September 21, 2000

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

SUBJECT: FERMI - NRC INSPECTION REPORT 50-341/2000009(DRS)

Dear Mr. O'Connor:

On August 25, 2000, the NRC completed the baseline annual inspection of Evaluations of Changes, Tests, or Experiments (10 CFR 50.59) and the baseline biennial Permanent Plant Modifications inspection at your Fermi 2 reactor facility. The enclosed report presents the results of that inspection which were discussed on August 25, 2000, with Mr. P. Fessler and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to changes to facility structures, systems, and components, normal and emergency procedures, and the Updated Safety Analysis Report in accordance with the requirements of 10 CFR 50.59, and changes to the facility via permanent plant modifications to verify compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of design documents, procedures, and representative records, and interviews with personnel.

Based on the results of this inspection, two issues of very low safety significance were identified The two issues were considered violations of NRC regulations which involved inadequate post-modification testing and a failure to follow procedure requirements while performing a 10 CFR 50.59 evaluation. However, the violations were not cited due to their very low safety significance and because they have been entered into your corrective action program. If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with a copy to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and the NRC Resident Inspector at the Fermi Facility.

In accordance with 10 CFR 2.790 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/NRC/ADAMS/index.html (the Public Electronic Reading Room.

Sincerely,

/RA/

John A. Grobe, Director
Division of Reactor Safety

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

Enclosure: Inspection Report 50-341/2000009(DRS)

cc w/encl: N. Peterson, Director, Nuclear Licensing
P. Marquardt, Corporate Legal Department
Compliance Supervisor
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Monroe County, Emergency Management Division
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:	NPF-43
Report No:	50-341/2000009(DRS)
Licensee:	Detroit Edison Company
Facility:	Enrico Fermi, Unit 2
Location:	6400 N. Dixie Hwy. Newport, MI 48166
Dates:	August 21 through 25, 2000
Inspectors:	Z. Falevits, Reactor Engineer, Team Leader K. Green-Bates, Reactor Engineer D. Schrum, Reactor Engineer S. Sheldon, Reactor Engineer R. Winter, Reactor Engineer
Approved by:	Ronald N. Gardner, Chief, Electrical Engineering Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 50-341/2000009(DRS); on 8/21 - 25, 2000; Detroit Edison Company, Enrico Fermi, Unit 2; Evaluations of Changes, Tests or Experiments, Permanent Plant modifications; two findings were identified - failure to follow procedure and failure to perform a post-modification test.

The inspection was conducted by five region-based inspectors. This inspection identified one no color finding and one green finding, both of which were Non-Cited Violations. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process.

Cornerstone: Mitigating Systems

- GREEN: The licensee failed to ensure that residual heat removal (RHR) pump "C" motor alignment checks, specified by engineering in the Engineering Design Package (EDP) following motor replacement, were accomplished. These motor alignment checks were required to demonstrate correct shaft alignment following shaft resurfacing. This is considered a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XI. This violation was identified by the NRC and promptly entered by the licensee into the corrective action program as CARDs 00-18091 and 00-18092.

The deficiency had very low safety significance (green). There was an extremely low probability of a simultaneous occurrence of a Loss of Coolant Accident and failure of RHR pump"C". An operational vibration test was performed and provided reasonable assurance that RHR pump"C" would function if called upon (Section 1R17.1).

- NO COLOR: The licensee failed to follow Fermi procedure requirements for preparing a 10 CFR 50.59 evaluation that resulted from a modification that replaced the original emergency equipment cooling water system (EECW) heat exchangers with new increased flowrate stainless steel heat exchangers. The evaluation failed to address all flowrate, pressure, and material changes made to the UFSAR and EECW system did not document consideration of impacts of these changes on the system as a whole, or the modification's impact on fulfilling each of the EECW's three safety functions. This is considered a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V. This violation was identified by the NRC and promptly entered by the licensee into the corrective action program as CARD 00-10249.

The licensee had performed other evaluations in other documents and calculations that showed that an unreviewed safety question did not exist. Since this finding did not affect a cornerstone of safety, it was not assessed with the Significance Determination Process, and was not assigned a color (Section 1R02.1).

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems and Barrier Integrity

1R02 Evaluations of Changes, Tests or Experiments (IP 71111, Attachment 2)

.1 Review of 10 CFR 50.59 Evaluations and Screenings

a. Inspection Scope

The team reviewed 16 evaluations performed pursuant to 10 CFR 50.59. The evaluations related to permanent plant modifications, setpoint changes, procedure changes, and changes to the Updated Final Safety Analysis Report. The team also reviewed 25 Preliminary Evaluations (PE) where the licensee 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 team verified that the changes were minor editorial clarifications that did not meet the threshold of a "change to the facility as described in the safety analysis report."

b. Findings

10 CFR 50.59 Evaluation for the Emergency Equipment Cooling Water System Heat Exchanger Replacement Modification

At Fermi, the emergency equipment cooling water system (EECW) has a safety related function to transfer heat from the emergency core cooling system (ECCS) components to the safety related emergency equipment service water system (EESW) where heat is transferred to the ultimate heat sink (RHR reservoir). Additionally, the system provides a safety-related make-up source for the EECW make-up tank, and maintains the RHR reservoir temperature above the TS required temperature limit of 41°F when needed.

The licensee identified that EECW flow must be maintained between 1500 and 1660 gallons per minute (gpm) to meet system design requirements, but the heat exchanger and associated valves were originally designed for a 1450 gpm flowrate. Analysis found that the elevated flowrate changed the expected life of the EECW heat exchangers from 40 years to 2 years, and in April 2000 modification EDP-29805 was initiated to replace the original carbon steel (CS) heat exchangers with new increased flowrate stainless steel (SS) heat exchangers.

Because this was a change to the facility as specifically described in the UFSAR, a 10 CFR 50.59 safety evaluation (SE) was required to evaluate whether the increased flowrate, pressure and material changes would have any affects on the function of the system, components or structures. During review of plant modification safety evaluation SE 99-0009, the team identified that the SE did not evaluate all the changes as required by Fermi Engineering Procedure MES07, "Preliminary Evaluations and 10 CFR 50.59 Safety Evaluations."

The team determined that procedure MES07 appropriately required that all changes to the UFSAR be addressed and gave material change and piping system examples which were directly applicable to the EECW safety evaluation. The procedure specified that each of the seven SE questions required an accompanying explanation providing sufficient justification detail and documentation that an independent reviewer could draw the same conclusion.

Procedure MES07 also required that the SE consider impacts of the change that go beyond the initial reason for its implementation such as whether: (1) the changes would cause systems to be open outside their original design or test limits such as by imposing additional vibration, water hammer or fatigue loads, or by operating piping systems at a higher pressure, etc., (2) the changes could result in degradation of a safety system, or lead to a failure mode of a different type (e.g., malfunctions which could be created should be identified such as when a different material is used and the new material could be susceptible to stress corrosion cracking (SS) when previously it was not susceptible to this failure mechanism (CS)), and (3) the changes could affect any system interface in a way that could lead to an accident.

The team determined that SE 99-0009 did not adhere to procedural requirements because it did not evaluate all flowrate, pressure, and material changes made to the UFSAR and EECW system, it did not document consideration of impacts of these changes on the system as a whole, or the modifications impact on fulfilling each of EECW's three safety functions.

Failure to follow procedure requirements for performing a 10 CFR 50.59 evaluation is a Violation of 10 CFR 50, Appendix B, Criterion V. This violation is considered a Non-Cited Violation (50-341/2000009-01(DRS)), consistent with the General Statement of Policy and Procedure for NRC Enforcement Actions (NUREG 1600) (Enforcement Policy), Section VI.A.1. This violation was identified by the NRC and promptly entered by the licensee into the corrective action program as CARD 00-10249.

Based on additional review of calculations and documentation provided by the licensee in response to team questions, the team determined that the changes made to the plant system and UFSAR did not pose a safety concern. The team did not consider this NCV a safety significant issue. This issue does not affect a cornerstone, and therefore this finding has no color.

1R17 Permanent Plant Modifications (IP 71111, Attachment 17)

.1 Review of Recent Permanent Plant Modifications

a. Inspection Scope

The team reviewed 17 permanent plant modifications that were installed in the last several years. The modifications were chosen based upon their affecting systems that had high risk significance in the licensee's Individual Plant Evaluation or high Maintenance Rule safety significance. Most of the modifications involved changes to mitigating systems. The team 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 team also verified that the modifications performed did not place the plant in an increased risk configuration.

b. Findings

Failure to Perform Required Motor Alignment Checks following RHR Pump “C” Motor Replacement Modification

(1) Modification - Replacement of Existing RHR Pump “C” Motor with a Refurbished Motor Removed from the RHR Pump “B”

On August 12, 1997, the licensee noted that the RHR pump “C” motor upper bearing oil had extremely high wear. In addition, the pump “C” motor had experienced high structural vibration. On September 7, 1999, the licensee initiated EDP 30397 to replace the existing RHR pump “C” motor with a refurbished motor removed from the RHR Pump “B” motor. During motor refurbishment the motor shaft was found to be slightly bent and required machining to straighten the shaft extension. After machining the motor shaft, the motor shaft diameter decreased and consequently required a customized motor coupling.

As part of the modification review process, the design engineer requested that a complete motor alignment check be performed prior to starting any field work. The mechanical engineer specified this test in the EDP’s Design Verification Comment Control Form. This was subsequently added to the Design Change Acceptance Test (DCAT) as prerequisite item 1.2.1.

Work Control Conduct Manual MWC02, Revision 17, required that the TSR/EDP owner resolve any discrepancies between what was specified and what was accomplished for testing procedures. Furthermore, the EDP owner was required to review and sign off on the work package before the field work could commence. The team determined that the work planner failed to incorporate this required test into the work request and consequently the test was not performed. The team also noted that Part 10, Step 5 of Work Request 000Z991410 required that the modification owner review the results of the DCAT testing and verify the results to be acceptable for implementation of the modification. This step was signed off by the Mod Owner as accomplished even though the required motor alignment checks were not performed. In addition, the modification technical and cross discipline reviewers failed to identify this omission

The team used the significance determination process (SDP) to evaluate the significance of the failure to perform the alignment checks of RHR pump “C” motor, and concluded that the finding was of very low safety significance (green). This finding had the potential to impact mitigating systems (RHR pump “C”). However, there was an extremely low probability of a simultaneous occurrence of a Loss of Coolant Accident and failure of RHR pump”C”. Also, while the licensee had not conducted the motor alignment checks, other post-modification testing, such as vibration testing had been conducted. This provided reasonable assurance that the RHR "C" pump would function if called upon.

Failure to perform the required alignment checks, following replacement of RHR pump "C" motor, as part of post-modification testing is a Violation of 10 CFR 50, Appendix B, Criterion XI. This violation is considered a Non-Cited Violation (50-341/2000009-02(DRS)), consistent with the General Statement of Policy and Procedure for NRC Enforcement Actions (NUREG 1600) (Enforcement Policy), Section VI.A.1. This violation was identified by the NRC and promptly entered by the licensee into the corrective action program as CARDs 00-18091 and 00-18092.

(2) During review of selected modifications the team noted the following:

(a) Technical Service Request (TSR)-30092, dated September 15, 1998 replaced Emergency Diesel Generator (EDG) underfrequency relay model GE P/N 12SFF21A1A with model 12SFF16A1A. The team noted that the blocks in part 4 and part 5 of the 10 CFR 50.59 Preliminary Evaluation were incorrectly marked. The licensee determined this parts equivalency change to be an exempt change not requiring a full 10 CFR 50.59 evaluation, even though the relay model number was changed in UFSAR fig 8.3-4. The team noted that although the model number was changed, the replacement relay was identical to the old relay. No safety concern was noted.

The team also noted that drawing 6SD721-2500-08, Revision K, was not updated to reflect the new relay model number nor was the TSR posted against the drawing to reflect the model number change to the drawing. Subsequently, during a followup review, the licensee identified 36 additional similar instances. The licensee informed the team that an as-built document will be issued to post the 36 Technical Change Requests (TCRs) against the affected drawings.

(b) The team's review of selected modifications noted several instances where the attention to detail within modification calculations appeared to be lacking. Specifically, the calculations' compliance with a specific ASME Code year and edition did not appear to be documented or in some instances were not correct. Several examples were found within calculations where information on different pages did not appear to agree, and not all listed calculation revisions against a parent calculation had been taken into account when a new modification analysis was performed which resulted in non-conservative values being generated for the new modifications.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems (IP 71152)

.1 Corrective Action Process Review

a. Inspection Scope

In conjunction with the baseline inspection, the team reviewed a relevant sample of licensee corrective action documents to verify that when issues within the plant modification and 10 CFR 50.59 processes were identified, they were appropriately characterized and entered into the licensee's problem identification and resolution program. During this review, the team also assessed whether the corrective actions were appropriate to prevent recurrence. The team also verified the implementation of a sample of corrective actions.

b. Findings

In general, problems were identified and entered into corrective action program as CARDs. The team identified no risk significant problems, however, the team noted examples of deficient performance in some stages of the corrective action process. Two examples are listed below:

- CARD 00-12031 "Identification of System Design Weakness," identified that the initial design configuration for modification EDP 27412 would have resulted in a common mode failure which would generate an unreviewed safety question. The CARD had been closed without documentation of any actions taken to assure that this problem would not occur in other future modifications or engineering groups. An evaluation of how the situation had occurred was not performed. The significance level of the CARD did not appear appropriate as it had been categorized only as a trending CARD. After discussion with the licensee, the team noted that actions had been taken to prevent recurrence, however, they were taken outside of the corrective action program. The licensee wrote an addendum to the CARD on August 23, 2000 (Letter 0.801.21) to address this issue.

- CARD 99-16703 "Modification Procedure Changes," investigation identified three issues but only two of the issues had actions taken before the CARD was closed out. The issue concerning a problem with limiting/unreliable search engines for modification procedure revisions was not addressed. The team noted that the CARD appeared narrowly focused for Operations Department Procedures only and that this problem may not have been adequately addressed for other departments, as during review of plant modifications the team found other examples where procedures or drawings requiring revision had not been identified. For example, the team noted that for modification EDP-28862 the required revisions to maintenance procedures had not been identified during the modification process. The licensee promptly issued CARD 00-10260 to address this issue.

4OA6 Management Meetings

Exit Meeting Summary

The team presented the inspection results to Mr. P. Fessler, Assistant Vice President, and other members of licensee management at the exit meeting held on August 25, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Fessler, Assistant Vice President, Nuclear Operations
R. Libra, Technical Manager
T. Dong, Director, System Engineering
J. Moyers, Director, Nuclear Quality Assurance
S. Stasek, Manager, Nuclear Assessment
T. Haberland, Assistant Superintendent, Maintenance
W. Miller, Director, Engineering Projects
R. Johnson, Nuclear Licensing Supervisor
P. Smith, Supervisor ISEG, Licensing
K. Howard, Plant Support, Engineering
Q. Duong, Plant Support Engineering, Electrical Supervisor
G. Scarfo, Plant Support Engineering, Supervisor Design
K. Amin, Plant Support Engineering, I & C
E. Wilds, Plant Support Engineering, Mechanical & Civil
R. Gummaraju, Lead Auditor, Nuclear Quality Assurance

NRC

R. Gardner, Chief, Electrical Engineering Branch, Division of Reactor Safety
J. Larizza, Resident Inspector

INSPECTION PROCEDURES (IPs) USED

IP 71111.02	Evaluations of Changes, Tests, or Experiments
IP 71111.17	Permanent Plant Modifications
IP 71152	Identification and Resolution of Problems

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-341/2000009-01	NCV	Failure to follow procedure requirements for performing a 10 CFR 50.59 evaluation
50-341/2000009-02	NCV	Failure to perform required RHR pump “C” motor alignment checks as part of post-modification testing

Closed

50-341/2000009-01	NCV	Failure to follow procedure requirements for performing a 10 CFR 50.59 evaluation
50-341/2000009-02	NCV	Failure to perform required RHR pump “C” motor alignment checks as part of post-modification testing

Discussed

None

LIST OF ACRONYMS USED

ASME	American Society of Mechanical Engineers
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
CS	Carbon Steel
CSS	Core Spray System
DRS	Division of Reactor Safety
DCAT	Design Change Acceptance Test
ECCS	Emergency Core Cooling System
EDP	Engineering Design Package
EDG	Emergency Diesel Generator
EECW	Emergency Equipment Cooling Water
EESW	Emergency Equipment Service Water
GPM	Gallons Per Minute
LCR	Licensee Change Request
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PE	Preliminary Evaluation
PERR	Public Electronic Reading Room
PM	Preventative Maintenance
PMT	Post-Modification Testing
RHR	Residual Heat Removal
SE	Safety Evaluation
SS	Stainless Steel
STR	Safety Tagging Record
TCR	Technical Change Requests
TS	Technical Specification
TSR	Technical Service Request
UFSAR	Updated Final Safety Analysis Report

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 on this list does not imply that NRC inspectors reviewed the documents in their entirety, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort.

Calculations

DC 0885	ECCS Suction Line Air Ingestion, Revision C
DC 0978	DCD Volume II: Pipe Stress Analysis, Revision A As Related to EDP-11194
DC 3137	Piping Stress Report, Revision B As Related to EDP-29024
DC 3053	Postulated Break Locations for the HPCI Steam Line Outside Containment
DC 4522	Reactor Dome Pressure Instrumentation Surv Procedure Validation, Revision F
DC 4976	NUMARC Station Blackout Loss of Ventilation Effects on Temperature, September 17, 1990
DC 5342	Power Update Rating Calculation, Revision B As Related to EDP-12079
DC 5489	Ventilation Air Quantity for Diesel Generator Room 1, March 30, 2000
DC 5578	Reactor Building Heat Loads During Normal and Accident Conditions, January 16, 1998
DC-5896	Torque and Thrust Calculations for Critical BOP Gate & Globe Motor Operated Valves, January 7, 2000
DC 6003	Impact of ECCS Strainers on ECCS Piping Analyses, Revision 0
EDP-12079	Power Uprate Increase in Piping and Equipment Loads, Revision 0
EDP-11194	Elimination of Core Spray Snubber Support E21-3148-G33, Revision A
EDP-29024	ECCS Strainer Replacement, Revision 0

CARDS (Corrective Action Report Documents)

98-16019	Incorrect Input to CECO Database per TSR 29725, Revision A
98-16263	UFSAR Discrepancy Regarding Scram Discharge Volume Leak Testing (CII)
98-16694	Inadequate Design Control & Approval of Vendor Prepared EDPs
98-18459	Tech Spec “Loss-Of-Power” Relay Setpoint Calculation Error
98-22427	Tolerance of Replacement Time Delay Relays Exceeds Tolerance of Tech Spec Allowable Values for Load Shed - Degraded Voltage
99-10818	Insufficient Detail and Analysis Performed During the Preparation, Review and Approval of PEs and SEs
99-10959	Senior Management Request Review All Open/Closed TCNs Back to RFO5 to Verify Changes Did Not Affect License Basis
99-12852	RHR Pump Motor
99-13623	Aux Contacts (O/B and C/B) Did Not Operate Properly When the Contactors Are Energized
99-14420	Tolerances Not Converted to Proper Engineering Units
98-14582	Confirmation of the Statement in UFSAR 9.5.1.3.2.1 Regarding the Effects on EDG Room Temperature During a CO2 Discharge Could Not Be Made, September 24, 1998
99-17395	Discrepancy in Fuse Size
99-17597	Error in Setpoint Validation Design Calculation #Dc-4529 Vol. I, Revision E

99-17962	HPCI Operating Time for Mitigation of the Small Break LOCA; Possible Discrepancy between EQ and UFSAR, December 6, 1999
00-10016	Nitrogen Supply Lines for Drywell to Suppression Pool
00-12031	Identification of System Design Weakness During Initial Preparation of Safety Evaluation for Feedwater/Recirc DCS
00-12799	Bus 72EB & 72ED Load Shed Drawing Update
98-17815	Jet Pump Riser Relevant Indication, September 19, 1998
99-15896	Inadequate Design and Install Instructions (B3100), Revision 0
99-15898	Inadequate Design Review (B3100), Revision 0
98-16082	Control Room Prints Not Adequately Maintained, Revision 0
98-16263	UFSAR Discrepancy Regarding Scram Discharge Volume Leak Testing, Revisions 1 - 5, June 28, 2000
99-16703	Human Factors and Config Control in Station Blackout Procedure, Revision 0
99-18870	Inadequate Design of Supplemental Cooling System for Maintenance and Operation, Revision 0
00-12031	Reactor Recirculation System and Design Weakness During SE, Revision 0
00-10133	Drawing Does Not Show Correct Max Pressure Across RCIC Pump, Revision 0

CARDS (written as a result of this inspection)

00-10249	SE 99-0009 Does Not Conform to Procedure MLS-07, August 24, 2000
00-10251	Code Edition Referenced in Piping Stress Evaluation Incorrect, August 24, 2000
00-10252	Typographical Error in Design Change Acceptance Calculation for EDP-11194, Elimination of Class 1 Snubber, August 24, 2000
00-10253	Consideration of the Cumulative Effect of Posted Changes Against Design Calculation DC 3137, August 24, 2000
00-13683	Blocks Incorrectly Marked in Preliminary Evaluation for TSR-3009, August 23, 2000
00-17721	LOCA Analysis Screening, August 25, 2000
00-18091	EDP Requirements Not Included in Work Package
00-18092	EDP Owner Did Not Verify EDP Requirements are Contained in Work Package
98-16263	Addenda to, UFSAR Discrepancy Regarding Scram Discharge Volume Leak Testing, August 24, 2000
00-12031	Addenda to, "Identification of System Design Weakness (Letter 0.801.21)," August 23, 2000

Drawings

6SD721-2500-08	Revision K, One Line Diagram 4160V DG Buses #11EA, 12EB, 13EC & 14ED

Modifications

EDP 26589	Control Valve Logic of the Station Air Supply to the Non-Interruptible Control Air System (NIAS) Isolation Valve P5000F402, June 5, 2000
EDP 26959	Replacement of Class 1E (Division II) Power Battery, Revision 0, August 17, 1998
EDP 28272	Addition of a New Sampling Configuration to the EDG Fuel Oil Storage Tank Drain Lines to Facilitate Fuel Oil Sampling Capability, December 16, 1997

EDP 28998	Addition of RHR Min Flow Alarms and Change Setpoint for Time Delay Relays to Open Min Flow Valves, January 26, 1998
EDP 29636	Change High Voltage Taps on Div II Transformers SS #65 & SS #69, Revision 0, June 3, 1998
EDP 29824	RHR “B” Motor Replacement, Revision 0
EDP 30397	Replacement of Existing RHR Pump “C” Motor with a Refurbished Motor Removed from the RHR Pump “B” (10 year replacement), Revision 0
TSR 28519	RPS Alternate Feed EPA Breakers Overvoltage Time Delay, December 23, 1997
TSR 30092	Equiv Part Identification for Frequency Relays Used in EDGs, Revision 0
TSR 30189	UPS Rectifier/Charger (VSAI) High Voltage Setpoint Change, Revision 0
TSR 30955	Formal Documentation of Evaluation in Support of 11/08/99 Notification of Event Retraction, January 10, 2000
TSR 31005	Revision Loss of Power Relay Setpoints, March 28, 2000
EDP 29024A	ECCS Suction Strainer Replacement, February 16, 1999
EDP 29213	Replacement of Div 1&2 SRV Solenoid Valves (B2104), September 8, 1999. (PMT Revision Only)
EDP 0978	DCD Volume Pipe Stress Analysis (B3100), October 22, 1998
EDP 28988	EECW Check Valve Replacement [Procedure], Revision 1
EDP DC 0885	ECCS Suction Line Air Ingestion (E4100), February 5, 1999

10 CFR 50.59 Evaluations

SE-97-0130	Control Logic Change of the Station Air Supply to the Non-Interruptible Control Air System (NIAS) Isolation Valve - P5000F402, December 23, 1997
SE 97-0134	Addition of a New Sampling Configuration to the EDG Fuel Oil Storage Tank Drain Lines to Facilitate Fuel Oil Sampling Capability, December 16, 1997
SE-98-0007	Replacement of Class 1E Divisional Power Battery, August 25, 1998
SE-98-0016	Replacement of RHR & CS System Torus Suction Strainer, June 23, 1998
SE 98-0037	Rupture Disc Over pressure Protection is Added to Two Containment Penetrations to Prevent Thermal Over Pressure as Described in GL 96-06, September 8, 1998
SE-98-0043	Change High Voltage Taps on Div II Transformer SS #65 & SS #69, June 8, 1998
SE-98-0073	Abandoned RHR Spray Piping, January 12, 1999
SE-98-0113	SRV Discrepancies with UFSAR, January 18, 2000
SE-98-0136	Discrepancies Between UFSAR and Design Basis for RHR System, Revision 1
SE 98-0155	This Calculation Revision Eliminates Consideration of Intermediate Pipe Breaks for the HPCI Steam Line Outside Containment, January 19, 1999
SE-99-0009	Emergency Equipment Service Water Heat Exchanger Replacement, April 4, 2000
SE-99-0021	Change Max Allowable Stroke Time of Torus Cooling Return Valve, June 22, 1999
SE-99-0029	RCIC Calculation Revision, July 27, 1999
SE-99-0056	Digital Upgrade of Reactor Recirc Control System, April 7, 2000
SE-00-0010	Revise Loss of Power Relay Setpoint, March 28, 2000
SE 00-0015	Revise the Battery Room Temperature in UFSAR Section 9.4.2.1 to Reflect the As-Built Condition of Approximately 75 Degrees Fahrenheit, May 23, 2000

10 CFR 50.59 Preliminary Evaluations

DC - 4522	Reactor Dome Pressure Instrumentation Surveillance Procedure Validation, March 23, 2000
DC - 5896	Revision to include Evaluation G3352F034 into Design Calculation DC-5896 - Torque and Thrust Calculations for Critical BOP Gate & Globe Motor Operated Valves, January 10, 2000
DCR 00-0577	Procedure # 24.302.14, Revision 3, Logic System Functional Testing of Division 2 NAIS Valve, June 20, 2000
DCR 00-0840	Procedure # 42.302.02, Revision 33, Logic System Functional Test of Division 1 4160 Volt Emergency Bus 64B and 11EA Undervoltage Circuits , May 31, 2000
DCR 00-1310	Procedure Revision Corrected Tech Spec Surv. Time, July 7, 2000
EDP 28998	Add RHR Min Flow Bypass Initiated Alarms, Change Time Delay Relays, and Increase Set point to Open Min Flow Bypass Valves on Low Flow Condition, January 26, 1998
EDP 30397	Replacement of Existing RHR Pump “C” Motor with a Refurbished Motor Removed from the RHR Pump “B” (10 year replacement)
LCR 98-113-UFS	RHR UFSAR Changes, February 16, 2000
LCR-98-146-UFS	UFSAR Validation Project Discrepancy, January 6, 1999
LCR 99-032-UFS	EDP 29805 Replacement of EECW Heat Exchanger UFSAR Changes, February 23, 2000
LCR 99-052-UFS	Reactor Core Isolation Cooling UFSAR Changes, May 25, 2000
LCR 99-096-UFS	UFSAR Change of IST/ISI Code References, July 21, 2000
LCR 99-138-UFS	SRV UFSAR Changes, January 18, 2000
LCR 00-006-UFS	UFSAR Actions to be Taken By Operators in Response to Low Water Lake Levels, February 7, 2000
SOE 99-02	Division 1 Service Water Bypass Leakage and Shutoff Head Test. Temporary Pressure Instruments Will Be Used During the Test to Obtain Data, March 5, 1999
SOE 00-03	Design Verification Testing for the Digital Replacement of the Reactor Recirculation Speed Control System During the Reactor Pressure Vessel System Leakage Test, April 6, 2000
SOE 00-04	Division 2 EESW/EECW Cross Tie Test, May 1, 2000
TSR - 30562	Control Rod Drive Hydraulic System, June 16, 1999
TSR-29896	Change Single Loop Core Flow Summer B21K607 Calibration Formula, December 21, 1999
TSR-30092	Equiv Part Identification for Frequency Relays Used in EDGs
TSR-30189	UPS Rectifier/Charger (VSAI) High Voltage Setpoint Change
1D61	Procedure Revision Provided Reference Technical Specification Surveillance Number and Procedure to Perform Surveillance, July 17, 2000
24.202.01	Added Provision to Use Two Stopwatches to Measure the System Response Time in Section 5.2, July 19, 2000
98-138-UFS	Steam Tunnel Transient Due to MS Rupture, February 4, 1999
98-146-UFS	RHR Head Spray, Rx Water Level Ref and Power Update, January 20, 1999

Procedures

MES07	Fermi 2 Engineering Procedure - Preliminary Evaluations and 10 CFR 50.59 Safety Evaluations, January 30, 2000
MES15	Fermi 2 Engineering Procedure - Design Calculations, July 29, 1999
MES21	Fermi 2 Engineering Procedure - Incorporation of Changes into Design Documentation, June 28, 2000
MES28	Primary Leakage Rate Testing Program, Revision 8

Miscellaneous

Document No. 22A3019, BWR Equipment Environmental Requirements, January 31, 1973
Evaluation of the Impacts of Loss of Room Cooling on Systems Treated in the Fermi 2 Level 1 PRA, March 1992
Fermi 2 Chemistry Report No. 307-00-10, 4/16/00, Oil Sample Data Sheet General Electric Fermi 2 Individual Plant Examination (Internal Events), August 1992
Nuclear Quality Assurance Audit 99-0101, January 04 through January 15, 1999
Nuclear Quality Assurance Surveillance 98-0103, January 26 through January 30, 1998
NSAC 185, HVAC Systems and Nuclear Plant Safety, May 1992
Plant Support Engineering Quarterly Report 1st and 2nd Quarters 2000
Quality Control Inspection Report number 99 IR 1525
Quality Control Inspection Report number 99 IR 1526
Quality Control Inspection Report number 99 IR 1545
Specification 3071-504 Detroit Edison Design Specification for High Pressure Coolant Injection System, June 3, 1987
Vendor Manual #VMRI-45.1, Revision A, Byron Jackson Pumps
EDP 29805 Modification Implementation Restraints Checklist for Replacement of EECW Heat Exchangers, Revision 1
EDP 28383 Seismic Qualification Design Verification, Revision 0
Fermi Letter No. NRC-00-0013, 10 CFR50.46 LOCA Analysis 1998 Annual Report for Fermi, March 1, 1999
Fermi Letter No. NRC-00-0014, 10 CFR50.46 LOCA Analysis 1999 Annual Report for Fermi, March 22, 2000

<u>Initial Document Request</u>

I. ***<u>Information Needed for in Office Preparation Week</u>***

The following information is needed by Thursday, August 10, 2000, or sooner, to facilitate the selection of items to be reviewed during the onsite inspection week (August 21-25, 2000). The team will select specific items from the information requested below and submit the selected items to your staff during the week before the onsite inspection.

We request that the specific items selected from the lists be available and ready for review on the first day of inspection (August 21, 2000).

a. Permanent Plant Modifications

(1) List of permanent plant modifications to risk significant SSCs involving: (a) permanent plant changes; (b) design changes; (c) set point changes; (d) procedure changes; (e) equivalency evaluations; (f) suitability analyses; (g) calculations; (h) commercial grade dedications. *

(2) List of CARDs (open and closed) issued to address plant permanent modification issues/concerns. *

(3) Copy of modification procedure(s) and post modification testing procedure.

b. Changes, Tests, or Experiments

(1) List of all 10 CFR 50.59 completed evaluations involving: (a) changes to facility (modifications); (b) procedure revisions; (c) tests or non-routine operating configurations; (d) changes to the USFAR; (e) calculation. *

(2) List of all 10 CFR 50.59 screenings that have been screened out as not requiring a full evaluation involving: (a) changes to facility (modifications); (b) procedure revisions; (c) tests or non-routine operating configurations; (d) changes to the USFAR; (e) calculations. *

(3) List of condition reports generated because of problems associated with 10 CFR 50.59 evaluations. *

* Provide information requested going back two years

(4) Copies of procedures that specify how 10 CFR 50.59 evaluations and screenings are performed.

(5) Copies of procedures that delineate how 10 CFR 50.59 FSAR updates are prepared by engineers or staff and how the licensee submits 10 CFR 50.59 FSAR updates.

(6) List of special tests or experiments and non-routine operating configurations in the last two years (if any).

C. General Information

(1) List of procedure changes. *

(2) List of calculation revisions. *

(3) List of setpoint changes. *

(4) List of equivalency evaluations. *

(5) List of suitability analyses. *

(6) List of commercial grade dedications. *

(7) List of Temporary Modifications. *

(8) Latest Engineering Organization Chart. *

* Provide information requested going back two years

II. ***Information Request to be Available on First Day of Inspection (August 21, 2000)***

a. We request that the following information be *available* to the team once they arrive onsite. Copies of these documents do not need to be solely available to the team as long as the inspectors have ready access to them.

Updated Final Safety Analysis Report

Technical Specifications (TSS)

Latest IPE/PRA Report

Vendor Manuals

Equipment Qualification Binders

The Latest 10 CFR 50.59 FSAR Update Submittal

b. Please provide copies of the following documents:

Copies of inspector selected sample of permanent plant modifications and design changes, set point changes, procedure changes, equivalency evaluations, suitability analyses, calculations, and commercial grade dedications (list of selected items will be provided to licensee by Tuesday August 15, 2000).

Provide copies of Q. A. audits, self-assessments and outside organization audits conducted in the areas of permanent plant modifications and 10 CFR 50.59 evaluations and screenings. Also include corrective action documentation/status of identified findings. (last 2 years).

Copies of any self-assessments and associated CRs generated in preparation for the inspection

Copies of any Condition Report generated as a result of the team's findings during this inspection.

Copies of the list of questions submitted by the team members and the status/resolution of the information requested (provide daily during the inspection to each team member).

NOTE: If you have any questions regarding the requested information please contact Zelig Falevits at NRC Region III, Phone (630) 829-9717.