

April 27, 2001

EA-01-092

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

SUBJECT: FERMI 2  
NRC INSPECTION REPORT 50-341/01-06(DRP)

Dear Mr. O'Connor:

On March 31, 2001, the NRC completed an inspection at your Fermi 2 reactor facility. The enclosed report documents the inspection findings which were discussed on April 6, 2001, with you and other members of your staff.

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

Based on the results of this inspection, the NRC did not identify any issues which were categorized as being risk significant.

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/**

Mark A. Ring, Chief  
Branch 1  
Division of Reactor Projects

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

Enclosure: Inspection Report 50-341/01-06(DRP)

See Distribution

DOCUMENT NAME: G:\FERM\fer2001-006drp.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without enclosure "E"= Copy with enclosure "N"= No copy

OFFICE	RIII		RIII	E			
NAME	RLerch/trn		MRing				
DATE	04/27/01		04/27/01				

**OFFICIAL RECORD COPY**

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

ADAMS Distribution:

CMC1

DFT

MAS4

GEG

HBC

SJC4

C. Ariano (hard copy)

DRPIII

DRSIII

PLB1

JRK1

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-341/01-06(DRP)

Licensee: Detroit Edison Company

Facility: Enrico Fermi, Unit 2

Location: 6400 N. Dixie Hwy.  
Newport, MI 48166

Dates: February 17 through March 31, 2001

Inspectors: S. Campbell, Senior Resident Inspector  
J. Larizza, Resident Inspector  
R. Lerch, Project Engineer  
B. Dickson, Resident Inspector, Dresden  
P. Pelke, Reactor Engineer

Approved by: Mark Ring, Chief  
Branch 1  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000341-01-06, on 2/17 - 3/31/2001; Detroit Edison, Fermi 2. Resident Inspector Report.

The inspection was conducted by the resident and region-based inspectors. The significance of most findings is indicated by their color (GREEN, WHITE, YELLOW, RED) using IMC 0609 "Significance Determination Process (SDP)." Based on the results of this inspection, there were no findings. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violations.

## Report Details

### Plant Status

During the inspection period, the plant was operated at or near 100 percent power. On March 4, 2001, at 3:07 p.m., reactor power was decreased to approximately 60 percent to perform maintenance on the Number 6 south feedwater heater normal drain line valve. Reactor power was returned to 100 percent on March 4, 2001, at 5:42 p.m. On March 10, 2001, at 9:21 p.m., reactor power was decreased to approximately 90 percent to perform Infrequently Performed Test or Evolution (IPTE 01-03) to determine the maximum power level at which the high pressure turbine valves surveillance could be performed with acceptable results. Reactor power was returned to 100 percent on March 11, 2001, at 6:57 a.m., where it remained for the rest of the period.

## **1. REACTOR SAFETY**

### 1R01 Adverse Weather (71111.01)

#### a. Inspection Scope

On March 13, 2001, the inspectors used Procedure 27.000.04, "Freeze Protection Lineup Verification," Attachment 4, "Monthly Protected Area Freeze Protection Check," to conduct a walkdown of the residual heat removal service water complex and other outside areas with a non-licensed operator to verify that freeze protection was being maintained on important equipment. Heaters controlled by individual thermostats were checked for operation, and for maintaining temperatures above specified levels.

#### b. Findings

No findings of significance were identified.

### 1R04 Equipment Alignments

#### .1 Quarterly Walkdown of the Emergency Diesel Generator Systems (71111.04Q)

#### a. Inspection Scope

The inspectors conducted a partial walkdown of emergency diesel generators 11, 12, 13, and 14. The inspectors reviewed associated piping and instrumentation drawings, condition assessment resolution documents, work requests, and abnormal, standard operating and emergency procedures to complete the walkdown. The inspectors used the documents to verify valves were aligned properly and that no outstanding deficient conditions existed to prevent proper operation of the diesels.

#### b. Findings

No findings of significance were identified.

.2 Semi-Annual Walkdown of Risk Significant Systems (71111.04S)

a. Inspection Scope

The inspectors used piping and instrumentation diagrams, emergency operating, standard operating, and surveillance procedures, condition assessment resolution documents, and maintenance work requests to verify correct valve alignment, material condition, pipe hangers installed correctly and functional and that electrical power was available for the following systems:

- Standby feedwater,
- High pressure coolant injection,
- Residual heat removal system, and
- Emergency equipment cooling water.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

.1 Tour of Risk Significant Areas for Fire Protection

a. Inspection Scope

Between March 2 and 3, 2001, the inspectors toured the following risk significant areas to determine whether combustible hazards were present, fire extinguishers were properly filled and tested, the CARDOX units were operable and hose stations were properly maintained:

- Standby feedwater pump room
- Reactor Building closed cooling water room
- Division 1 switchgear room
- Division 2 switchgear room
- Division 1 battery room
- Division 2 battery room
- Division 1 residual heat removal heat exchanger room
- Division 2 residual heat removal heat exchanger room
- Division 1 core spray room
- Division 2 core spray and reactor coolant isolation cooling pump room
- High pressure coolant injection pump room
- Non-interruptible air system room
- Division 1 residual heat removal pump room
- Division 2 residual heat removal pump room
- Standby liquid control room
- Reactor recirculation motor generator set room
- Emergency diesel generator 11 room
- Emergency diesel generator 12 room
- Emergency diesel generator 13 room

- Emergency diesel generator 14 room
- Emergency diesel generator 11 switchgear room
- Emergency diesel generator 12 switchgear room
- Emergency diesel generator 13 switchgear room
- Emergency diesel generator 14 switchgear room
- Division 1 CARDOX room
- Division 2 CARDOX room
- Division 1 standby gas treatment room
- Division 2 standby gas treatment room

b. Findings

No findings of significance were identified.

1R06 Flood Protection (71111.06)

a. Inspection Scope

The inspectors reviewed the following documents for selected areas containing risk significant systems and components which are below internal or external flood levels or otherwise susceptible to flooding, to verify that the licensee's flooding mitigation plans and equipment are consistent with the licensee's design requirement:

- Updated Final Safety Analysis Report Section 2.4.2.2, "Flood Design Consideration"
- Updated Final Safety Analysis Report Section 3.4.4.2, "Residual Heat Removal Complex Structure"
- Updated Final Safety Analysis Report Section 9.2.5.2.1, "Residual Heat Removal Complex Reservoir"
- Alarm Response Procedure 2D105, "Reactor Building Corner Room/High Pressure Coolant Injection Room Flood Level"
- Abnormal Operating Procedure 20.000.01, "Flooding"
- Maintenance Procedure 35.000.242, "Barrier Identification Classification"
- Functional Operating Sketch 6M721-5706-3, "Residual Heat Removal Service Water Make-Up Decant and Overflow System"
- Performance Evaluation Procedure 27.000.05, "Operator's Rounds"
- System Procedure 23.428, "Secondary Containment Airlocks and Penetrations"
- System Procedure 23.208, "Residual Heat Removal Complex Service Water System"
- Technical Service Request-29081, "Residual Heat Removal Complex Flood Protection Make-Up Valve E1100F156A/B and E1100F158A/B are Revised to be in Normally Closed Position"
- Technical Requirement Manual 3.7.4, "Shore Barriers Protection"
- Design Basis Document, "E11-XX, Residual Heat Removal Service Water System"
- Condition Assessment Resolution Document 01-00069, "Turbine Building First Floor, Northwest Corner, Door Hinge Needs Adjusting or Rework"



b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11Q)

b. Inspection Scope

On March 8, 2001, the inspectors observed simulator training and evaluator critiques for the operating staff. The inspectors observed crew performance, ability to take timely actions, correct usage and implementation of abnormal and emergency procedures, oversight and direction provided by the shift manager, and the ability to implement appropriate Technical Specification actions.

c. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12Q)

a. Inspection Scope

The inspectors reviewed the system health reports, associated condition assessment resolution documents and the Control Room unit logs for the following systems to determine whether the maintenance rule program had been implemented appropriately by assessing the characterization of failed structures, systems, and components. The inspectors also determined if goal setting and performance monitoring were adequate.

- Residual heat removal system
- Emergency diesel generators (11, 12, 13 and 14)
- Standby feedwater system
- High pressure coolant injection system
- Core spray system
- Reactor core isolation cooling system
- Control rod hydraulic drive system
- Combustion turbine generator 11 unit 1
- Emergency equipment cooling water system

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed the circumstances surrounding the unexpected discrepancy in reactor core isolation cooling pump inboard bearing oil bubbler level that caused a non-normal shutdown of reactor core isolation cooling on March 6, 2001, while

performing the reactor core isolation cooling system pump and valve operability surveillance test.

The Inspectors discussed the event with licensee personnel and reviewed the following documents:

- Control Room logs
- Surveillance Procedure 24.206.01, "Reactor Core Isolation Cooling System Pump and Valve Operability Test"
- Limiting Condition for Operation 01-0109, "Reactor Core Isolation Cooling System Inoperable Due to Reactor Core Isolation Cooling Pump Inboard Bearing Oil Level Low Found During Surveillance 24.206.01"
- Technical Specification 3.5.3, "Reactor Core Isolation Cooling System"
- NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73"
- Condition Assessment Resolution Document 01-12870, "Reactor Core Isolation Cooling Pump Inboard Bearing Oil Bubbler Level Went Out of Sight Low During Reactor Core Isolation Cooling Pump Run"
- Work Request 000Z010728, "Investigate Bubbler Level Dropping to Nearly Empty" on reactor core isolation cooling pump, dated March 6, 2001
- Work Request 000Z010737, "Verify Trico Oilers for Inboard and Outboard Bearing Installed Correctly," dated March 7, 2001
- March 7, 2001, system engineer reactor core isolation cooling operability evaluation for the period of time that reactor core isolation cooling pump bearing bubbler level adjuster may have been installed upside down

b. Findings

No findings of significance were identified.

1R14 Nonroutine Plant Evolutions (71111.14)

.1 Notice of Enforcement Discretion Granted for Emergency Diesel Generator 14

a. Inspection Scope

The inspectors followed-up on the licensee's response to the inoperable emergency diesel generator 14 by visually inspecting the emergency diesel generator and participating in conference calls for granting the licensee a Notice of Enforcement Discretion.

Discussion of Non-Routine Event

On March 21, 2001, the licensee initiated routine Surveillance Procedure 23.307.33, "Emergency Diesel Generator 14 - 24-Hour Run Followed by Hot Fast Start." Approximately 12-hours into the 24-hour run, the control room received an annunciator alarm indicating emergency diesel generator 14 troubles. The rounds operator reported that the emergency diesel generator outboard bearing exhibited high and rising temperature. The rounds operator was then directed by the control room to shutdown the emergency diesel generator.

The rounds operator reported a fire coming from the emergency diesel generator outboard bearing area and extinguished the fire with a hand held carbon dioxide fire extinguisher. Based on the report of the fire affecting the operability of plant safety system that are required to establish or maintain safe shutdown, control room personnel entered Procedure EP-101, "Classification of Emergencies," classified the event and declared an "Alert" condition at the Fermi Station. The "Alert" condition was immediately exited based on the fire being extinguished and the visible damage limited to the emergency diesel generator outboard bearing. Notifications were made to the appropriate governmental agencies.

Investigation into the emergency diesel generator outboard bearing failure revealed that the oil level in the bearing housing was below the manufacturer recommended minimum level. In 1984, a stiffner plate was added to the outboard end of the generator housing of emergency diesel generator 14, to reduce axial vibration. This required a modification of the oil sight glass piping. In 1999, a site wide program for improving oil level indications, installed a "green band" on the oil site glass. Due to the modification and the oil level "green band," when the oil level was indicated at the bottom end of the "green band" it was in actuality 7/8 inches too low. Recent emergency diesel generator runs had not given indication of bearing problems.

By letter dated March 26, 2001, the licensee made a request to the NRC for enforcement discretion with respect to Technical Specification Limiting Condition for Operation related to emergency diesel generator 14. The seven-day completion time for restoring emergency diesel generator 14 to operable status could not be met because of extensive work required to repair the generator shaft and replacement of the failed generator bearing. The licensee requested an additional seven days be added to the Technical Specification Limiting Condition for Operation time. The NRC granted enforcement discretion on March 27, 2001 at 2:12 p.m. This was documented in an NRC letter to the Detroit Edison Company dated March 29, 2001.

As condition for the Notice of Enforcement Discretion, the licensee committed to the following measures during the extended emergency diesel generator 14 completion time: (1) prohibiting any elective equipment testing and (2) the installation of barriers and signs indicating what equipment was protected during the extended outage of emergency diesel generator 14. The licensee also committed to protect the standby feedwater system. During the discussion, the licensee also stated that there were no known challenges to the electrical grid stability during the seven-day extension.

The licensee documented the emergency diesel generator 14 outboard bearing failure on Condition Assessment Resolution Document 01-14004.

b. Findings

Pending the inspectors' review of the licensee's root cause of the event and the risk significance incurred from the event, this item is an **Unresolved Item (URI 50-341/01006-01)**.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed equipment evaluations to determine if operability was properly justified and the component or system remained available such that no unrecognized increase in risk occurred. The following evaluations for equipment issues that occurred during the inspection:

- Engineering Functional Analysis for Condition Assessment Resolution Document 01-11229, "Evaluate Operability of the Division 2 CARDOX Level and Pressure Indication"
- Engineering Functional Analysis for Condition Assessment Resolution Document 01-10802, "Pressure Transient During High Pressure Coolant Injection system Startup"

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed the following documents to determine whether functional capability of the system or human reliability in responding to initiating events was affected. The inspectors also determined if the operator's ability to implement abnormal or emergency procedures was impacted.

- ODE-6,"Operator Workaround"
- Operator Workaround 01-005, "G33-N188A (Reactor Water Cleanup Filter Demineralizer 'A' Effluent Strainer Differential Pressure Switch Isolated"
- Operator Workaround 98-005, "Radwaste System"
- Operator Workaround 98-006, "Reactor Recirculation -RR Valves B3105-F031A&B"
- Operator Workaround 00-007, "Fuel Pool Cooling"
- March 14, 2001, Licensee's Nuclear Generation Memorandum, "Aggregate Assessment of Operator Workarounds"
- March 5, 2001, Licensee's Nuclear Generation Memorandum, "Risk Assessment of Revised Operator Workarounds, March 2001"

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The engineering design packages listed below were reviewed and selected aspects were discussed with engineering personnel. The packages were reviewed for adequacy of the safety evaluation and consideration of design parameters. The modifications reviewed were for equipment upgrades of existing components.

- Engineering Design Package - 27238, Rev A, "Emergency Diesel Generator Governor System Replacement"
- Engineering Design Package - 29068, Rev. A, "Exciter-Regulator System Replacement for Emergency Diesel Generators 11, 12 and 14"
- Engineering Design Package - 30203, Rev 0, "High Pressure Coolant Injection Pump Discharge Flow Control, Obsolete GEMAC Controller Replacement"
- Engineering Design Package - 30202, Rev. 0, "Reactor Core Isolation Cooling Pump Discharge Flow Control, Obsolete GEMAC Controller Replacement"

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following post maintenance testing packages to confirm that the tests were adequate for the scope of the maintenance. The inspectors also determined that the tests restored the operational readiness consistent with the design and licensing basis documents:

- Work Requests P507010100, P002000100 and Q315000200 and Procedure 23.129, "Station and Control Air System"
- Work Request 000Z010511 and Procedure 24.408.04, "Division 2 Primary Containment Monitoring System Valve Operability and Position Indication Verification Test"
- Work Request 000Z010728, "Investigate Bubbler Level Dropping to Nearly Empty"
- Work Request 000Z010737, "Verify Trico Oilers for Inboard and Outboard Bearing Installed Correctly"
- Work Request 000Z003866, "Change Setpoint on Feedwater Control System per Technical Service Requirement 31252"

b. Findings

No findings of significance were identified.

## 1R22 Surveillance Testing (71111.22)

### .1 Routine Review of Plant and Control Room Surveillance Records

#### a. Inspection Scope

The inspectors reviewed records for Technical Specifications required surveillance activities conducted in the control room and in the plant to determine if operators were recording plant parameters appropriately and if the parameters were within Technical Specifications limits. Following the completion of the test, the inspectors determined that the test equipment was removed and the equipment returned to a condition in which it could perform its intended safety function.

#### b. Findings

No findings of significance were identified.

### .2 Reactor Core Isolation Cooling and High Pressure Core Injection

#### a. Inspection Scope

The inspectors reviewed the results of the following surveillance tests to confirm that plant equipment could perform its intended safety function and satisfy the requirements contained in the Technical Specifications:

- 24.206.01, "Reactor Core Isolation Cooling System Pump Operability and Valve Test at 1000 psig"
- 24.202.07, "High Pressure Coolant Injection Vacuum Breaker Check Valve Test"
- 24.307.34, "Diesel Generator Service Water, Diesel Fuel Oil and Starting Air Operability Test - Emergency Diesel Generator 11"

#### b. Findings

No findings of significance were identified.

### .3 Observation of Surveillance Activities

#### a. Inspection Scope

The inspectors witnessed and reviewed test data for the surveillance tests. The inspectors reviewed the Updated Final Safety Analysis Report and Technical Specifications to confirm the surveillance activities had verified that the equipment performed their intended safety functions and operational readiness. The inspectors verified sufficient staffing levels of the control room and other personnel to adequately conduct the test. The inspectors confirmed that the licensee had properly identified deficiencies, particularly the failure of the emergency diesel generator outboard bearing failure, and had entered them into the corrective action program.

- Procedure 42.000.02, "Thermal Overload Calibration"

- Procedure 24.307.33, "Emergency Diesel Generator 14 - 24-hour Run Followed by Hot Fast Restart"
- Procedure 204.06, "Division 2 Low Pressure Coolant Injection and Suppression Pool Cooling/Spray Pump and Valve Operability Test"
- Procedure 44.40.002, "Anticipated Transient Without Scram/Safety Relief Valve Low Low Set - Reactor Vessel Pressure Division 2 Functional Test"
- Procedure 44.220.416, "Main Steam Isolation Valve Leakage Control, Division 2, Reactor Vessel Pressure, Channel Functional Test"
- Procedure 42.309.01, "Division ½ Weekly 130/260 Volt-Direct Current Battery Check"
- Procedure 24.413.03, "Control Room Emergency Filter Monthly Operability Test"

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors verified the accuracy and completeness of the "Reactor Coolant System Activity" performance indicator data. The inspectors reviewed data reported to the NRC since the last verification. The review was accomplished, in part, through evaluation of the Technical Specifications requirements, chemistry records, and reactor coolant sample data. Additionally, the inspectors observed the surveillance activity that determined the reactor coolant system identified leakage rate. The documents reviewed included:

- "Unidentified Drywell Leakage, February, 2000 to March 13, 2001"
- "Fermi 2 Reactor Water Dose Equivalent Iodine-131, May 31, 2000 to March 7, 2001"
- Nuclear Energy Institute 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline"
- Fermi 2 Technical Specifications, Section 3.4

b. Findings

No findings of significance were identified.

.2 Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences

a. Inspection Scope

To ensure that all performance indicator data were properly counted, the inspectors reviewed the licensee's corrective action program records for liquid and gaseous

effluent releases that were reported to the NRC for the last four quarters. The inspectors also reviewed plant incidents to assess if there were any that involved radioactive liquids and gases that were not bounded by plant collection and monitoring systems and to assess the potential for unmonitored release paths. The documents reviewed included:

- Offsite Dose Calculation Manual (Revisions 12, 13, and 14)
- Surveillance documents for offsite dose calculation manual monthly and quarterly calculations in 1999 and 2000
- Selected year 2000 condition assessment resolution documents addressing radioactive effluent treatment and monitoring program deficiencies

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up (71153)

a. Inspection Scope

The inspectors reviewed whether the following violation was included in the corrective action program and the status of implementing the corrective actions.

b. Findings

(Closed) Violation 50-341/97-201-01013: "Motor Control Center Fuse Disconnect Switch Installed in Safety System Failed To Remain Closed." Inspection Report 50-341/97-003 documented circumstances where the motor control center disconnects often failed to remain closed. Inspection Report 50-341/97-201 identified violations associated with the issue. The condition was caused by poor control of cleaners and lubricants on the components resulting in a hardened grease condition. Similar conditions have been documented since 1993. A pre-decisional enforcement conference was conducted on August 6, 1997, and a \$50,000 Civil Penalty was imposed.

Corrective actions from this event included four commitments: 1) trending motor control center performance, 2) cleaning and exercising the switches, 3) monitoring selected switches, and 4) replacing safety-related motor control center load positions. The licensee committed to a completion schedule. Some corrective actions had been completed (190 of 320 switches replaced) and electrical events that involved severe and minor injuries and near misses occurred during implementation. Consequently, the completion schedule was revised in Letter NRC-99-0012. Further delays occurred due to a reevaluation of the Fermi electrical safety practices in year 2000 as stated in Letter NRC-00-0032, which revised commitments made in Letter NRC-99-0012. Letter NRC-00-0032 stated that to complete the corrective actions required working on energized equipment, a condition that Fermi management felt jeopardized the safety of plant personnel. To limit personnel hazards, Fermi management determined that performing switch preventive maintenance (lubricate every 670 days) and replacement of the safety-related rotary switches (by end of refueling outage 8) at a committed



frequency was no longer necessary. The decision was based, in part on information that no adverse trend had been identified since corrective actions to address the motor control center switch issue were done in 1997.

In the time since this violation occurred, the revised reactor oversight program has allowed closure of violations provided the issue was in the licensee's corrective action program. This issue is in the licensee's corrective action program as Deviation Event Report 97-0421 and Condition Assessment Resolution Documents 97-11485, 98-12075, 98-14314, 99-10809, 99-12864, 99-12865 and 00-18739. This violation is closed.

(Closed) URI 50-341/00-03-05: Review of the Impact on Plant Risk from Age Related Failures on Three of Four Emergency Diesel Generators. Several linear reactors failed randomly over a two-year period that rendered the emergency diesel generators inoperable. The licensee disassembled a linear reactor and found sharp bends in the winding, which created hot spots and degradation of the winding insulation. Further, a theory the licensee postulated was that during diesel operation, heat generated from the current potential transformers, below the linear reactors, had shortened the life of the components. The inspectors reviewed the associated exciter manuals and determined that a specified service was not provided. This issue was attributed to either an unforeseen poor manufacturer design or the component reaching its end of service life and not from a deficiency in plant performance. Therefore, a significance determination process does not need to be conducted. This item is closed.

#### 4OA5 Other

The inspectors reviewed the final report for the June 1999 Plant Evaluation performed by an inspection team from the Institute of Nuclear Power Operations. No further inspection was deemed necessary by NRC inspectors, and no assessment was made of the results of the inspection.

#### 4OA6 Meeting

##### Exit Meeting Summary

The inspectors presented the inspection results to Mr. O'Connor and other members of licensee management at the conclusion of the inspection on April 6, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

## KEY POINT OF CONTACT

### Licensee

W. O'Connor, Vice President, Nuclear Operations  
P. Kessler, Assistant Vice President, Nuclear Operations  
R. Libra, Director, System Engineering  
R. DeLong, Director, System Engineering  
J. Moyers, Director, Nuclear Quality Assurance  
K. Howard, Director, Plant Support Engineering  
S. Stasek, Manager, Nuclear Assessment  
D. Cobb, Superintendent, Maintenance  
K. Hlavaty, Superintendent, Operations  
E. Kokosky, Superintendent, Radiation Protection  
J. Davis, Superintendent, Outage Management  
J. Pendergast, Principal Engineer, Licensing  
S. Peterman, Engineer, Operations  
K. Harsley, Licensing  
J. Flint, Licensing

### NRC

M. Ring, Chief, Branch 1  
S. Campbell, Senior Resident Inspector  
J. Larizza, Resident Inspector

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

50-341/01-006-01	URI	Emergency Diesel Generator Outboard Bearing Fire Notice of Enforcement Discretion
------------------	-----	--

### Closed

50-341/97-201-01013 Violation		Motor Control Center Fuse Disconnect Switch Installed in Safety System Failed To Remain Closed
-------------------------------	--	---

50-341/0003-05	URI	Age Related Failures on Three of Four Emergency Diesel Generators
----------------	-----	--

### Discussed

None

## LIST OF BASELINE INSPECTIONS PERFORMED

The following inspect able-area procedures were used to perform inspections during the report period. Documented findings are contained in the body of the report.

Inspection Procedure		Report
Number	Title	Section
71111-01	Adverse Weather Preparation	1R01
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-06	Flood Protection Measures	1R06
71111-11	Licensed Operator Requalification	1R11
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessments/Emergent Work Evaluation	1R13
71111-14	Nonroutine Evolutions	1R14
71111-15	Operability Evaluations	1R15
71111-16	Operator Workarounds	1R16
71111-17	Permanent Plant Modifications	1R17
71111-19	Post Maintenance Testing	1R19
71111-22	Surveillance Testing	1R22
71151	Performance Indicator Verification	4OA1
71153	Event Follow-up	4OA3
(none)	Other	4OA4
(none)	Management Meetings	4OA5

## LIST OF ACRONYMS USED

DRP	Division of Reactor Projects
IMC	Inspection Manual Chapter
NRC	Nuclear Regulatory Commission
SDP	Significance Determination Process
URI	Unresolved Item