

October 26, 2007

Mr. Jack M. Davis
Senior Vice President and
Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000341/2007007

Dear Mr. Davis:

On September 14, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed a team inspection of problem identification and resolution at your Fermi Power Plant, Unit 2. The enclosed report documents the inspection findings which were discussed on September 14, 2007, with 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.

On the basis of the sample selected for review, the team concluded that, in general, problems were properly identified, evaluated, and corrected. However, the inspectors identified one finding of very low safety significance (Green).

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

J. Davis

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Sincerely,

/RA/

Christine A. Lipa, Chief
Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000341/2007007
w/Attachment: Supplemental Information

cc w/encl: J. Plona, Vice President,
Nuclear Generation
K. Hlavaty, Plant Manager
R. Gaston, Manager, Nuclear Licensing
D. Pettinari, Legal Department
Michigan Department of Environmental Quality
Waste and Hazardous Materials Division
M. Yudasz, Jr., Director, Monroe County
Emergency Management Division
Supervisor - Electric Operators
State Liaison Officer, State of Michigan
Wayne County Emergency Management Division

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Letter to Jack M. Davis from Christine A. Lipa dated October 26, 2007

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC INTEGRATED
INSPECTION REPORT 05000341/2007007

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000341/2007007

Licensee: Detroit Edison Company

Facility: Fermi Power Plant, Unit 2

Location: Newport, Michigan

Dates: August 27 through September 14, 2007

Inspectors: R. Lerch, Project Engineer
T. Steadham, Resident Inspector
D. Szwarc, Reactor Engineer, DRS
A. Wilson, Reactor Engineer, DRP

Approved by: C. Lipa, Chief
Branch 4
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000341/2007007; 08/27/2007-09/14/2007; Fermi Power Plant, Unit 2; Biennial Problem Identification and Resolution.

The inspection was conducted by three Region III inspectors and the resident inspector. One Green finding of very low safety significance was identified during this inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process (SDP)." The finding was assessed using the SDP process. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

In summary, the inspectors concluded that the corrective action process was generally effective at identifying and resolving issues as indicated by the conditions observed in the plant, process meetings observed, and the issues that had been entered in the process that inspectors reviewed. The licensee had program managers monitoring performance of the program and pursuing improved implementation. Operating experience was reviewed for plant applicability and also used in issue evaluations. The audit and self-assessment programs were functioning adequately, but had not identified some broad trends such as an NRC substantive crosscutting issue. The licensee periodically monitored the safety conscious work environment and results were acceptable and consistent with input to the corrective action process and employee concerns program. Two areas of concern were identified by inspectors based on issues in corrective action documents. Licensee staff had previously identified that there was acceptance of inadequate procedures and work instructions that inspectors concluded was continuing based on recent issues. Also, inspectors observed that some activities that required interfacing with off site organizations had problems due to lack of ownership by station personnel.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green. A finding involving the failure to maintain adequate maintenance procedures to clean the '2B' Main Unit Transformer was self-revealed during an event. The procedure did not contain adequate controls over the removal of the cooling fans from service with the transformer energized. As a result, the licensee removed too many coolers which caused localized overheating subsequently resulting in the transformer failure, turbine trip, and reactor scram. The licensee entered the issue into their corrective action program as CARD 06-24046 and created procedures for cleaning the transformers. The inspectors determined that the finding was associated with cross-cutting aspect H.2(c), Human Performance - Resources.

This finding was determined to be more than minor because the improper transformer cleaning resulted in a reactor scram. This finding was determined to be of very low safety significance because it did not contribute to the likelihood that mitigation

equipment or functions would not be available. No violation of regulatory requirements was identified. (Section 4OA2a.(2))

B. Licensee-Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (PI&R)

a. Assessment of the Corrective Action Program (CAP)

(1) Inspection Scope

The inspectors reviewed items selected across the NRC's cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for timely and complete evaluation and resolution. Specifically, the inspectors selected and reviewed condition assessment resolution documents (CARDs) generated since November 2005, when the previous NRC problem identification and resolution team inspection was conducted (Inspection Report (IR) 05000341/2005020). These documents included CARDs, apparent cause evaluations (ACEs) and root cause evaluations (RCEs).

The inspectors evaluated CARDs to determine the licensee's threshold for identifying problems and entering them into the corrective action program. The inspectors also conducted walkdowns, observed Ownership Screening Committee and CARD Review Board meetings, and interviewed plant personnel to review processes where problems and findings could be identified. The process was also reviewed for requiring prompt evaluation of issues for operability and reportability.

The inspectors also reviewed a sample of previous Non-Cited Violations to verify that the issues were adequately prioritized and evaluated and appropriate corrective actions were taken. A review of the diesel fire pump was expanded to include CARDs initiated during the past five years. In addition, the inspectors interviewed the diesel fire pump system engineer to evaluate system performance over the past five years.

Documents substantially reviewed by the inspectors are listed in the Attachment to this report. Completion of these interviews, observations, and record reviews constituted one inspection sample.

(2) Assessment

Identification of Issues

The inspectors concluded that, overall, the licensee was effective at identifying problems and entering them into the corrective action program. This was evidenced by the relatively few deficiencies identified that did not have CARDs written, the high number of CARDs generated and the broad distribution between departments. The inspectors did, however, identify one minor case during this inspection where CARDs were not written when deficiencies were identified during a self-assessment. For

example, Operations Self-Assessment NPOP-06-0047 identified areas for improvement in the areas of log and record-keeping as well as shift turnovers but the issues were not entered into the corrective action program.

Prioritization and Evaluation of Issues

One finding of very low safety significance (Green) was identified as self-revealed when the '2B' Main Unit Transformer (MUT) suffered a fatal internal fault on June 15, 2006. See the "Main Unit Transformer Trip" discussion below.

Issues in the CAP were properly prioritized. The inspectors concluded that the Ownership Screening Committee and CARD Review Board were generally effective in assuring the proper significance levels were assigned. The licensee was monitoring the backlog of open CARDS and attempting to reduce the number to a target level.

For the ACEs and RCEs reviewed by the inspectors, the inspectors concluded that they were performed using systematic methods. The licensee had made numerous improvements in the evaluation processes to improve uniformity and quality of analysis and documentation. Training had also been provided to staff members who perform and review issue evaluations. The thoroughness of evaluation and level of detail in the ACEs and RCEs was improved over the two year period, however, the evaluation of issues remained an area of concern for the inspectors. One example was shown in reviewing the root cause evaluation associated with CARD 06-24046, "Main Unit Transformer 2B Sudden Pressure Trip", the inspectors identified the licensee's failure to either develop corrective actions or explain why none were needed for a contributing cause of the event. On March 25, 2006, switchyard disconnect DO arced for approximately 14 minutes which was later determined to have contributed to the subsequent MUT 2B failure. The licensee discovered that CARD 04-20108 was initiated on January 10, 2004, to investigate the 'DO' disconnect for proper configuration; however, the CARD was closed on December 13, 2004, with no corrective actions taken. Therefore, the inspectors concluded that in 2006 the licensee failed to properly evaluate why the 2004 CARD was closed without corrective actions. The licensee later determined that if the configuration was corrected, the arcing event would not have occurred and thus considered the closure of the CARD with no actions taken to be a contributing cause of the MUT 2B failure. Although the licensee reviewed potential damage to other equipment as a result of the arcing event, the licensee failed to review the events and circumstances of the contributing cause in order to identify any corrective actions. Once identified, the licensee entered this issue into their corrective action program as CARD 07-25091 to perform the necessary review.

A second example was revealed when the inspectors reviewed CARD 05-24619 which was initiated on August 6, 2005, to review an abnormal condition associated with the Division I Control Center Heating, Ventilation, and Air Conditioning Return Air Fan. During the extent of condition review, the licensee discovered that approximately 22 percent of the work requests sampled did not clearly reflect the correct installation instructions. Therefore, the recommendation was made to have a second planner verify work package instructions to clearly reflect the correct installation or modification instructions for equivalent parts. The licensee concluded that the recommendation was addressed under another action item in the CARD; however, the referenced action item

did not address the recommendation. Consequently, the inspectors identified that the recommendation for a second planner review was never implemented. Once identified, the licensee entered this issue into their corrective action program as CARD 07-25136 to review the inspectors' concerns.

Main Unit Transformer Trip

a. Inspection Scope

The inspectors selected CARD 06-24046, "Main Unit Transformer 2B Sudden Pressure Trip, " because the issue was associated with a level 1 root cause evaluation completed within the past two years of this inspection. The inspectors verified the following attributes during their review of the licensee's corrective actions for the above action requests and other related action requests:

- complete and accurate identification of the problem in a timely manner commensurate with its safety significance and ease of discovery;
- consideration of the extent of condition, generic implications, common cause and previous occurrences;
- evaluation and disposition of operability/reportability issues;
- classification and prioritization of the resolution of the problem, commensurate with safety significance;
- identification of the root and contributing causes of the problem; and
- identification of corrective actions which were appropriately focused to correct the problem.

The inspectors discussed the corrective actions and associated action request evaluations with licensee personnel.

b. Findings

Introduction: A finding of very low safety significance (Green) was self-revealed on June 15, 2006, when the '2B' Main Unit Transformer (MUT) suffered a fatal internal fault on the Z phase high voltage windings because of localized overheating. The maintenance instructions that the licensee utilized to clean the MUT were insufficient to ensure that the MUT remained adequately cooled.

Description: On June 15, 2006, the licensee began activities to clean MUT 2B because the heat exchanger cooling fins were becoming clogged with insects and cottonwood common for that time of year. The work instructions that were to be used to clean the transformer did not contain any guidance on the proper method to remove the oil coolers from service. Consequently, the licensee removed two adjacent coolers on the transformer Z phase approximately six hours before cleaning of the coolers commenced. This extended time period allowed temperature stratification of the oil in the Z phase and localized overheating of the windings.

The licensee then started to clean the transformer by spraying cool water on the cooling fins. Twenty-three minutes after the cleaning began, MUT 2B suffered a fatal internal fault on the Z phase high voltage winding. The failure caused the MUT sudden pressure relay to actuate causing a main generator trip and subsequent reactor scram. All plant equipment operated as designed as a result of the scram and no fires resulted from the failure.

The licensee entered this issue into their corrective action program as CARD 06-24046 and performed a root cause evaluation of the issue. The licensee determined that the root cause of the failure was the failure to use a formalized work control process to control the MUT cleaning which thereby failed to prevent two adjacent coolers to be taken out of service together for an extended period of time. The licensee postulated that the overheating from the two coolers being removed from service coupled with the relatively rapid cooling of the oil from the water spray caused moisture to propagate from the cellulose insulation to the oil. The increased moisture in the oil decreased the dielectric strength of the oil which caused the internal fault.

As a result of this event, the licensee developed a detailed procedure to clean both MUTs, reviewed and modified other similar jobs on other equipment, and disseminated lessons learned to from this event to Operations, Maintenance, and Engineering.

Analysis: The inspectors determined that the failure to maintain adequate maintenance procedures to clean the '2B' Main Unit Transformer was a performance deficiency. This finding was determined to be more than minor in accordance with Manual Chapter (MC) 0612, "Power Reactor Inspection Reports," Appendix B. Specifically, the inspectors reviewed the examples of minor and more than minor issues in MC 0612, Appendix E, and determined that there was one example related to this issue. Example 4b states that the a procedural deficiency is more than minor if the error caused a reactor trip or other transient. The inspectors assessed the finding using the Phase 1 SDP and determined that the finding was associated with the Initiating Events Cornerstone. The finding did not contribute to the likelihood that mitigation equipment or functions would not be available; therefore, this finding screened as Green. Once identified, the licensee entered this issue into their corrective action program as CARD 06-24046, performed a root cause evaluation, and created procedures for cleaning the transformers. The inspectors determined that the finding is associated with a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not maintain complete and accurate procedures or work packages for cleaning the MUTs (H.2(c)).

Enforcement: Because the MUTs are not safety-related components, neither the requirements of 10 CFR 50, Appendix B, nor Regulatory Guide 1.33 apply to this issue. Therefore, no violation of regulatory requirements occurred and this failure is being treated as a finding and is identified as FIN 05000341/2007007-01: Inadequate Main Unit Transformer Cleaning Procedures.

Effectiveness of Corrective Actions

The inspectors concluded that, overall, corrective action effectiveness had improved from 2005 to 2007, but observed that on a broad basis, the licensee had not effectively addressed issues with work instruction quality and ownership of issues involving off site organizations.

The inspectors noted several examples of workers accepting less than adequate procedures or work instructions during this inspection. The licensee performed a common cause analysis last year of several significant operational events and documented the review in CARD 06-25246. The licensee identified, among other issues, the staff's acceptance of poor procedures as a contributing cause. Corrective actions were completed including stand downs and training. However, about a month later, engineering reviewed the preventative maintenance (PM) packages for the inspection and testing of both MUTs and determined that they were adequate despite deficiencies in the level of detail of the work instructions. Specifically, replacement of cooling fan motors was directed as a single line in the work instructions with no steps to perform a post maintenance test. Further, the work instructions contained a step to test the MUT alarms but included no guidance on how to test them, exactly what alarms to test, or the standards with which to measure success or failure such as with the use of acceptance criteria. Once identified, the licensee entered this issue into their corrective action program as CARD 07-25107 to review the inspectors' concerns.

The inspectors were concerned that standards for improved procedure quality had not been internalized within the licensee's organization. The inspectors determined that a lack of effective prioritization for improving the work instructions for the MUT PM packages had continued. For example, on September 13, 2007, an event with the station air system was caused, in part, because several departments accepted inadequate work instructions. In addition, when the inspectors initially inquired about the adequacy of the MUT PM packages, as discussed above, the licensee staff's position was that the PMs contained adequate work instructions. The inspectors also reviewed CARD 03-18293, written on June 5, 2003, that identified deficiencies with the work instructions for the MUTs and other switchyard-related equipment. That CARD was still open at the close of this inspection.

The inspectors determined that several recent NRC findings, events, and other issues were related to a lack of licensee ownership of issues related to equipment maintained by outside organizations, such as switchyard equipment or the MUTs. For example, FIN 05000341/2007004-01 identified transient combustibles in a switchyard relay house, which was not monitored adequately because the licensee stated that they did not consider themselves responsible for the switchyard relay house. FIN 05000341/2007002-02 identified deficiencies with the Alternate Emergency Operations Facility due to the licensee's reliance on an unofficial agreement with Warren Service Center management to maintain the facility. Lastly, the cleaning instructions for MUT 2B were inadequate partly because of the licensee's reliance on the Distribution Operations personnel, who routinely cleaned the MUTs and have knowledge and experience in performing the task. Once identified, the licensee entered this trend into their corrective action program as CARD 07-25174 to review the inspectors' concerns.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The inspectors reviewed completed licensee evaluations of industry operating experience from the past two years to determine if industry experience was being promptly reviewed by appropriately qualified individuals at Fermi and actions, either CARDS or program enhancements, were being taken to address those issues that were applicable to Fermi. In addition, the inspectors interviewed the operating experience program coordinator to determine how the process worked.

(2) Assessment

No findings of significance were identified. The licensee was using appropriately qualified individuals to promptly evaluate industry experience. Corrective actions and program enhancements were entered into the corrective action program, as necessary, to address those items applicable to Fermi. The inspectors noted that the licensee had increased the use of operating experience during reviews of CARDS.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

Inspectors reviewed the audit plans and the self-assessment plans and discussed the programs with the responsible managers for the programs. Inspectors also reviewed a sample of self-assessment and audits in different departments including recent reviews of the CAP.

(2) Assessment

No findings of significance were identified. The audits and self-assessments were appropriately planned and conducted for the identification, evaluation, and correction of issues and demonstrated the ability of the licensee to be effective in these areas. Self-assessments of the CAP were critical and had identified program improvements. The results did not identify any substantial issues differing with inspector observations. Reorganizations by the licensee had simplified and clarified responsibilities for the programs. However, while self-assessments were generally effective at identifying lower-level areas for improvement, the inspectors identified inconsistencies in the breadth and depth of the self-assessments as well as documentation and distribution of the assessment results. The licensee explained that the lack of a formalized self-assessment procedure was the reason for such a wide disparity between assessments. The inspectors noted that the lack of a formalized procedure for performing assessments was an impediment to the licensee identifying more significant trends before being identified by either an outside organization or an event. For example, despite two NRC substantive cross-cutting issues issued during the two-year inspection period, the licensee failed to identify the issues prior to the NRC. Additionally, a self-assessment performed on April 30, 2007, on Operations Human Performance identified errors in the area of planning review, specifically inadequate review of procedures or surveillances; however, the licensee failed to identify planning review as an area for

improvement. Consequently, the licensee failed to initiate a CARD identifying planning review as an area for improvement. On September 13, 2007, an event occurred with the station air system which was due to inadequate planning and review of the work instructions. The licensee entered the inspectors' concerns with the self-assessment program into the corrective action program as CARD 07-24971.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors assessed the station's safety conscious work environment through reviews of the employee concern program implementing procedures, discussions with the ombudsman responsible for administration of the employee concern program, a review of the issues brought to the program, interviews with personnel from various station departments, and reviews of issue reports. The inspectors also reviewed the results from Safety Culture Assessments conducted by the Utilities Service Alliance (USA) in 2003 and 2006 and a contractor evaluation and a subsequent follow up evaluation.

(2) Assessment

No findings of significance were identified. Based on the external safety conscious work environment reviews that affirmed an adequate safety culture, the lack of negative feedback to the inspectors during interactions and interviews with licensee staff, and lack of safety culture issues brought to the CAP and ECP, inspectors concluded that the plant safety conscious work environment was adequate to support safe plant operations. The inspectors did note however that the methods adopted by the USA for SCWE evaluation no longer included an anonymous survey of plant worker attitudes. The last anonymous survey had been conducted at the plant in 2005 with adequate results.

4OA6 Meetings

.1 Exit Meeting

On September 14, 2007, the inspectors presented the preliminary inspection results to Joe Plona, Site Vice President, and other Fermi personnel. The inspectors stated that they had reviewed proprietary and confidential information during the inspection but that that information would not included in the inspection report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

Bill Axelson, Consultant
Linda Bugoci, Manager Corrective Action
Terry Brown, Manager Radiation Protection
Matt Caragher, Director Nuclear Engineering
Dale Chupurdy, Maintenance Specialist
Wayne Colonnello, Director Nuclear Support
Tom Dong, Manager Nuclear Performance Engineering & Fuels
Sam Hassoun, Licensing Principal Engineer
Beth Hare, Supervisor Component Engineering
Kevin Hlavaty, Director Nuclear Production
Ken Howard, Manager Nuclear Plant Support Engineering (PSE)
Joe Janssen, Manager Nuclear Maintenance
Rod Johnson, Supervisor Compliance
Dave Keskitalo, Supervisor Radiological Engineering
Ed Kokosky, Manager Nuclear Training
Kendra Hullum-Lawson, PSE-Mechanical/Civil Senior Engineer
John Louwers, Supervisor QA
Mark McDonough, Fire Protection Engineer
John Moyers, Manager Nuclear Quality Assurance (QA)
Dwi Murray, Licensing Engineer
Dan Noetzel, Manager Engineering 1st Team
Peg Offerle, Supervisor Corrective Action
Joe Plona, Site Vice President
Mike Philippon, Director Nuclear Assessment
Kent Scott, Manager Nuclear Operations
Kirk Snyder, Manager Nuclear System Engineering
Tom Stack, Manager Nuclear Security
Stan Stasek, Director Nuclear Projects
Greg Strobel, Operations Engineer
Tom Thomas, Ombudsman
Sue Uema, Supervisor PSE-Design

Nuclear Regulatory Commission

C. Lipa, Chief, Reactor Projects Branch 4

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000341/2007007-01 FIN Inadequate Main Unit Transformer Cleaning Procedures

LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion of a document on this list does not imply that NRC inspectors reviewed the entire documents, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. In addition, inclusion of a document on this list does not imply NRC acceptance of the document, unless specifically stated in the body of the inspection report.

Audits, Assessments and Self-Assessments

Memorandum NPOP-05-0031; Operations Focused Crew Assessment; June 17, 2005
Memorandum NPOP-05-0049; Reactivity Management Self Assessment; August 12, 2005
Memorandum NPOP-05-0086; Quick Hit Self Assessment on Operability Determination;
December 21, 2005
Memorandum NPOP-06-0047; Quick Hit Self Assessment on Operations Human Performance;
August 31, 2006
Memorandum NPOP-07-0021; Quick Hit Self Assessment Fermi 2 Fire protection Program for
Transient Combustible Controls; March 12, 2007
Memorandum NPOP-07-0032; Quick Hit Self Assessment on Operations Human Performance;
April 30, 2007
Self-Assessment Report – Number F2-07-01; Fire Protection Program Effectiveness of
Corrective Actions, Validation of Compliance Strategy, Readiness for 2008 Triennial
Inspection; June 12, 2007
2007 Corrective Action Program Self-Assessment Report; July 5, 2007
Organizational Effectiveness Performance Indicators; July, 2007

Corrective Action Program Documents

CARD 01-17348; Main Unit Transformer Cooling Fan; July 31, 2001
CARD 03-10829; Unexpected Response during SOP Run; July 11, 2003
CARD 03-11138; Auto Start of Diesel Fire Pump While Performing Procedure 28-504-03;
January 30, 2003
CARD 03-13604; Flow Transient & Auto Start of Diesel Fire Pump While Shutting Down Electric
Fire Pump; May 8, 2003
CARD 03-18293; Review Technical Requirements and Preventive Maintenance for Equipment
Serviced by System Maintenance; June 5, 2003
CARD 03-19199; Audit Finding: Corrective Actions to Level 1 CARD 01-21316 Were Not Fully
Implemented; September 10, 2003
CARD 04-00172; Room Heater Inoperable; January 13, 2004
CARD 04-20108; Investigate Disconnect 'DO' for Proper Configuration; January 10, 2004
CARD 04-20879; X4103 Residual Heat Removal Complex Ventilation System Maintenance
Rule (a)(1) Status; March 3, 2004
CARD 04-23870; Diesel Fire Pump Reached Max Coolant Temperature Limit and Was Shut
Down; August 26, 2004
CARD 05-10600; Security Related;
June 24, 2005
CARD 05-13274; Nuclear Quality Assurance Failed to Initiate a CARD to Investigate a Potential
Safety Conscious Work Environment Issue; December 22, 2005
CARD 05-20428; Procedure Non-Compliance Results in High Torus Level (Mispositioned
Component); dated 1/25/2005

CARD 05-20818; MSL drain valve would not close; February 7, 2005
CARD 05-20844; ARM Channel 30 (ABB/TB T Room Air Lock) Valid Alarm and EOP Entry; February 7, 2005
CARD 05-20846; Missed Emergency Classification during EOPs; February 7, 2005
CARD 05-21433; Shipping survey not performed in accordance with 67.000.103 for shipment 05-006; March 3, 2006
CARD 05-23959; Potential Inadequate Coordination in Equipment used in the Dedicated Shutdown Scenario; June 30, 2007
CARD 05-24166; NRC Unresolved Item on Habitability of BOP Switchgear Room; July 14, 2005
CARD 05-24173; The BOP Switchgear Room Has a Potential Habitability Problem During III.G.3 Fire; July 14, 2005
CARD 05-24180; Failure to Implement Timely Corrective Actions for Fire Protection Program Issues (Issue 3); July 14, 2005
CARD 05-24251; Fire Damage in D1 or D2 Switchgear Room Can Cause Opposite Division EDGs to Trip; July 17, 2005
CARD 05-24596; OE21106 – Separation at Lamination Interface of 3M Interam E54A Fire Wrap; August 4, 2005
CARD 05-24619; Division 1 Control Center Heating Ventilation and Air Conditioning Return Air Fan; August 6, 2005
CARD 05-25599; Unexpected Classification during Simulator Session – SS-OP-904-0542; October 4, 2005
CARD 05-26583; Loss of RWHVAC system during cold weather; November 24, 2005
CARD 05-26589; Processed radwaste liquids without RWHVAC in operation; November 25, 2005
CARD 05-27107; Failure to document justification for waiving procedure prerequisites; December 21, 2005
CARD 06-20308; Emergency Diesel Generator 12 Mode Control Switch Mispositioned; January 23, 2006
CARD 06-20316; RERP Drill Jan 18, 2006 – Failure of objective for initial notifications; January 24, 2006
CARD 06-20571; Output Breaker Fails to Open; February 3, 2006
CARD 06-20722; Procedure violation 67.000.103 Survey of Outgoing Radioactive Material Shipments; February 13, 2006
CARD 06-20864; Inaccurate data on notification form EP-290001 for drill of 06/29/2005; February 17, 2006
CARD 06-21134; NRC Inspector Concern of Unlabeled Cans in RRA; March 7, 2006
CARD 06-21373; Audit Finding - Acceptable Leakage Across Valves was not Provided under Mod testing in ECP; March 20, 2006
CARD 06-21394; PA intrusion detection alarm failure; March 21, 2006
CARD 06-21493; 'DO' Disconnect Arcing; March 25, 2006
CARD 06-21534; Continuous air monitor alarm on refueling floor; March 26, 2006
CARD 06-21892; NRC Questions Related to Temporary Cooling Installed for Div 1 Battery Test; April 4, 2006
CARD 06-21922; Foreign Material Discovered in the Generator; April 5, 2006
CARD 06-22666; Human performance error for HRA entry; April 23, 2006
CARD 06-22667; NRC Concern: RPV venting unit configuration control discrepancies; April 23, 2006
CARD 06-22668; Bushing Test Results; April 23, 2006
CARD 06-22923; NRC Concern – Temporary Modifications; April 28, 2006

CARD 06-23388; NRC Identified: Transient Combustibles in the RHR; May 16, 2006
CARD 06-23431; Adverse Trend – Transient Combustibles in the Plant; May 18, 2006
CARD 06-23630; RERP Drill 5-23-06. Failed objective due to incorrect Protective Action Recommendation; May 26, 2006
CARD 06-23785; NRC Concern – Standby Liquid Control Operability During Sparging Activities; June 1, 2006
CARD 06-24046; Main Unit Transformer 2B Sudden Pressure Trip; June 15, 2006
CARD 06-24243; Revise Fire Fighting Preplan – NRC Concern; June 23, 2006
CARD 06-24614; Enhancement Item – Recommend Purchasing Radiator Cooled System/GSU Transformers; July 14, 2006
CARD 06-24618; Quality of Inputs to Main Transformer Trouble Alarms Needs [to be] verified; July 14, 2006
CARD 06-24619; Need Control for Locked-in Main Transformer Trouble Alarms; July 14, 2006
CARD 06-25145; Repeat Failures to Meet MMR 12 Requirements; August 10, 2006
CARD 06-25160; RERP telephone system long distance capability blocked; August 10, 2006
CARD 06-25253; Undersized Control Transformers; August 15, 2006
CARD 06-25374; Isolate Main Unit Transformer Trouble Alarms When Locked in For Long Periods; August 21, 2006
CARD 06-25471; Diesel Fire Pump Did Not Auto Start When Pressure Was Dropped; August 24, 2006
CARD 06-25652; Site PST Event Reviews in Accordance With Conduct Manual MWC03; September 1, 2006
CARD 06-25721; Request Training on Revised NRC Reactor Oversight Process; September 6, 2006
CARD 06-24888; Near Miss-Prerequisite not performed to obtain engineering evaluation prior to removing a floor plug; July 28, 2006
CARD 06-27136; Review Engineering management Expectations for Design Changes; November 5, 2006
CARD 06-27386; EDG 14 Overvoltage Trip During SOP Run for Governor Tuning; November 16, 2006
CARD 06-28037; Div 1 CCHVAC makeup air rad monitor seems to have failed during performance of 000Z053573; December 18, 2006
CARD 06-28141; Power supply failure to CW Decant Rad Monitor; December 25, 2006
CARD 07-20476; AEP – Preliminary Report of Fossil Plant Explosion during Hydrogen Delivery, January 26, 2007
CARD 07-20617; Out of specification results on new EDG fuel oil for EDG 12; February 1, 2007
CARD 07-20781; Unplanned entry into Tech Spec 3.8.7; February 8, 2007
CARD 07-20981; Div 1 CCHVAC failed to properly shift into recirc mode; February 20, 2007
CARD 07-21035; RERP: Access to Alternate Emergency Operations Facility impacted; February 21, 2007
CARD 07-21265; RCIC Pump Outboard Seal Leak – Maintenance Rework; March 4, 2007
CARD 07-21616; NRC concern regarding CHRRMS calibration: Possible deviation from regulatory guidance; March 21, 2007
CARD 07-21646; EBS Does Not Support a Level 1 CARD Corrective Action; March 22, 2007
CARD 07-21770; NRC Ultimate Heat Sink Inspection RFI-12: Restoration of Drywell Following SBO Event Does not Control rate of Heat Addition to Emergency Equipment Cooling Water; March 29, 2007
CARD 07-21940; Diesel Fire Pump Jacket Coolant Heater is not Maintaining Temperature Greater than 100 F; April 10, 2007

CARD 07-21941; Unexpected Half Scram; April 10, 2007
CARD 07-22006; Review Work History of DFP for Common Cause; April 13, 2007
CARD 07-22088; Unplanned air sample result >0.3 DAC while cleaning RWCU strainer G3300D005 in the Small Tool Decon Room; April 17, 2007
CARD 07-22691; Surveillance Performed by Potentially Unqualified Personnel; May 16, 2007
CARD 07-22986; NRC Information Notice 2007-19 Fire Protection Equipment Recalls and Counterfeit Notices; May 30, 2007
CARD 07-23470; Recommended Actions for Long Range Fire Protection Program Licensing Strategy; June 21, 2007
CARD 07-24174; Potential NRC Violation – April 2007 Ultimate Heat Sink Inspection – 20.300.SBO Inadequate Guidance on Restoring Drywell Cooling; July 26, 2007

Corrective Action Program Documents Generated Because of the Inspection

CARD 07-24847; NRC Identified, PI&R Inspection - CARD documentation contained confidential information
CARD 07-24867; PI&R Inspection - Nut on halon bottle lower clamp not fully tightened
CARD 07-24971; NRC concern, Potential inadequacy in self assessments
CARD 07-25091; PI&R Inspection - Contributing Cause and Missed Opportunities identified in a Root Cause Analysis did not have associated corrective actions
CARD 07-25107; PI&R Inspection - Main Unit XFMR PMs for Alarm Testing Lack Detailed Work Instruction
CARD 07-25136; 2007 NRC PI&R Team Concern on CARD Action Item 05-24619-06
CARD 07-25173; PI&R Inspection Potential Green Finding - Inadequate procedure for cleaning Main Unit Transformer 2B resulted in failure of the transformer and a plant transient
CARD 07-25174; PI&R Inspection Observation - Tolerance of Inadequate Work Instructions
CARD 07-25175; PI&R Inspection Observation - Lack of Ownership of Important Equipment Maintained by Offsite Organizations
CARD 07-25396; PI&R Observation - Lack of Rigor in CARD Evaluations Needs Improvement (written after exit)

Procedures

28.503.03; Halon Storage Tank Weight and Pressure Test; Revision 6
35.312.001; Cleaning Main Turbine Generator #2 Transformers 2A and 2B Oil Coolers; Revision 2
35.710.025; Reactor Vessel Disassembly; Revision 9
64.120.040; Containment Area High Range Radiation Monitor Calibration; Revision 15
Establishing FME Requirements; Revision 0
FBP 26; Self Assessment Process; Revision 9
MES 12; Performing Temporary Modifications; Revision 14
MGA 12; Fermi 2 General Administration Conduct Manual – Fermi 2 Ombudsman; Revision 2
MLS04; Operating Experience Program; Revision 18
MMA17; Foreign Material Exclusion (FME); Revision 7
MQA 02; Internal Audits and Surveillances; Revision 13
MQA 03; QA Supplier Audits Conduct Manual; Revision 10
MQA-11; Quality Assurance Conduct Manual Condition Assessment Resolution Document; Revision 21
MQA12; Root Cause Analysis; Revision 12
MQA 13; Trending; Revision 5
MQA 15; Apparent Cause Evaluations; Revision 5

MWC10; Work Package Preparation; Revision 7
Nuclear training Work Instruction 4.08; Examination Development, Review, and Approval;
Revision 9
Operations Department Expectation ODE-15; Compensatory Monitoring; Revision 2
RWWI-004; Segregation of Non-Process Waste; Revision 1
SH-GN-537-0001-001; Foreign Material Exclusion Awareness; Revision 0

Safety-Conscious Work Environment (SCWE)

Fermi 2 Safety Conscious Work Environment Evaluation Report; The Kestral Group;
May 9, 2006
Fermi 2 Nuclear Safety Culture Assessment; Utilities Service Alliance; July 2003
Fermi 2 Nuclear Safety Culture Assessment; Utilities Service Alliance; October 4, 2006
Follow-up Safety Conscious Work Environment (SCWE) Evaluation; The Kestral Group;
March 7, 2007

Other Documents

PM Deferral Request Approval 1210651; November 30, 2004
Final Root Cause Analysis Report; Fire Damage in D1 or D2 Switchgear Room Can Cause
Opposite EDGs to Trip (CARD 05-24251); August 18, 2005
Work Request H605040100; Adjust Valve Packing, Leakage Noted During Plant Startup;
July 15, 2005
Work Request S171060100; Inspection and Testing of Main Unit Transformer 2A;
March 28, 2006
NRC Generic Letter 2006-02; Grid Reliability and the Impact on Plant Risk and the Operability
of Offsite Power; February 1, 2006
NRC Information Notice 2006-20; Foreign Material Found in the Emergency Core Cooling
System; October 16, 2006
NRC Information Notice 2007-19; Fire Protection Equipment Recalls and Counterfeit Notices;
May 21, 2007
NRC Regulatory Issue Summary 2006-13; Information on the Changes Made to the Reactor
Oversight Process to More Fully Address Safety Culture; July 31, 2006
OMB-07-0002; 2007 First Quarter Report – Ombudsman Program; April 10, 2007
Nuclear Safety Management Policy Statement; Rev. 1; May 3, 2007
Fermi 2 Daily Update; September 7, 2007
Human Performance Briefing Sheet, CARD 07-25038; Event Date: 09/08/07
Selected Operator Logs from 1/1/2004 to 9/11/2007
Organizational Effectiveness Group Announcement; June 21, 2007
CARD Review Board meeting minutes for 9/5/2007

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agency Wide Documents Access and Management System
BOP	Balance of Plant
CAP	Corrective Action Program
CARD	Condition Assessment Resolution Document
DFP	Diesel Fire Pump
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ECP	Employee Concerns Program
EDG	Emergency Diesel Generator
FIN	Finding
FME	Foreign Material Exclusion
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PI&R	Problem Identification and Resolution
RCE	Root Cause Evaluation
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SCWE	Safety-Conscious Work Environment
SDP	Significance Determination Process