

November 5, 2004

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

SUBJECT: FERMIL POWER PLANT, UNIT 2  
NRC EVALUATIONS OF CHANGES, TESTS, OR EXPERIMENTS AND  
PERMANENT PLANT MODIFICATIONS REPORT 05000341/2004009(DRS)

Dear Mr. O'Connor:

On October 8, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed a combined baseline inspection of Evaluation of Changes, Tests, or Experiments and Permanent Plant Modifications at the Fermi Power Plant. The enclosed report documents the inspection findings, which were discussed on October 8, 2004, with Mr. S. Stasek and other members of your staff at the completion of the inspection.

The inspectors examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

On the basis of the results of the inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's Rules of Practice, a copy of this letter and its enclosure will be 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/*

David E. Hills, Chief  
Materials Engineering Branch  
Division of Reactor Safety

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

Enclosure: Inspection Report 05000341/2004009(DRS)

See Attached Distribution

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cc w/encl: N. Peterson, Manager, Nuclear Licensing  
D. Pettinari, Corporate Legal Department  
Compliance Supervisor  
G. White, Michigan Public Service Commission  
L. Brandon, Michigan Department of Environmental Quality  
Monroe County, Emergency Management Division  
Planning Manager, Emergency Management Division  
MI Department of State Police

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000341/2004009(DRS)

Licensee: Detroit Edison Company

Facility: Fermi Power Plant, Unit 2

Location: 6400 N. Dixie Highway  
Newport, MI 48166

Dates: October 4 through 8, 2004

Inspectors: H. Walker, Engineering Inspector, Lead  
B. Jose, Engineering Inspector  
G. O'Dwyer, Engineering Inspector

Observer: R. Ruiz, Nuclear Safety Professional

Approved by: D. Hills, Chief  
Materials Engineering Branch  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000341/2004009(DRS); 10/04/2004 - 10/08/2004; Fermi 2 Power Plant; Evaluation of Changes, Tests, or Experiments and Permanent Plant Modifications.

The report covers a one-week announced baseline inspection on evaluations of changes, tests or experiments, and permanent plant modifications. The inspection was conducted by three region based inspectors and one observer. No findings of significance were identified.

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. Inspector-Identified and Self-Revealed Findings**

None.

**B. Licensee-Identified Violations**

None.

## REPORT DETAILS

### 1. REACTOR SAFETY

#### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

#### 1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

##### .1 Review of 50.59 Evaluations and Screenings

##### a. Inspection Scope

From October 4 through 8, 2004, the inspectors reviewed six evaluations performed pursuant to 10 CFR 50.59. The evaluations related to permanent plant modifications, setpoint changes, procedure changes, conditions adverse to quality, and changes to the updated final safety analysis report. The inspectors confirmed that the evaluations were thorough and that prior NRC approval was obtained as appropriate. The inspectors also reviewed twenty screenings where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. In regard to the changes reviewed where no 10 CFR 50.59 evaluation was performed, the inspectors verified that the changes did not meet the threshold to require a 10 CFR 50.59 evaluation. These evaluations and screenings were chosen based on the risk significance of samples from the different cornerstones. The list of documents reviewed by the inspectors is included as an attachment to this report.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, to determine acceptability of the completed evaluations and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000. The inspectors also consulted Part 9900 of the NRC Inspection Manual, "10 CFR Guidance for 10 CFR 50.59, Changes, Tests, and Experiments."

##### b. Findings

No findings of significance were identified.

#### 1R17 Permanent Plant Modifications (71111.17B)

##### a. Inspection Scope

From October 4 through 8, 2004, the inspectors reviewed eight permanent plant modifications that had been installed in the plant during the last two years. The modifications were chosen based upon the effect on systems that had high probabilistic risk analysis (PRA) significance in the plant Individual Plant Evaluation (IPE) or high maintenance rule safety significance. The inspectors reviewed the modifications to verify that the completed design changes were in accordance with the specified design requirements and the licensing bases and to confirm that the changes did not affect any

systems' safety function. Design and post-modification testing aspects were verified to ensure the functionality of the modification, its associated system, and any support systems. The inspectors also verified that the modifications performed did not place the plant in an increased risk configuration.

The inspectors also used applicable industry standards, such as the American Society of Mechanical Engineers code, to evaluate acceptability of the modifications. The list of documents reviewed by the inspectors is included as an attachment to this report.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA2 Identification and Resolution of Problems

a. Inspection Scope

From October 4 through 8, 2004, the inspectors reviewed 21 condition reports that were written by licensee personnel to enter the issues in the corrective action program. The inspectors reviewed these findings to verify an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions related to the permanent plant design and evaluations for Changes, Tests, or Experiments issues. In addition, two condition reports, written on issues identified during the inspection, were reviewed to verify adequate problem identification and incorporation of the problems into the corrective action system. The specific corrective action documents that were sampled and reviewed by the team are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting

The inspectors presented the inspection results to Mr. S. Stasek and other members of licensee management, on October 8, 2004. The licensee acknowledged the inspection results presented. Licensee personnel were asked to identify any documents, materials, or information provided during the inspection that were considered proprietary. No proprietary information was identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

W. O'Connor, Vice President, Nuclear Generation  
M. Caragher, Engineering First Team Manager  
D. Cobb, Plant Manager  
W. Colonnello, Director Nuclear Support  
K. Hlavaty, Acting Plant Manager  
R. Libra, Director, Nuclear Engineering  
R. Newkirk, Supervisor Nuclear Licensing  
J. Pendergast, Principal Engineer Licensing  
S. Peterman, Project Manager Nuclear Projects  
N. Peterson, Manager, Nuclear Licensing  
S. Stasek, Director, Nuclear Assessment  
R. Wittschen, Principal Engineer Licensing  
R. Zyduck, Manager Plant Support Engineering

#### Nuclear Regulatory Commission

D. Hills, Chief, Materials Engineering Branch  
S. Campbell, Senior Resident Inspector

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened and Closed

None.

#### Discussed

None.

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents that were reviewed during the inspection. The list may include documents prepared by others for the licensee. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but that selected 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 documents, unless specifically stated in the body of the inspection report.

### Procedures and Instructions

MES06; Preparation and Control of Design Basis Documents; Revision 6

MES11; Technical Service Request; Revision 18

MES14; Changes, Tests and Experiments; Revision 5

MES19; Preparation and Control of Engineering Design Packages; Revision 18

MES20; Implementation of Modifications; Revision 15

MES42; Equivalent Replacement Process; Revision 8

### Design Changes

EDP-32110; Installation of Alternate AC Power Source (AACPS) for Station; Revision A

Blackout and Appendix R Events

EDP-32595; Installation of Emergency Lighting in Support of Appendix R; Revision 0

02-006-UFS; Revision to UFSAR Sections 2.2.3.4 and 9.2.1.2, Figures 9.2-1 and 9.5-1; Revision A; Sheet 2

03-028-UFS; Changes to UFSAR Sections 9.5.1.1.2, 9.5.1.2.1, 9.5.1.2.3.2 and 9A.5; Revision 0

03-050-UFS; Changes to UFSAR Sections 10.4.4.2 and 15.2.2; Revision 0

ECR 30530-1; Facilitate Fabrication and Installation of EECW HX; Revision B

ECR 32268-1; Modification to the EDGs Alternator Inboard and Outboard Main Bearing Cover; Revision 0

EDP-31880; 120V Switchyard Upgrade; Revision 0

EDP-32976; Replace Speed Input to Tach Relay for EDG 11 with Magnetic Pickup; Revision 0

IPTE 02-02; Determination of Leakage of P5000F440 Valve; Revision 0

ITCEDP-32161; Replace RCIC Oil Cooler Pressure Control Valve E51F015; Revision 0

#### 10 CFR 50.59 Safety Evaluations

02-0542; DC-6086 VOL 1 Revision to Incorporate Initial Unfiltered Release Associated with Delay in Secondary Con; Revision 0

02-0591; Revision to 35.242 to Incorporate Necessary Controls of the CCPB During Maintenance; Revision 0

03-0226; Revision to TS Bases Sections 3.2.1 and 3.2.3 Superseded by VSSCRN 03.0226; Revision 0

03-0355; Evaluation of 50.59 SCRNs 03-0355 per CARD 03-18623, This Evaluation Addresses Compensatory Actions by TCN-11056; Revision 0

03-0393; Revision to SOP 23.307 Valve Line-up to Eliminate Intercooler Keep Warm Function by Closing Valves R300F020A (B, C, and D) and R300F026A (B, C, and D); Revision 0

03-0573; Alternate Alternating Current Power Source Addition; Revision 0

#### 10 CFR 50.59 Screenings

02-0462; Revision to Procedure 77.000.53, Chemical Addition to EDGJCS; Revision 0

02-0498; Revision to Procedure 23.206, Reactor Core Isolation Cooling System; Revision 0

02-0613; Revision to HPCI System P&ID. FOS, ISI, Piping Isometric Drawings and CECO; Revision 0

02-0718; Revision to Procedure 23.106, Control Rod Drive Hydraulic System; Revision 0

03-0093; Revision to Procedure 23.708, Fuel Pool Cooling and Clean Up System; Revision 0

03-0216; Revision to Procedure 23.307 to Reflect the New Voltage Regulator Installed on EDGs; Revision 0

03-0406; Revision to Specification 3071-128-EJ, Electrical Engineering Standard Class 1E, 1M and BOP Equipment Fusing Requirements; Revision 0

03-0442; Revised Operating Procedure to Provide Guidance for Using the CST as an Alternate Suction for the Core Spray System; Revision 0

03-0510; RCIC Pump Cooling Water Pressure Control Valve E51F015 Replaced with Self-contained Pressure Regulator; Revision 0

03-0704; Reactor Feedwater and Condensate System; Revision 0

03-0484; Reactor Scram; Revision 0

04-0065; TSR-32598, Correction of EECW/EESW/UHS System Design Documentation; Revision 0

04-0133; Breaker Operation; Revision 0

04-0172; Install IAS to Support Implementation of EDP 32523; Revision 0

04-0224; Loss of Offsite Power/Loss of Offsite and Onsite Power; Revision 0

04-0243; Elect. Loading, Short Circuit Current and Running Voltages for 4.16kV, 480 Volt and 120 Volt System Using ETAP; Revision 0

04-0247; Replace EDG Jacket Coolant Standby Pump; Revision 0

04-0272; DGSW Design Basis Requirements Calculation; Revision 0

04-0290; Revision to Procedure MES16, Temporary Power and Extension Cords; Revision 0

04-0347; Install Jumper Wires in RPS and ECCS Trip Unit Cabinets; Revision 0

#### Equivalent Replacement Evaluations

ERE 31656; Evaluation for Addition of a Splash Guard to RHRSW and EESW Pumps; dated August 6, 2003

ERE 31911; Evaluation for Replacement of Diesel Fire Pump; dated July 9, 2003

ERE 32392; Replacement of 130 Vdc Charger Output Breaker; dated July 9, 2003

ERE 32471; Replacement Bolts and Nuts for RHRSW Pumps; dated July 9, 2003

ERE 32931; Replacement of the EDGs No. 11,12,13, and 14 Standby Lube Oil Heater Contactors; dated May 6, 2004

#### Condition Assessment Resolution Documents (Cards) Initiated as a Result of the Inspection

04-24631; Formula Error in Specification 3071-128-ET Identified in EDP33195; dated October 7, 2004

04-24659; NRC Design Inspection - Review of Equivalent Replacement Process; dated October 7, 2004

Condition Assessment Resolution Documents (CARDS) Initiated Prior to the Inspection That Were Related to Design Modifications

02-20000; Plant Modifications Being Performed in Warehouse A Without Proper Reviews; dated October 9, 2002

03-10273; Drawings Do Not Reflect Changes Incorporated; dated March 21, 2003

03-12314; Safety Concern with EDP-30800 and its ECRs; dated January 3, 2003

03-18606; Drawings Do Not Reflect Changes Incorporated; dated March 21, 2003

03-21459; EDG 12 Start Failure During Slow Start Surveillance; dated September 4, 2003

03-22845; Configuration Control/Plant Modification Error; dated October 28, 2003

03-23313; Investigate Temporary Black-Start Diesel Electric Line Power Supplies; dated December 12, 2003

04-11106; Improving Scope Control for Modification Packages; dated February 25, 2004

04-11107; Improving Identification of Management Expectations of Modification Packages; dated February 25, 2004

04-20039; Untimely Completion of Implementation of the EECW Plant Modification (EDP - 29805) and Updating BCDDs (Introduces an error likely situation that does not meet established expectations); dated January 07, 2004

04-20727; Work Closure and Modification Process Implementation Problems; dated February 23, 2004

04-22297; EDP - 28140 Failure to Address Configuration Control Items; dated May 24, 2004

04-23873; Modification Implementation Program Deficiency; dated August 26, 2004

04-11106; Improving Scope Control for Modification Packages; dated February 25, 2004

04-11107; Improving Identification of Management Expectations of Modification Packages; dated February 25, 2004

04- 20039; Untimely Completion of Implementation of the EECW Plant Modification (EDP - 29805) and Updating BCDDs (Introduces an error likely situation that does not meet established expectations); dated January 7, 2004

Condition Assessment Resolution Documents (CARDS) Initiated Prior to the Inspection That Were Related to 50.59 Evaluations

03-12086; Potential Inadequate 50.59 for EDP-29805 (EECW Heat Exchanger Replacement; dated May 29, 2003

03-14958; Incorrect Statement in 50.59 Screen for Temporary Modification 02-0015; dated May 3, 2003

03-18416; Perform 50.59 Evaluation for Lifted Leads on N30K910C; dated July 29, 2003

04-20005; Conduct a 50.59 Evaluation on WR Signed on Longer than 45 Days; dated January 05, 2004

04-20499; MLS14 Does Not Permit Crediting Old SEs or Preliminary Evaluations; dated February 10, 2004

04-20611; 50.59 Screens Did Not Adequately Discuss Design Function; dated February 17, 2004

04-20625; Screen 02-0407 Failed to Identify the Need for a 50.59 Evaluation; dated February 17, 2004

04-21193; Failure to Identify Need for a 50.59 Screen; dated March 22, 2004

## LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agency-wide Document Access and Management System
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
DC	Direct Current
DRS	Division of Reactor Safety
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedures
EQ	Environmentally Qualified
IMC	Inspection Manual Chapter
EECW	Emergency Equipment Cooling Water
EESW	Emergency Equipment Service Water
EOP	Emergency Operating Procedure
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission