installation was consistent with design modification documents and that the modifications did not adversely impact system operability or availability.

- TM 03-0026, Reactor Feedwater Pump Online Leak Repair
- TM 04-0011, Bypass Modular Power Unit Number 2

The inspectors verified that the configuration control of the modifications were correct by reviewing design modification documents and confirmed that appropriate post-installation testing was accomplished. 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 TSs and the UFSAR.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS3 Radiological Environmental Monitoring Program and Radioactive Material Control Program (71122.03)

.1 Inspection Planning - Reviews of Radiological Environmental Monitoring Reports and Data

a. Inspection Scope

The inspectors reviewed the 2002 and 2003 Annual Radiological Environmental Operating Reports, the results of the 2004 radiological environmental monitoring analyses through May 2004, and the most recent licensee assessment results to verify that the Radiological Environmental Monitoring Program (REMP) was implemented as required by TS and the Offsite Dose Calculation Manual (ODCM). The inspectors reviewed the environmental reports for changes to the ODCM with respect to

environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, the sample analysis vendor's inter-laboratory comparison program, and analysis of environmental sample data. The inspectors reviewed the ODCM to identify the environmental monitoring stations and evaluated the locations of these stations and the types of samples collected from each to determine if they were consistent with NRC guidance in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light Water Cooled Nuclear Power Plants," and in Regulatory Guide 4.8, "Environmental TSs for Nuclear Power Plants." The inspectors reviewed the UFSAR for information regarding the environmental monitoring program and meteorological monitoring instrumentation to determine whether the program was developed consistent with its design basis. The inspectors reviewed the scope of the licensee's audit program to verify that it met the requirements of 10 CFR 20.1101(c).

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Onsite Inspection Activities

a. Inspection Scope

The inspectors walked down all five of the environmental air sampling stations and approximately 12 percent of the thermoluminescence dosimeter monitoring stations to determine whether they were located as described in the ODCM, to assess equipment material condition and operability, and to verify that environmental station orientation relative to plant effluent release points, vegetation growth control, and equipment configuration allowed for the collection of representative samples.

The inspectors accompanied a REMP technician and observed the collection and change-out of air particulate and charcoal cartridges at each air sampling station and observed the collection of surface and drinking water samples to determine whether appropriate practices were used to ensure sample integrity and to verify that sampling techniques were in accordance with the licensee's procedures.

The meteorological tower was walked down by the inspectors to verify it was adequately sited and that instrumentation was installed consistent with Regulatory Guide 1.23, "Meteorological Programs in Support of Nuclear Power Plants." The inspectors verified that the meteorological instruments were operable, calibrated, and maintained in accordance with guidance contained in the UFSAR, NRC Safety Guide 23, and licensee procedures. The inspectors compared real-time data collected at the meteorological tower versus the time-averaged data transmitted to the control room to verify data integrity.

The inspectors reviewed each event documented in the Annual Environmental Monitoring Reports which involved a missed sample, inoperable sampler, lost

thermoluminescence dosimeter, or anomalous measurement for the cause and corrective actions and conducted a review of the licensee's assessment of any positive sample results (i.e., licensed radioactive material detected above the lower limits of detection).

The inspectors reviewed modifications made to any environmental sample stations since the last inspection and/or significant changes made by the licensee to the ODCM as dictated by the 2002 or 2003 land use census. The inspectors reviewed technical justifications for changed sampling locations, if applicable. The inspectors verified that the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

The inspectors reviewed the calibration and maintenance records for all five of the environmental air samplers, focusing on the air flow meter and particulate filter/charcoal cartridge components. Additionally, the most recent calibration record for the mass flow rotameter used by the licensee to measure and validate air sample pump flow rates was reviewed to ensure traceability to the National Institute of Standards and Technology. As the licensee did not conduct analyses of REMP samples on site and utilized a vendor laboratory to provide analytical services, the inspectors did not review licensee calibration records for environmental sample radiation measurement instrumentation (i.e., count room equipment) or quality control charts.

The inspectors reviewed the results of the REMP sample vendor's quality control program including the inter-laboratory comparison program to verify the adequacy of the vendor's program and the corrective actions for any identified deficiencies. The inspectors reviewed the lower limit of detection values achieved by the vendor laboratory for all REMP required sample media to verify that analytical detection capabilities met ODCM requirements for each environmentally monitored pathway. The inspectors reviewed the last quality assurance audit results of the program to determine whether the licensee met its TS/ODCM requirements.

These reviews represented six inspection samples.

b. Findings

No findings of significance were identified.

.3 Unrestricted Release of Material from the Radiologically Restricted Area

a. Inspection Scope

The inspectors observed those locations where the licensee typically monitors potentially contaminated material and individuals leaving the radiologically restricted area, and evaluated the procedures and practices used for the control, survey, and release of materials and workers from these areas. The inspectors questioned several of the radiation protection staff responsible for the performance of personnel surveying and releasing material for unrestricted use to assess their knowledge of procedures and protocols and to verify that release surveys were performed appropriately.

The inspectors assessed the radiation monitoring instrumentation used for both the unrestricted release of workers and of material from the radiologically restricted area to determine if it was appropriate for the radiation types present and was calibrated with radiation sources consistent with the plant's nuclide mix. The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material and workers to verify that there was guidance on how to respond to an alarm which indicated the potential presence of licensed radioactive material. The inspectors reviewed the licensee's radiation survey equipment to ensure the radiation detection sensitivities were consistent with the NRC guidance for surface contamination contained in Circular 81-07, "Control of Radioactively Contaminated Material," and Information Notice 85-92, "Survey of Wastes Before Disposal from Nuclear Reactor Facilities," and with Health Physics Positions (position-221) in NUREG/CR-5569 for volumetrically contaminated material. The inspectors reviewed the licensee's program to determine if it adequately identified and evaluated the impact of difficult-to-detect radionuclides (i.e., those that decay via electron capture) and accounted for those nuclides during routine unrestricted release surveys. The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters (i.e., counting times and background radiation levels). The inspectors verified that the licensee had not established a "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high radiation background area.

These reviews represented two inspection samples.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, licensee event reports (LERs), and special reports, as applicable, related to the REMP since the last inspection to determine if identified problems were entered into the corrective action program for resolution. The inspectors also verified that the licensee's self-assessment and/or audit program was capable of identifying repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

The inspectors also reviewed CARDs related to the REMP and the radioactive material control program since the previous inspection, interviewed staff, and reviewed documents to determine if the following activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;

- identification and implementation of effective corrective actions; and
- implementation/consideration of risk significant operational experience feedback.

These reviews represented one inspection sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

.1 Reactor Safety Strategic Area

a. Inspection Scope

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

- Unplanned Scrams Per 7000 Critical Hours
- Scrams With Loss of Normal Heat Removal
- Unplanned Power Changes Per 7000 Critical Hours

The inspectors reviewed selected applicable conditions and data from logs, LERs and CARDs from January 1, 2003, through December 31, 2003, for each PI area specified above. The inspectors independently re-performed calculations where applicable. The inspectors compared that information to the information required for each PI definition in the guideline to ensure the licensee reported the data correctly.

b. Findings

No findings of significance were identified.

.2 Radiation Safety Strategic Area

a. Inspection Scope

The inspectors sampled licensee submittals for the Reactor Coolant System Specific Activity PI. The definitions and guidance contained in NEI 99-02, Revision 2 were used to verify the reported data.

The inspectors reviewed the licensee's assessment of this PI by reviewing chemistry department procedures, records and results of selected isotopic analyses (June 2003 through May 2004) to verify that the greatest dose equivalent iodine (DEI) value

obtained during those months corresponded to the value reported to the NRC. The inspectors also reviewed selected DEI calculations to verify that appropriate iodine conversion factors were used in the determinations. Additionally, on June 23, 2004, the inspectors observed a chemistry technician obtain, prepare and analyze a reactor coolant sample for DEI to verify compliance with the licensee's procedures for sampling and analysis.

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 that they were being entered into the licensee's corrective action system at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a screening review of each item entered into the licensee's corrective action program to identify trends that might indicate the existence of a more significant safety issue. The inspectors considered repetitive or closely related issues that may have been documented by the licensee outside the normal corrective action program, such as in:

- trend reports or PIs,
- major equipment problem lists,
- repetitive and/or rework maintenance lists,
- departmental problem/challenges lists,
- system health reports,
- quality assurance audit/surveillance reports,
- self assessment reports,
- maintenance rule assessments, or
- corrective action backlog lists.

The inspectors verified that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program by comparing those

issues identified by the NRC during the conduct of the plant status and inspectable area portions of the program with those issues identified by the licensee.

b. Issues

The inspectors determined that a possible degrading trend in extent of condition reviews existed. The following CARDs, written as a result of the licensee's CARD document quality review during the first quarter of 2004, identified concerns with extent of condition reviews: CARDs 04-11113 through 04-11118, 04-11121, and 04-11122. These CARDs documented extent of condition concerns with 13 separate CARDs that did not meet the licensee's expectations. In addition, the inspectors recently documented extent of condition concerns or findings in the following inspection reports:

- IR 05000341/2003009 documented a Green finding due to an inadequate extent of condition review regarding multiple control center heating, ventilation, and air conditioning chiller trips experienced over several years.

- IR 05000341/2004005 documented an unresolved item due to the licensee limiting their extent of condition to two other EDG compartment bulkhead fittings identical to the one lube oil line that became disconnected on EDG-12.

The inspectors discussed this issue with the licensee to ensure that there were no outstanding safety concerns with the extent of condition concerns in the above CARDs and none were identified. The licensee had previously identified this issue and entered it into their corrective action program as CARD 04-21544. Upon further review by the licensee, all extent of condition concerns were properly addressed.

4OA3 Event Followup (71153)

.1 High Pressure Coolant Injection Outboard Steam Isolation Valve Failure to Fully Close

a. Inspection Scope

On April 7, 2004, a High Pressure Coolant Injection valve failed to stroke fully closed as required during testing. The inspectors reviewed CARDs, work orders, industry events and procedures; and interviewed engineering, maintenance, operations and work control personnel to follow up on the circumstances surrounding the event.

b. Findings

Introduction

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified when a High Pressure Coolant Injection outboard steam isolation valve failed to close on demand during testing due to the improper installation of a contactor in the valve closing circuit.

Description

During HPCI pump time response and operability test 24.202.01 on July 13, 2003, HPCI turbine outboard steam isolation valve E4150F003 passed the stroke time test in the opening direction, but failed to fully close. Work Request (WR) 000Z032836 was generated to identify and correct the cause of the failure. Maintenance workers identified a potential problem with the close auxiliary seal-in contacts and replaced the associated contactors. The root cause was identified as a random failure of the contacts.

Subsequently, during the performance of operability test 24.202.01 on April 7, 2004, HPCI turbine outboard steam isolation valve E4150F003 again passed the open stroke time test, but failed to fully close. Troubleshooting activities under WR 000Z041054 identified that the close auxiliary seal-in contactors had been previously installed incorrectly and were mis-aligned. Proper contactor alignment was necessary to ensure proper mechanical actuation of the auxiliary switch actuation arm with the contactor actuator. With the contactor mis-aligned, the auxiliary switch arm slipped behind the contactor actuator and caused the auxiliary contacts to fail to change state to the closed position and seal in the closing signal as required. The inspectors reviewed the control circuit of this valve and determined that upon receipt of an automatic isolation signal, the valve would not have fully closed, affecting the containment isolation function of the valve.

Analysis

The inspectors determined that the failure to properly install the close auxiliary seal-in contactors was a performance deficiency warranting a significance evaluation. The finding was associated with the Barrier Integrity cornerstone. The finding also affected the cross-cutting area of Human Performance. The inspectors assessed this finding using the Significance Determination Process (SDP). The inspectors reviewed the samples of minor issues in Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," and determined that there were no examples related to this issue. Consistent with the guidance in IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening," the inspectors determined that the finding was of more than minor significance because this issue was associated with the SSC [Structures, Systems, and Components] and Barrier Performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events since a containment isolation valve was rendered inoperable as a result of the installation error. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that this finding was a licensee performance deficiency of very low safety significance (Green) because the finding did not represent a degradation of the barrier function of the control room against smoke or a toxic atmosphere, an actual open pathway in the physical integrity of reactor containment, or an actual reduction of the atmospheric pressure control function of the reactor containment.

Enforcement

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions of a type appropriate to the circumstances and shall be accomplished in accordance with those instructions. The instructions provided in WR 000Z032836 directed the electricians to replace auxiliary contacts as needed. Inherent in performing this step was the requirement to properly install the contactor. Further, this work activity affected quality and was being performed on safety-related equipment. Contrary to the above, on July 14, 2003, licensee personnel failed to properly install the close auxiliary seal-in contactors for HPCI turbine outboard steam isolation valve E4150F003 which resulted in the valve failing to perform satisfactorily on April 7, 2004.

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 (NCV 05000341/2004004-01), consistent with Section VI.A of the NRC Enforcement Policy. The licensee entered this issue into their corrective action program as CARD 04-21564. Corrective actions to address this issue included replacing the mis-aligned contactors and training station electricians on the lessons learned from the event.

.2 Review of Licensee Event Reports (LERs)

(Closed) LER 50-341/03-004-00: EDG-12 Lube Oil Pressure Low

This LER was submitted in response to the identification that an internal lube oil header line associated with EDG-12 was improperly connected to a bulkhead fitting that penetrated the engine which rendered EDG-12 inoperable. The inspectors performed a supplemental inspection in accordance with Inspection Procedure 95001; the results of which were documented in NRC Inspection Report 05000341/2004005. One licensee-identified violation is documented in Section 4OA7 of this report. This LER is closed.

(Closed) LER 50-341/03-002-01: Automatic Reactor Shutdown Due to Electric Grid Disturbance and Loss of Offsite Power

This revision to the subject LER was written in response to the discovery that on several occasions, EDGs were out of service for longer than their allowed outage time (AOT). As a result of the August 14, 2003, blackout, the licensee discovered that Combustion Turbine Generator (CTG) 11-1 failed to start on demand and determined that CTG 11-1 had been inoperable since 1996 which resulted in a Green finding as documented in NRC Inspection Report 05000341/2003010. One licensee-identified violation is documented in Section 4OA7 of this report. This LER is closed.

4OA4 Cross-Cutting Aspects of Findings

A finding described in Section 4OA3.1 of this report had, as its primary cause, a Human Performance deficiency, in that an electrician failed to properly install an electrical auxiliary seal-in contactor. This error caused the subsequent failure of a valve to close

during surveillance testing on April 7, 2004 which adversely impacted the reliability of the valve to isolate on a containment isolation signal.

4OA5 Other Activities

.1 (Closed) Temporary Instruction (TI) 2515/154: Spent Fuel Material Control and Accounting at Nuclear Power Plants. The inspectors completed Phase I and Phase II of the subject TI and provided the appropriate documentation to NRC management as required by the TI.

.2 (Closed) TI 2515/156: Offsite Power System Operational Readiness.

a. Scope

The inspectors collected data from licensee maintenance records, event reports, corrective action documents and procedures, and through interviews of station engineering, maintenance, and operations staff, as required by TI 2515/156. The data was gathered to assess the operational readiness of the offsite power systems in accordance with NRC requirements such as Appendix A to 10 CFR 50, General Design Criteria (GDC) 17; Criterion XVI of Appendix B to 10 CFR 50; TSs for offsite power systems; 10 CFR 50.63; 10 CFR 50.65(a)(4), and licensee procedures. Documents reviewed for this TI are listed in the attachment.

b. Findings

No findings of significance were identified. Based on the results of the inspection, no immediate operability issues were identified. In accordance with TI 2515/156 reporting requirements, the inspectors provided the required data to the headquarters staff for further analysis.

.3 (Closed) Unresolved Item 05000341/2004002-02: Spectrum Motor Control Center Bucket Loose Connections

As discussed in NRC Inspection Report 05000341/2004002, a safety-related supply fan tripped on October 13, 2003, due to severe overheating in the vicinity of the fuse block. Unresolved Item 05000341/2004002 was opened pending a review of the licensee's root cause evaluation of the issue.

During this inspection period, the inspectors reviewed the licensee's final root cause report, corrective actions, and qualification and testing documentation. The licensee determined that the hot spots were caused by tinned leads. As part of their corrective actions, the licensee increased the frequency of thermography inspections on the affected motor control center buckets and planned to replace the tinned leads with untinned leads at the next available opportunity. The inspectors reviewed Qualification Evaluation Report QER97P1430/EVAL, Revision 1, and determined that the vendor had

qualified these buckets with the tinned leads. Because the fuse blocks were received from the vendor with tinned leads, no violation of regulatory requirements was identified.

This Unresolved Item is closed.

.4 (Closed) Unresolved Item 050000341/2003007-02: Non-Conservative Time Delay Relay Acceptance Limit

The inspectors evaluated the issues identified in the subject Unresolved Item by reviewing relevant sections of the Fermi 2 TSs, UFSAR, and other documents. The condition was entered in the corrective action program by licensee personnel by initiating CARD 03-11847. The inspectors reviewed the CARD for the actions taken and proposed. Although all corrective actions listed in the CARD had not been completed, the actions appeared to be adequate and were planned for completion in the near future. No violation of regulatory requirements was identified. This Unresolved Item is closed.

.5 Licensee Strike Contingency Plans (92709)

a. Inspection Scope

The inspectors reviewed documents, training records, and interviewed personnel to evaluate the licensee's strike contingency plan to determine if the minimum number of qualified personnel was available as required for the proper operation and safety of the facility; determine if reactor operation and facility security were maintained as required; and determine if the plan complied with the requirements in the TSs and the Code of Federal Regulations.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meetings

The inspectors presented the inspection results to Mr. W. O'Connor and other members of licensee management at the conclusion of the inspection on June 30, 2004. The inspectors asked the licensee whether any material examined during the inspection should be considered proprietary. Proprietary information was examined during this inspection, but is not specifically discussed in this report.

.2 Interim Exit Meetings

An interim exit meeting was conducted for:

- Public radiation safety inspection for radiological environmental monitoring with Mr. D. Cobb on June 25, 2004.

4OA7 Licensee-Identified Violations

The following violations of very low significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as Non-Cited Violations.

Cornerstone: Mitigating Systems

1. 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions and procedures of a type appropriate to the circumstances. Contrary to the above, licensee personnel failed to have adequate instructions or procedures to ensure that a lube oil line inside the Emergency Diesel Generator (EDG) 12 compartment was properly reconnected to the low lube oil pressure switch during maintenance on June 2, 2003. As a result, EDG-12 was rendered inoperable from June 2, 2003 through November 8, 2003. The licensee entered this issue into their corrective action program as CARD 03-12686. The violation was determined to be of very low safety significance (Green) following a Phase 2 Significance Determination Process (SDP) review of the issue.

2. Technical Specification 3.8.1 requires that with one or both EDGs in one division inoperable and with Combustion Turbine Generator (CTG) 11-1 available, both EDGs be restored to an operable status within 7 days. Technical Specification 3.8.1 also requires that with one or both EDGs inoperable and with CTG 11-1 unavailable, both EDGs be restored to an operable status within 72 hours. Contrary to the above, the licensee discovered that CTG 11-1 had been inoperable since 1996 which resulted in numerous instances in which EDGs were inoperable for greater than the TS 3.8.1 72 hours Allowed Outage Time (AOT), but were returned to an operable status within the 7 day AOT. The licensee entered this issue into their corrective action program as CARD 03-19464. The violation was determined to be of very low safety significance (Green) following a Phase 3 Significance Determination Process (SDP) review of the issue.

3. Technical Specification 5.5.6 requires that the licensee establish a program for the inservice testing and inspection of American Society of Mechanical Engineers (ASME) Class 1, 2, and 3 components. Contrary to the above, an inservice testing program had not been established for the Division 1 and 2 Drywell Spray inboard and outboard isolation valves, the Torus Spray isolation valves, and a Low Pressure Coolant Injection system outboard isolation valve and inservice testing of these valves had not been performed for these ASME Class 1, 2, and 3 valves. The licensee entered this issue into their corrective action program as CARD 04-22563. The violation was determined to be of very low safety significance (Green) since TS Surveillance Requirement 3.0.3 allowed the delay of testing following the discovery of missed testing for up to the limit of the specified frequency of the test.

ATTACHMENT: SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

W. O'Connor, Jr., Vice President Nuclear Generation
D. Cobb, Plant Manager
D. Craine, General Supervisor, Radiological Engineering
H. Higgins, Radiation Protection Manager
R. Libra, Director, Nuclear Engineering
K. Morris, Emergency Preparedness Supervisor
D. Noetzel, Manager, Nuclear System Engineering
N. Peterson, Nuclear Licensing Manager
M. Philippon, Operations Manager

NRC

E. Duncan, Chief, Division of Reactor Projects, Branch 6

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000341/2004004-01	NCV	HPCI Outboard Steam Isolation Valve Failed to Fully Close

Closed

05000341/2004002-02	URI	Spectrum MCC Bucket Loose Connections
05000341/2003007-02	URI	Non-Conservative Time Delay Relay Acceptance Limit
05000341/2004004-01	NCV	HPCI Outboard Steam Isolation Valve Failed to Fully Close
2003-004, Revision 0	LER	EDG 12 Lube Oil Pressure Low
2003-002, Revision 1	LER	Automatic Reactor Shutdown Due to Electric Grid Disturbance and Loss of Offsite Power
2515/154	TI	Spent Fuel Material Control and Accounting at Nuclear Power Plants
2515/156	TI	Offsite Power System Operational Readiness

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.

1R01 Adverse Weather

Performance Evaluation Procedure 27.000.06; Hot Weather Operations, Revision 0
Job No. AD96030530; Perform 27.000.06, Attachment 3, Hot Weather System Readiness Review Checklist
CARD 03-10811; Incorrect Information on Procedure 27.322 Mayfly Infestation, dated 6/25/03
CARD 02-16765; Potential Warm Weather Preparation Improvements, dated 6/24/02
Performance Evaluation Procedure 27.322; Mayfly Infestation Preparation Plan, Revision 1
Performance Evaluation Procedure; Operator Rounds, Revision 24

1R04 Equipment Alignment

Functional Operating Sketch 6M721-5734; Emergency Diesel Generator System; Revision AM
Procedure 23.307; Emergency Diesel Generator; Revision 82
System Operating Procedure 23.309; 260/130V DC Electrical System (ESF and BOP); Revision 43
Drawing 5SD721-2530-13, Revision AG; Frontal Elevation 260V DC MCC 2PA-1 Division I Auxiliary Building Third Floor
Drawing 6SD721-2530-10; One Line Diagram 260/130V ESS Dual Battery 2PA Distribution - Division I
Drawing 6I721-2530-02, Revision F; Schematic Diagram 130V Charger On/Off Control Division 1
CARD 04-15401; During a Walkdown, Duct Tape is Covering Louver Handles; dated May 17, 2004
Design Basis Document R32-00, Revision A

1R05 Fire Protection

UFSAR 9A4.1.2; Zone 1 Torus Room
UFSAR 9A4.8; GSW Pump House
UFSAR 9A.4.1.6; First Floor, Zone 5, Elevation 583 Feet 6 Inches
UFSAR 9A.4.1.7; Second Floor, Zone 6, Elevation 613 Feet 6 Inches
UFSAR 9A.4.2.11; Division I and II Battery Rooms, Zone 10, Elevation 643 Feet 6 Inches
UFSAR Figure 9A-4; Fire Protection Evaluation Reactor and Auxiliary Buildings First Floor Plan (Elevation 583.5 Feet); Revision 13
UFSAR Figure 9A-6; Fire Protection Evaluation Reactor and Auxiliary Buildings Second Floor Plan (Elevation 613.5 Feet); Revision 12

CARD 04-22202; Confusing Fire Pre-Plan, dated 5/17/2004
Fire Protection Pre-Plan FP-AB-3-14b; Auxiliary Building, West Battery Room, Zone 14, Elevation 643'-6"; Revision 2
Fire Protection Pre-Plan FP-AB-3-14a; Auxiliary Building, East Battery Room, Zone 14, Elevation 643'-6"; Revision 2
UFSAR Figure 9A-8; Fire Protection Evaluation Reactor and Auxiliary Buildings Third Floor Plan, Elevation 641.5 Feet and 643.5 Feet; Revision 12
UFSAR 9A.4.2.5; Switchgear Room, Zone 4, Elevation 613 Feet - 8-1/2 Inches
UFSAR Figure 9A-6; Fire Protection Evaluation Reactor and Auxiliary Buildings Second Floor Plan (Elevation 613.5 Feet); Revision 12
Fire Protection Pre Plan FP-AB-3-14e; Auxiliary Building, Division II Switchgear Room, Zone 14, Elevation 643'-6"; Revision 2
UFSAR Figure 9A-8; Fire Protection Evaluation Reactor and Auxiliary Buildings Third Floor Plan, Elevation 641.5 Feet and 643.5 Feet; Revision 12
Drawing 6A721-2407, Rev 5; Fire Protection Evaluation Reactor and Auxiliary Buildings Third Floor Plan, Elevation 641'6" and 643'-6"
UFSAR 9A.4.2.13; Switchgear Room, Zone 12, Elevation 643 Feet-6 Inches
UFSAR Figure 9A-1; Fire Protection Evaluation Plot Plan; Revision 12
Drawing 6M721-5733-1, Revision AG; Fire Protection Functional Operating Sketch
Drawing 6I721R-2378-31, Revision E; Wiring Diagram - Fire Detection System Circulating Water Pumphouse Zone 32
Fire Protection Pre Plan FP-CWPH-1-32; Circulating Water Pumphouse Zone 32 Elevation 583'-6"; Revision 4
Fire Protection Procedure 28.508.01; Monthly Portable Fire Extinguisher Inspection; Revision 12
Fire Protection Procedure 28.501.05; Fire Hose Station Monthly Inspection - BOP; Revision 5
Drawing 6I721-R-2378-01, Revision E; Installation Fire Detection System Circulating Water Pumphouse Zone 32
Design Basis Document P80/82-00; Fire Protection/Detection Systems, Revision A
Drawing 6A721-2400, Revision N; Fire Protection Evaluation Plot Plan
SER Docket No. 50-341; NUREG-0798; Supplement No. 5
SER Docket No. 50-341; NUREG-0798; Supplement No. 6
Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance.
Branch Technical Position APCSB 9.5-1; Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976
Regulatory Guide 1.101; Emergency Planning and Preparedness for Nuclear Power Reactors; Revision 4
10 CFR Part 50, RIN 3150-AG22; Elimination of the Requirement for Noncombustible Fire Barrier Penetration Seal Materials and Other Minor Changes; July 20, 2000
Regulatory Guide 1.189; Fire Protection for Operating Nuclear Power Plants; April 2001
UFSAR 13.2.4.1; Fire Brigade Training, June 22, 2004
UFSAR 9A.5; Point-by-Point Comparison with Appendix A to NRC Branch Technical Position APCSB 9.5-1
Fermi Procedure FIP-FP1-01; Fire Brigade; Revision 0
Nuclear Production Administrative Procedure NPP-FP1-02; Fire Brigade; Revision 0

Plant Safety Administrative Procedure POP-FP1-02; Revision 0
NFPA No. 27 - 1975; Private Fire Brigades

1R06 Flood Protection

CARD 04-22974; Fire Penetration Fallen Out Around Pipe; July 1, 2004
CARD 04-16202; Level Detectors Not Labeled; July 6, 2004
CARD 04-23006; NRC SRI Questions on G1101D065 Sump Gaps; July 2, 2004
System Operating Procedure 23.702; Equipment and Floor Drainage System; Revision 39
Drawing 6M721-5710-2, Revision AA; Sump Pumps System Functional Operating Sketch
Drawing 6M721-2032, Revision AY; Sump Pump Diagram Radwaste System
ARP 2D105; Reactor Building Corner Rooms/ HPCI Room Flood Level; Revision 12
ARP 2D78; Reactor Building Floor/Equipment Drain Sumps Level Hi-Hi/Lo-Lo; Revision 14
Surveillance Scheduling and Tracking; Perform 47.000.84 Sec 6.2 LLRT for Equipment Drain Check Valves - G1101F1410 & 1411; March 25, 2003
Surveillance Scheduling and Tracking; Perform 47.000.04 Sec 6.4 LLRT for Floor Drain Check Valves G1101F1407 & 1408
Performance Evaluation Procedure 27.702.01; Reactor Building Sump Crosstie Flood Control Valve Test; Revision 5
UFSAR 9.3.3; Plant Equipment and Floor Drains
UFSAR 2.4; Hydrologic Engineering
UFSAR 3.4: Water Level (Flood) Design
Regulatory Guide 1.102; Flood Protection for Nuclear Power Plants; Revision 1
NRC Information Notice 2000-20: Potential Loss of Redundant Safety-Related Equipment Because of the Lack of High-Energy Line Break Barriers; December 11, 2000

1R11 Licensed Operator Requalification

SS-OP-904-0182; 95Percent/MSIV Closure/Frequency Low/Turbine Trip/Total Scram Failure/Steam Leak in Containment; March 26, 2004
Simulator Grading Sheet

1R12 Maintenance Rule Implementation

Regulatory Guide 1.160; Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2
NUMARC 93-01; Nuclear Energy Institute Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2
NUREG-1648; Lessons Learned from Maintenance Rule Baseline Inspections; October 1999

1R13 Maintenance Risk Assessment and Emergent Work

Plan of the Day - Division 1; Week June 28, 2004
PSA 97C; Fermi In-Plant Examination; Volume 4
Regulatory Guide 1.177; An Approach for Plant Specific, Risk-Informed Decision Making: TSs; August 1998
MMR Maintenance Rule Conduct Manual, Chapter 12; Equipment Out of Service Risk Management; Revision 1
TMSA-04-0047; Risk Assessment for the Week of June 28, 2004; June 25, 2004
MMR Maintenance Rule Conduct Manual, Appendix H; On-line Maintenance Risk Matrix; Revision 0
WR 0142040615; Perform 44.030.264
WR 0081040615; Perform 44.040.002
Plan of the Day; Monday, May 17, 2004
CARD 04-22563; "IST Program Self Assessment Finding - Add Surveillance Timing Requirements to Selected RHR MOVs"; June 9, 2004
Plan of the Day, Division 1/Division 2 Weeks; Friday April 2, 2004
Plan of the Day, Division 2 Week; Wednesday, April 07, 2004
SOE 03-03; Division 2 EECW Electrical Lineup; Revision 2
Plan of the Day, Division 2 Week; Monday, April 12, 2004
Plan of the Day, Division 2 Week; Thursday, May 20, 2004

1R15 Operability Evaluations

CARD 04-22663; Senior Resident Inspector Concerns With DC-5350, "AC Control Cable Voltage Drop Calculation for QA-1, Division 1"
CARD 04-21775; Measurements Taken Under 47.000.05 Identified Low Division 2 ESF Cooler Air Flows; April 22, 2004
CARD 04-21922; Division 1 EECW Room Cooler Air Flow Measured to be 29 Percent Below Design; April 29, 2004
Fermi 2 Nuclear Power Plant Emergency Equipment Cooling Water System Design Basis Document P44-00; Revision C
CARD 01-13222; Engineering Functional Analyses No. P44-03-007; Revision A
Surveillance Procedure 47.000.05; Balancing and Adjustment of HVAC Systems; Revision 23
CARD 01-13222; Current Calibrated Division II EECW Hydraulic Model May Not Accurately Predict Division II EECW Flows; July 23, 2001
CARD 04-22658; Potentially Damaged Concrete; June 14, 2004

1R16 Operator Workarounds

Operator Work Around ODE-6; Revision 4
CARD 04-20946; G3352-F104 Indicates Dual in the MCR; March 8, 2004
CARD 03-01241; Missing Positioner Cover; September 10, 2003
CARD 04-21349; South Flash Tank Vent to Heater 5S Isolation Valve Would Not Close Remotely; March 27. 2004
Aggregate Assessment of Operator Work Arounds; March 19, 2004
Operation Information System Cris Report; April 28, 2004

Active Operations Challenges Index; April 23, 2004
CARD 04-20355; FW Heater 5N EDL Opens Too Soon; February 1, 2004
CARD 04-21777; MTG Hydrogen Cooler #2 Temperature Valve Controlling 10 Percent Lower Than Others; April 23, 2004
CARD 04-21555; 5D137, Demineralizer Storage Water Level High, Alarming Early; April 7, 2004
CARD 03-11400; Division 1 EECW Head Tank Level High Coming in Early; April 14, 2003
CARD 04-00382; Level Switch Not Working Correctly; March 1, 2004
CARD 03-21250; Erratic Indications on IRM 'H'; August 21, 2003
CARD 04-21714; Pens Pegged High; April 20, 2004
Emergency Support Procedure 29.ESP.18; Defeat of RWCU Isolations; Revision 5
System Operating Procedure 23.707; Reactor Water Clean Up; Revision 106

1R19 Post Maintenance Testing

Task 02889040624; Procedure 24.307.14, Section 5.1; EDG 11 Start and Load Test - Slow Start; June 24, 2004
Work Request 000Z041028; West Station Air Compressor Lube Oil; May 10, 2004
CARD 04-00135; West Station Air Compressor Lube Oil Temperature Showed Little Response After Opening P5000F033A 2 Turns; March 18, 2004
Vendor Manual Number VMF9-2.1; Centrifugal Air Compressor; Revision B
Drawing 6M721-2015, Revision BP; Diagram Station and Control Air
Drawing 6M721-5728-2, Revision S; TBCCW System (First Floor) Functional Operating Sketch
Drawing 6I721-2451-03, Revision M; Schematic Diagram Station Air Compressor West
Surveillance Procedure 24.307.35; DGSM, SFOT and Starting Air Operability Test - EDG 12; Revision 45
Work Request 000Z032283; EDG 12 Fuel Oil Day Tank Level Low Alarm Received. Replace Check VA R3000F083C
Surveillance Procedure 24.307.35; DGSW, DFOT and Starting Air Operability Test - EDG 12; Revision 45
Weld Process Control Sheet 000Z032283
Detroit Edison Company ASME Section XI Repair and Replacement Program for Fermi 2 Power Plant; Log No 03/027; Revision 0
Maintenance Procedure 35.000.232; Valve Disassembly, Reassembly and Rework; Revision 32
Performance Evaluation Procedure 47.000.13; PEP Check Valve Inspection Procedure; Revision 37;
Welder/Brazer Qualification Log; May 2004
WPCPIS R3000F083C Emergency Diesel Generator No. 12 Transfer Pump C002 Discharge Check Valve
Drawing 6WM-R30-N5145-1; Piping Isometric - Diesel Fuel Oil Pump Discharge (R3000C002 & C004 RHR Complex); Revision D
Vendor Manual Number VMC2-33, Revision E; Forged Steel Valves

1R22 Surveillance Testing

Technical Specification 5.5.10; TS Bases Control Program; Amendment 156
Amendment 41 to Facility Operating License No. NPF-43; September 7, 1989
CARD 03-21632; TS Requirements Table Does not Support Bases and Plant Design Discussion of Changes for Improved TS Section 3.3.6.1, Primary Containment Isolation Instrumentation
NRC-88-0279; Proposed TS Change (License Amendment) - Isolation Actuation Instrumentation (3/4.3.2); December 22, 1988
NRC-04-0006; Proposed Amendment to Revise TS 3.3.6.1, "Primary Containment Isolation Instrumentation;" March 19, 2004
UFSAR Section 5.2.7.1.4.1; Room Ventilation or Standby Cooler Temperature; Revision 11
CARD 04-21670; Revise Procedures to Prevent On-line Performance of RWCU Delta T Functional Calibration; April 16, 2004
Procedure 44.020.156; NSSSS - RWCU Area & Area Differential Temperature Division 1 Functional Test
Procedure 44.020.157; NSSSS - RWCU Area & Area Differential Temperature NRHX Division 2 Functional Test
Procedure 44.020.158; NSSSS - RWCU Area & Area Differential Temperature Division 1 Calibration/Functional Test
Procedure 44.020.159; NSSSS - RWCU Area & Area Differential Temperature Division 2 Functional Test

1R23 Temporary Plant Modifications

CARD 04-22647; Missed Justification in DC-5269 Resulting in Over Conservative Results in ETAP; June 14, 2004
CARD 04-22663; Wrong Cable Lengths in Low Voltage - ELMS Carried Forward Into ETAP Resulting in Over Conservative Voltage Drops; June 14, 2004
CARD 04-22663; Senior Resident Inspector Concerns with DC-5350, AC Control Cable Voltage Drop Calculation for QA-1, Division 1; June 15, 2004
Temporary Modification 2004-011; Bypass Failed Voltage Regulator on MPU 2; May 31, 2004
Schematic Diagram 6I721-2611-13; Reactor Building Main Control Room A/C Mode Selection Division 2; Revision V
Schematic Diagram 6I721-26111-38; Main Control Room A/C Chiller Compressor Centravac Control Division II T4100B008; Revision T
Schematic Diagram 6I721-2611-08; Reactor Building Exhaust Fans, Auxiliary Relays and Recirculation Air Line Control; Revision Q
Schematic Diagram 6I721-2611-11; Reactor Building Secondary Containment Isolation Signals Division II; Revision Q
Schematic Diagram 6I721-2611-04; Reactor Building Exhaust Fans, Auxiliary Relays and Recirculation Air Control; Revision Q
Line Diagram 6SD721-2530-01; 120VAC Instrumentation and Control Power Feeders Division 1 and 2 Reactor Building; Revision S
Schematic Diagram 6I721-2451-14; NIAS Division 2 Dryer P5002D013 Controls; Revision H

Schematic Diagram 6I721-2183-02; PRMS D11N436A, B & D11N437 A, B CAHRM D11N443A, B; Revision H
Schematic Diagram 6I721-2611-15; Reactor Building Main Control Room A/C Isolation Dampers, Division II; Revision R
Temporary Modification 03-0026; RFP Online Leak Repair

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs

Offsite Dose Calculation Manual, Revision 16
Radiation Protection Conduct Manual; Chapter 02; “Administrative Controls”; Revision 8
Plant Technical Procedure 62.000.208; “Direct Radiation Monitoring Thermoluminescent Dosimeters”; Revision 3
Plant Technical Procedure 62.000.201; “Airborne Particulate and Iodine Sampling Using RADeCO Model AVS-28A Air Sampler”; Revision 0
Plant Technical Procedure 62.000.209; “Terrestrial Monitoring Sample Collection”; Revision 2
Plant Technical Procedure 62.000.210; “Aquatic Monitoring Sample Collection”; Revision 4
Plant Technical Procedure 62.000.200; “Land Use Census”; Revision 4
Plant Technical Procedure 62.000.203; “REMP Results Analysis - Review and Action”; Revision 5
Plant Technical Procedure 66.000.007; “Calibration of the RADeCO Model AVS-28A Air Sampler”; Revision 0
2002 and 2003 Annual Radiological Environmental Operating Reports; dated April 29, 2003 and April 30, 2004, respectively
Radiation Protection Conduct Manual; Chapter 04; “Accessing and Working in the Radiologically Restricted Area”; Revision 12
Radiation Protection Conduct Manual; Chapter 18; “Release of Potentially Clean Fluids”; Revision 11
Radiation Protection Conduct Manual; Chapter 25; “Release of Potentially Clean Bulk Solids”; Revision 5
Nuclear Generation Memorandum; “The Impact of the Current Fermi 2 Radionuclide Mix on Radiation Surveys”; dated September 17, 2003
Nuclear Generation Memorandum; “Alarm Settings for IPM9 Personnel Contamination Monitors”; dated February 24, 2004
Nuclear Generation Memorandum; “Evaluation of Setpoint, Check Source, and Self-Shielding for SAM-11"; dated March 7, 2002
CARD 03-16898; “Purple Painted Side Cutters Found Outside the RRA”; April 13, 2003
CARD 02-19071; “Recommendations to Improve REMP Sampling”; October 15, 2002
CARD 02-19921; “Vegetation Surrounding REMP Air Sampling Locations”; October 23, 2002
CARD 03-22639; “Radioactive Material Found Outside the RRA”; October 16, 2003
CARD 02-18931; “Investigate Improvements to Groundwater Monitoring Stations”; September 10, 2002
Nuclear Quality Assurance Audit Report 02-0112; “Radiation Protection, Radioactive Effluent Monitoring, Radiological Material, Transfer and Disposal, and Non-Radiological Environmental Protection Programs”; dated December 18, 2002

Plant Technical Procedure 66.000.007; Attachment 1; “Calibration Records for the RADeCO Model AVS-28A Air Samplers”; various dates in November and December 2003
Sierra Instruments Inc. Calibration Certificate for Model 826-NX-OV1-PV1-V1 Mass Flow Rotameter; dated May 3, 2004
2003 Yearly Meteorological Statistics (Monthly Data Recovery Summary); undated
Records of Primary and Secondary Meteorological Monitoring Equipment Calibration and Maintenance; Plant Technical Procedures 45.614.008 and 45.614.009 with Associated Enclosures; September 2003 and April 2004

4OA1 Performance Indicator Verification

Plant Technical Procedure 76.000.05; “Operation of Chemistry Gamma Spectroscopy Systems”; Revision 13
Plant Technical Procedure 73.714.01; ”Plant Process Sampling P33-P405A, Reactor Building Sample Panel”; Revision 2
Plant Technical Procedure 76.000.34; “Reactor Coolant Analysis”; Revision 10
WI-RP-009; “Work Instruction for Determining the Radiation Protection NRC Performance Indicators”; Revision 0
Spreadsheets/Summary Data and Selected Gamma Spectroscopy Analysis Reports of Fermi 2 Reactor Water DEI; June 2003 through May 2004
CARD 01-14218; “Evaluate DEI Conversion Factors”; August 9, 2001
NEI 99-02; Performance Indicators; dated November 19, 2001
Control Room Operator Log; March 22 - 23, 2003
Control Room Operator Log; February 15 - 16 , 2003
Control Room Operator Log; February 19 - 20, 2003
Control Room Operator Log; December 5 - 7 2003
Control Room Operator Log: January 1 - 2, 2003
Control Room Operator Log; May 7 - 8, 2003

4OA2 Identification and Resolution of Problems

CARD 02-13627; Line Side Power Lead Failed in MCC 72C-2APOS IA-R (T4100 Boot); March 26, 2002
Qualification Test Report QTR97P1430/EQ for Harsh Environment Qualified Replacement Retrofit Buckets for ITE Telemecanique 5600 Series Motor Control Centers, Revision 1; dated June 29, 1998 (Proprietary document)
Qualification Evaluation Report QER97P1430/EVAL for Bussman and Marathon Fuseholders Qualified Replacement Buckets for ITE Telemecanique 5600 Series Motor Control Centers, Revision 1; dated August 19, 1998 (Proprietary document)
Generic Test Procedure for Acceptance and Dedication of Fuse Holders #GP0025, Revision 1; dated January 31, 1995 (Proprietary document)
Acceptance Test Procedure AP97P1430/1 for Class 1E Qualified Buckets, Revision 5; dated October 14, 2003 (Proprietary document)
Qualification Test Report QTR97P1430/1 for Harsh Environment Qualified Replacement Retrofit Buckets for ITE Telemecanique 5600 Series Motor Control Centers, Revision 0; dated June 18, 1998 (Proprietary document)

Qualification Test Report QTR97P1430/3 for Components for Qualified Replacement Buckets for ITE Telemecanique 5600 Series Motor Control Centers, Revision 0; dated March 4, 1999 (Proprietary document)
CARD 04-21818; Infrared Identified Hot Spot in 72B-3A-R Position 1-A-4, Drywell 2 Speed Cooling Fan #1; April 26, 2004
CARD 03-21636; Trip of Division 2, Control Center Heating Ventilation and Air Conditioning Supply Fan; October 30, 2003

4OA3 Event Followup

LER 2003-002, Revision 1; "Automatic Reactor Shutdown Due to Electric Grid Disturbance and Loss of Offsite Power"
CARD 03-19464; "Inverter Failure Due to Loss of Electric Grid"; August 14, 2003
Selected Control Room Logs from January 1, 1996 through December 31, 2003
CARD 04-22855; "Auxiliary Contact in MCC is Misaligned"; June 25, 2004
DER 93-0312; "Investigation of Failures Related to the ITE/Telemechanique Contacts"; May 25, 1993
CARD 03-10957; "E4150-F003 Not Stroking Closed"; July 13, 2003
CARD 02-18758; "Valve Failed to Stroke Closed"; August 15, 2002
Drawing 6I721-2221-04, Rev. AA; "Schematic Diagram HPCI System - Steam Supply Line Outboard Isolation valves E4150F003, E4150F600"
TMPE-04-0162; "HPCI Emergent Issues Team - April 8, 2004"; May 5, 2004
CARD 04-21564; "Valve Not Stroking Closed (E4150F003)"; April 8, 2004
WR 000Z041054; "Investigate, Troubleshoot, and Determine Cause of E4150F003 Failure to Stroke Closed"; April 8, 2004
WR 000Z032836; "Investigate, Troubleshoot, and Determine Cause of E4150F003 Not Stroking Closed"; July 27, 2003

4OA5 Other Activities

ITC 2004 Summer Operational Planning Assessment; dated May 7, 2004
Draft Augmented Quality Program AQP-0002; "ITC-Fermi 2 Interface 120kV and 345kV Switchyards"; Revision 0; dated May 10, 2004
FBP-32; "Critical Load Days"; Revision 1
ARP 9D22, Revision 13; "Division I Bus Voltage Low"
ARP 9D8, Revision 8; "SS 64 Transformer Trouble"
APR 9D6, Revision 7; "SS 66 Transformer Trouble"
ARP 9D5, Revision 8; "SS 68 Transformer Trouble"
ARP 10D43, Revision 12; "Div. II Bus Voltage Low"
ARP 4D132, Revision 6; "Generator Frequency High/Low"
Letter from Thomas Kirby, ITC Field Supervisor, to Enrico Fermi Power Station; "Initial Response to NRC Inspection Manual, Temporary Instruction 2515/156"; dated May 21, 2004
UFSAR Section 8.2.2.5; "Operation With Degraded Grid"
AOP 20.300.120kV, Revision 3; "Loss of 120kV" and associated AOP bases
AOP 20.300.345kV, Revision 1; "Loss of 345kV" and associated AOP bases
"Generator Interconnection and Operation Agreement by and between International Transmission Company, LLC as Transmission Owner and The Detroit Edison Company"; dated February 28, 2003

MMR12, Rev. 1; “Equipment out of Service Risk Management”
MOP04, Rev. 21; “Shift Operations”
MOP10, Rev. 3; “Fire Brigade”
MOP11, Rev. 8; “Fire Protection”
EF2-72717; “Submittal of Deviations from Staff Interpretations of Fire Protection Features in 10 CFR 50, Appendix R and Justification”; Dated August 3, 1984
UFSAR 13.1.2.5; Shift Crew Composition
Selected Fire Brigade Training Documents and Records
Selected replacement maintenance personnel training qualifications and records
Replacement personnel roster
Detroit Edison draft strike contingency plan (Confidential Information)

LIST OF ACRONYMS USED

AOT	Allowed Outage Time
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
CTG	Combustion Turbine Generator
DEI	Dose Equivalent Iodine
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
GDC	General Design Criteria
GIA	Generator Interconnection and Operation Agreement
HPCI	High Pressure Coolant Injection
ITC	International Transmission Company
kV	Kilovolts
LER	Licensee Event Report
MCC	Motor Control Center
NCV	Non-Cited Violation
NPP	Nuclear Power Plant
ODCM	Offsite Dose Calculation Manual
PI	Performance Indicator
RCIC	Reactor Core Isolation Cooling
REMP	Radiological Environmental Monitoring Program
RHR	Residual Heat Removal
RTO	Regional Transmission Organization
RWCU	Reactor Water Cleanup
TI	Temporary Instruction
TM	Temporary Modification
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
V	Volts
WR	Work Request