

October 30, 2001

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

SUBJECT: FERMIL 2 NUCLEAR POWER STATION
NRC INSPECTION REPORT 50-341/01-13(DRP)

Dear Mr. O'Connor:

On September 30, 2001, the NRC completed an inspection at your Fermi 2 Nuclear Power Station. The enclosed report documents inspection findings which were discussed on October 5, 2001, with you, Mr. Cobb, and other members of your staff.

The inspection 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. Specifically, this inspection focused on plant operations, radiation protection and operator licensing.

Based upon the results of this inspection, a Green finding that was a violation of NRC requirements was identified. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a Non-Cited Violation (NCV), consistent with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at the Fermi 2 Nuclear Power Station.

Since September 11, 2001, Fermi has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to the Detroit Edison Company. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture.

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. NPF-43

Enclosure: Inspection Report 50-341/01-13(DRP)

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

DOCUMENT NAME: G:\FERM\fer2001013 drp.wpd

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

| | | | | | | |
|--------|------------|---|----------|----------|---|--|
| OFFICE | RIII | N | RIII | RIII | E | |
| NAME | RLerch:ntp | | JHouse | MRing | | |
| DATE | 10/30/01 | | 10/30/01 | 10/30/01 | | |

OFFICIAL RECORD COPY

ADAMS Distribution:

CMC1

DFT

MAS4

RidsNrrDipmlipb

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: 50-341/01-13(DRP)

Licensee: Detroit Edison Company

Facility: Enrico Fermi, Unit 2

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

Dates: August 11 through September 30, 2001

Inspectors: S. Campbell, Senior Resident Inspector
J. Larizza, Resident Inspector
M. Mitchell, Radiation Specialist
R. Alexander, Radiation Specialist
A. Dunlop, Reactor Engineer
D. Pelton, Senior Operations Engineer
B. Palagi, Examiner

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

SUMMARY OF FINDINGS

IR 05000341-01-13(DRP), on 8/11-9/30/01, Detroit Edison Company, Fermi 2 Nuclear Power Station. Licensed operator requalification.

This inspection was conducted by resident and specialist inspectors. This inspection identified one Green issue which involved a Non-Cited Violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

Cornerstone: Mitigating Systems

Green. The inspectors identified that two licensed operator medical records, out of a total population of nine medical records reviewed, involved deficiencies. Specifically, the facility licensee had failed to notify the NRC within 30 days of identifying two licensed operators who had developed permanent physical conditions that could potentially affect the ability to perform assigned licensed duties (10 CFR 55.25).

The finding was of very low safety significance and considered a Non-Cited Violation because the license of the first operator had been inactive since before the medical diagnoses and the physical condition of the second licensed operator had been successfully controlled by diet and medication (Section 1R11).

Report Details

1. REACTOR SAFETY

Cornerstone: Mitigating Systems

Plant Status

At the beginning of the inspection period, reactor power was at 100 percent. On September 1, 2001, power was decreased to 80 percent for a rod pattern adjustment. Power was returned to 100 percent the same day. On September 28, 2001, General Electric notified the licensee that the carryover factor used in the plant computer was non-conservative due to the steam dryers being more efficient at moisture removal than originally thought, which impacted thermal power calculations. To prevent exceeding the thermal power limit, operators reduced thermal power by three megawatts, which was equivalent to a 0.2-percent reactor power decrease to 99.8 percent. Also, on September 28, 2001, reactor power was reduced to 80 percent to do a rod pattern adjustment. Operators returned power to 99.8 percent where it remained at this level until the end of the inspection period.

1R05 Fire Protection (71111.05Q)

Quarterly Tour of Risk Significant Areas for Fire Protection

a. Inspection Scope

The inspectors toured Division 1 Residual Heat Removal Complex to determine whether combustible hazards were present, fire extinguishers were properly filled and tested, the CARDOX units were operable, and if hose stations were properly maintained.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Facility Operating History

a. Inspection Scope

The inspectors reviewed the plant's operating history from July 1999 through August 2001, to assess whether the Licensed Operator Requalification Training (LORT) program had addressed operator performance deficiencies noted at the plant.

b. Findings

No findings of significance were identified.

.2 Licensee Requalification Examinations

a. Inspection Scope

The inspectors reviewed the annual requalification operating and written examination material to evaluate general quality, construction, and difficulty level. The operating examination material consisted of dynamic simulator scenarios and job performance measures (JPMs). The biennial written examination material included a total of 35 open reference multiple choice questions. The inspectors reviewed the methodology for developing the examinations, including the LORT program 2-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors assessed the level of examination material duplication during the current year annual examination (through three examinations) and with last year's annual examinations. The inspectors also interviewed members of the licensee's training staff and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.3 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed the administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated the performance of two operating shift crews during two dynamic simulator scenarios and five JPMs in parallel with the facility evaluators. The inspectors observed the training staff personnel administering the operating test, including pre-examination briefings, observations of operator performance, individual and crew evaluations after dynamic scenarios, techniques for JPM cuing, and the final evaluation briefing for licensed operators. The inspectors noted the performance of the simulator to support the examinations. The inspectors also reviewed the licensee's overall examination security program.

b. Findings

No findings of significance were identified.

.4 Licensee Training Feedback System

a. Inspection Scope

The inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT program up to date, including the use of feedback

from plant events and industry experience information. The inspectors interviewed licensee personnel (operators, instructors, training management, and operations management) and reviewed the applicable licensee's procedures.

b. Findings

No findings of significance were identified.

.5 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous annual requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans, and interviewed licensee personnel (operators, instructors, and training management). In addition, the inspectors reviewed the licensee's current examination cycle remediation packages for unsatisfactory operator performance on the written and operating examinations to ensure that remediation and subsequent re-evaluations were completed prior to returning individuals to licensed duties.

b. Findings

No findings of significance were identified.

.6 Conformance with Operator License Conditions

a. Inspection Scope

The inspectors evaluated the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses, including the process for tracking on-shift hours for licensed operators. The inspectors also reviewed nine licensed operators' medical records maintained by the facility for ensuring the medical fitness of its licensed operators and to assess compliance with medical standards delineated in ANSI/ANS-3.4 and with 10 CFR 55.21 and 10 CFR 55.25.

b. Findings

Green. The inspectors identified that two licensed operator medical records, out of a total population of nine medical records reviewed, contained deficiencies in that potentially disqualifying medical conditions were not reported to the NRC. The fact that greater than 20 percent of the medical records reviewed contained deficiencies was determined to be of "Green" safety significance.

The deficiencies were identified by the inspectors on August 30, 2001, and included:

- In 1998, a licensed operator underwent surgery to replace a defective aortic valve with a prosthetic valve. The facility licensee failed to notify the NRC of this change in the operator's physical condition; and
- In October 1987 and July 1989, a licensed operator was diagnosed as having uncorrected blood pressure in excess of 160/100. The facility licensee failed to notify the NRC of this change in the operator's physical condition.

The inspectors determined that the deficiencies involving failure to report these medical conditions were more than minor, in that, they could have credible impact on safety. Specifically, licensed operators with these permanent physical conditions may potentially be unable to perform certain licensed activities which could negatively impact the initiating events, mitigating systems, and barrier integrity cornerstones of Reactor Safety. Failure to report these conditions to the NRC prevented the NRC from evaluating these medical conditions to determine the suitability of continuing to hold operator licenses or whether license conditions were needed to address the medical conditions. The inspectors performed a Significance Determination Process analysis, in accordance with NRC Inspection Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance SDP." The fact that two licensed operator medical records, out of a total population of nine medical records reviewed, involved deficiencies was classified as "Green" and of very low safety significance.

The failure of the facility licensee to notify the NRC within 30 days of identifying that two licensed operators had developed permanent physical conditions that could adversely affect the performance of assigned operator job duties constituted a violation of 10 CFR 55.25. As required by 10 CFR 55.21 license applicants must have medical examinations to determine that the licensee will meet the requirements of 10 CFR 55.33(a)(1). Further, 10 CFR 23 requires that the medical fitness of license applicants be certified as meeting the requirements of 10 CFR 55.21 using form NRC-396, "Certification of Medical Examination by the Facility Licensee." Fermi NPP has previously submitted NRC-396 forms for their licensed operators certifying that their general health would not be expected to cause operational errors, based on the guidance contained in ANSI/ANS 3.4-1983. ANSI/ANS 3.4-1983 identifies prosthetic heart valve as a disqualifying condition and untreated hypertension as a condition requiring a report by a physician proficient in cardiovascular evaluation. As a result, the conditions should have been reported to the NRC as required by 10 CFR 55.25. Specifically, 10 CFR 55.25 requires that if a licensee (licensed reactor operator or senior reactor operator) develops a permanent physical or mental condition that causes the licensee to fail to meet the requirements of 10 CFR 55.21, the facility licensee shall notify the Commission within 30 days of learning of the diagnoses. These issues were considered to be of very low safety significance because: (1) the license of the licensed operator that had the aortic valve replaced had been inactive since before the diagnoses of a defective aortic valve; and (2) the licensed operator with high blood pressure was able to control the condition within acceptable parameters with medication and diet. Because these two examples were of very low safety significance and because the licensee entered these issues into their corrective action program as Condition Assessment Resolution Document numbers (CARDs) 01-18846 and 01-18847, this

violation is being treated as a **Non-Cited Violation (NCV 50-341/01-13-01)**, "Failure to Notify the NRC of Changes in Licensed Operator Physical Conditions," consistent with Section VI.A.1 of the NRC Enforcement Policy.

1R12 Maintenance Rule Implementation (71111.12Q)

a. Inspection Scope

The inspectors reviewed the system health reports, associated CARDS, white papers for probabilistic risk assessment on conditional probabilities 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 whether goal setting and performance monitoring were adequate.

- R3200, Direct Current.
- G5100, Torus Water Management.
- E2100, Core Spray.
- P5002, Control Air.

b. Findings

No findings of significance were identified.

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

.1 Investigation of Acrid Odor at Emergency Diesel Generator 14 Local Control Panel

a. Inspection Scope

The inspectors reviewed the circumstances surrounding the acrid odor originating from the back center cabinet of the local control panel of the emergency diesel generator (EDG) 14 during the August 22, 2001, system operation run following the planned system maintenance outage.

The inspectors attended various meetings, observed selected troubleshooting activities, work planning and scheduling, reviewed the work requests and the result of the functionality test conducted on three linear reactors.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Oscillating Power Range Monitor Operability (OPRM)

a. Inspection Scope

General Electric notified the licensee that the OPRM setpoints were potentially non-conservative requiring that the licensee conduct an alternate method of detecting and suppressing thermal-hydraulic instability. The inspectors verified that the licensee was performing the required alternate method contingencies. On August 17, 2001, the licensee completed the plant specific analysis and determined that the Fermi 2 data was conservative and declared the monitors operable. The inspectors reviewed documentation supporting the restoration of OPRM system to operable status.

b. Findings

No findings of significance were identified.

.2 Division 2 EDG 14 Out of Service for 18-Month Planned Maintenance and Division 1 Primary Containment Monitoring System Hydrogen/Oxygen Inoperable

a. Inspection Scope

On August 21, 2001, the division 1 primary containment monitoring system sample pump tripped and division 2 EDG 14 was inoperable due to planned maintenance. The ability of the division 2 primary containment monitoring system to operate during a loss-of-offsite power event, a condition requiring diesel backed power for the system, was questionable. The licensee determined that entry into TS Limiting Condition 3.0.3, requiring an immediate plant shutdown, was not required. The inspectors reviewed documentation supporting this determination.

b. Findings

No findings of significance were identified.

.3 Diesel Generator Service Water Coordinated Manual Control Switch Position Misaligned for EDG Start

a. Inspection Scope

On August 22, 2001, following a 18-month planned maintenance outage, the operators initiated post maintenance testing by starting the division 2 EDG 14. During the test, the licensee identified that the diesel generator operated without service water for approximately 22 seconds due to a service water pump start switch misalignment. The inspectors reviewed the design basis documents supporting the licensee's operability determination.

b. Findings

No findings of significance were identified.

.4 Division 1 Non Interruptible Air System Room Cooler Engineering Functional Analysis.

a. Inspection Scope

The inspectors reviewed the engineering functional analysis and documentation regarding an improper 10 CFR 50.59 safety evaluation done for replacing a non like-for-like fan motor for the division 1 control air compressor room. The inspectors reviewed these documents to find out whether the fan had remained operable since its installation on May 14, 1998.

b. Findings

No findings of significance were identified.

.5 Division 1 Control Center Heating, Ventilation and Air Conditioning Chiller

a. Inspection Scope

On September 18, 2001, while the division 2 control center heating, ventilation and air conditioning was out of service for planned maintenance, the division 1 control center heating, ventilation and air-conditioning chiller tripped on low evaporator temperature. The inspectors reviewed the engineering functional analysis documented on CARD 01-16912 to determine the impact of two divisions of equipment being out-of-service simultaneously for about 30 minutes and whether the licensee resolved the condition appropriately.

b. Findings

No findings of significance were identified.

.6 Operability Evaluation for Missing Inspections of Fire Penetration Seals

a. Inspection Scope

The inspectors reviewed CARD 01-16780, which included an engineering functional analysis justifying the operability of about 600 fire seal penetrations that had not been inspected since plant construction. The inspectors also conducted interviews with fire protection and engineering personnel and reviewed the following documents:

- CARD 97-11167, "Penetrations in Fire Rated Separation Barriers Not Included In Surveillance Procedure."
- Licensee Event Report 97-014 and -01, "Turbine Building and Auxiliary Building Mezzanine Not Fully Meeting License Condition 2.C.9."
- Technical Specification Amendment No. 62 to Facility Operating License No. NPF-43: (TAC NO. 77293).

- CARD 01-16780, "Timeliness in Performing Inspections of Fire Penetration Stops in Accordance With Procedure 28.507.05."
- Fire Protection Procedure 28.507.05, "Inspection of Fire penetration Stops."
- Technical Requirements Manual 3.12.8, "Fire Rated Assemblies."
- Technical Specification 3/4.7.8, "Fire Rated Assemblies."

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

Installation of Wall Penetration Seal

a. Inspection Scope

The engineering design package regarding penetration in the wall between the reactor water cleanup phase separator room and the second floor general area access of the reactor building was reviewed by the inspectors for adequacy of the safety evaluation and consideration of design parameters. The modification sealed the penetration that allowed a substantial air flow into the room that resulted in the spread of airborne radioactivity when the reactor building heating, ventilation and air conditioning was operating.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

.1 Post Maintenance Testing of Division 1 Residual Heat Removal Pump

a. Inspection Scope

The inspector reviewed post maintenance testing surveillance procedure for division 1 residual heat removal service water pump and valve operability test. The inspectors reviewed the package to verify that the test was 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.

b. Findings

No findings of significance were identified.

.2 Post Maintenance Testing of Emergency Equipment Cooling Water System Valves

a. Inspection Scope

The inspectors reviewed the following documents to assess the impact of using incorrect voltages to test motor operators on emergency equipment cooling water divisions 1 and 2 drywell return outboard isolation valves P4400F607A and B. The changes caused a revision to the thrust/torque verification and this verification was not included in the post maintenance test package. The inspectors assessed the impact on equipment availability, data collection and restoration of the valves due to the oversight:

- CARD 01-16455, "Less than Adequate Post Modification Testing Requirements Following Implementation of Engineering Design Package 29183."
- Engineering Design Package 29183, "Change of the Emergency Equipment Cooling Water Isolation Valves P4400F607A/B 480 VAC Power Supplies."
- Design Calculation 5719, "Minimum Required Target Thrust for Generic Letter 89-10 Gate and Globe Valves."

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

Routine Surveillance Test Reviews and Observations

a. Inspection Scope

The inspectors witnessed and reviewed test data for the following surveillance tests. The inspectors reviewed the Updated Final Safety Analysis Report and TSs to confirm the surveillance activities had verified that the equipment would perform 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 and had entered them into the corrective action program:

- Surveillance Procedure 24.205.05, "Residual Heat Removal Service Water Pump "C" Discharge Check Valve Operability Test."
- Surveillance Procedure 24.324.01, "Combustion Turbine Generator G11-1 Monthly Operability and Meter Channel Check."
- Surveillance Procedure 43.404.002, "Standby Gas Treatment Filter Performance Test, Division II."
- Surveillance Procedure 44.010.117, "Intermediate Range Monitor B Channel Calibration."
- Surveillance Procedure 24.207.08, "Division 1 Emergency Equipment Cooling Water Pump and Valve Operability Test."
- Surveillance Procedure 64.713.019, "Radiological Effluents Routine Surveillances," Revision 10.

- Surveillance Procedure 67.000.502, “Eberline SPING Radiation Monitors General Sampling,” Revision 10.
- Surveillance Procedure 65.000.503, “Use and Operation of Site Radwast Storage Facility Crane,” Revision 9.
- Surveillance Procedure 74.000.19, “Routine Chemistry Surveillances,” Revision 15.
- Surveillance Procedure 74.000.67, “Particulate Contamination in Fuel Oil,” Revision 6.
- Surveillance Procedure 44.120.029, “Post Accident Monitoring-Drywell/Trous Hydrogen-Oxygen channel 12-Month Calibration-Division 2,” Revision 42.

b. Findings

No findings of significance were identified.

3. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns, Radiological Boundary Verification, and Radiation Work Permit (RWP) Reviews

a. Inspection Scope

The inspectors reviewed the station’s implementation of physical and administrative controls over access to radiologically restricted areas, including worker adherence to these controls, by reviewing station procedures and RWPs and walking down radiologically significant areas. Specifically, areas in the Turbine Building, Reactor Building, Radwaste and Onsite Storage Facilities, and around the posted temporary storage area for new fuel shipments were observed. Confirmatory radiation measurements were performed by the inspector to verify that these areas were posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and TSs.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed self-assessments, Nuclear Quality Assurance audits, and licensee CARDS completed since August 2000, which focused on access control to radiologically significant areas. The inspectors reviewed these documents to assess the licensee’s ability to identify repetitive problems, contributing causes, the extent of conditions, and implement corrective actions to achieve lasting results.

b. Findings

No findings of significance were identified.

2OS2 As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls (71121.02)

.1 Radiological Work/ALARA Planning

a. Inspection Scope

The inspector reviewed the station's procedures for radiological work/ALARA planning and scheduling and evaluated the dose projection methodologies and practices in use by the licensee in preparation for the upcoming RF08 Refueling Outage to verify that sound technical bases for outage dose estimates existed. Specifically, the inspectors reviewed six radiologically significant RWP/ALARA planning packages to verify that adequate person-hour estimates, job history files, lessons learned, and industry experiences were utilized in the ALARA planning process. The RWP/ALARA planning and the work/outage scheduling processes were also discussed with the radiation protection (RP) staff to assess the integration of ALARA principles into work procedures and scheduling of radiologically significant evolutions. In addition, the inspectors assessed the licensee's coordination of on-site subject matter experts (from the maintenance departments, engineering, chemistry, and operations) and the Station ALARA Committee in refining the RWP/ALARA plans.

b. Findings

No findings of significance were identified.

.2 Source Term Reduction and Control

a. Inspection Scope

The inspectors reviewed and discussed with the RP staff the status of the station's source term/cobalt reduction program and procedures, focusing on those initiatives with the potential to impact outage dose exposures (hot spot tracking and removal/remediation, temporary and permanent shielding, and online/shutdown chemistry initiatives). The inspectors also assessed the general trend of the station's total source term to evaluate the effectiveness of the station's source term reduction program.

b. Findings

No findings of significance were identified.

.3 Declared Pregnant Workers

a. Inspection Scope

The inspectors reviewed the station's procedure for controlling exposures to embryos/fetuses via the controls implemented for workers who voluntarily declare their pregnancy to the licensee. Additionally, the inspectors reviewed the records and controls implemented for the two workers who declared their pregnancy to the station since January 2001, to verify that controls were implemented in accordance with the station procedure and 10 CFR 20.1208.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed self-assessments, Nuclear Quality Assurance audits, and licensee CARDS completed in recent months which focused on ALARA planning and controls. The inspectors reviewed these documents to assess the licensee's ability to identify repetitive problems, contributing causes, the extent of conditions, and develop corrective actions which will achieve lasting results.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

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

Operability of Radiological Environmental Monitoring Equipment

a. Inspection Scope

The inspectors reviewed selected data from calendar year 2000 and the first three quarters of calendar year 2001 including five equipment operability and calibration reports for the air and composite water sampling, routine calibration and maintenance activities, and non-scheduled maintenance activities in order to confirm that the equipment was acceptably maintained and operable. The inspectors interviewed staff members responsible for the Radiological Environmental Monitoring Program sample collections to verify that the equipment operation was appropriately challenged during routine sample collection duties.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator Verification (71151)

Cornerstone: Public Radiation Safety

Radiological Effluent TS/Offsite Dose Calculation Manual Radiological Effluent Occurrence Performance Indicator

a. Inspection Scope

The inspectors reviewed the licensee's offsite dose calculations (October 2000 to August 2001) to verify the performance indicator for the public radiation safety cornerstone. The inspector also reviewed performance indicator verification records generated by the RP staff since October 2000 and discussed the Radiological Effluent TS/Offsite Dose Calculation Manual performance indicator data collection and analysis process with the radiological engineer and performance indicator coordinator to verify that the program was implemented consistent with industry guidelines provided in NEI 99-02 and licensee procedures.

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

Inspection Scope

The inspectors reviewed an unresolved item. The inspectors reviewed the root cause analysis and corrective actions taken by the licensee for this event.

(Closed) URI 50-341/01-012-02: No Oil Level in the Outboard Motor Bearing for Standby Feedwater Pump A. This item involved the inspectors identification that no oil level was shown in the bubbler sight glass in the motor outboard bearing oil reservoir of standby feedwater pump A. Also, from the inspectors' findings, the licensee found that the standby feedwater pump A, a risk significant system, inboard motor bearing had excessive flow. The inspectors had reviewed oil levels of risk significant and safety-related equipment as part of the supplemental inspection (Inspection Report 50-341/01-010) for the Emergency Alternating Current Performance Indicator crossing from the GREEN to the WHITE threshold. This performance indicator crossed the threshold because of accumulated fault exposure hours due to the catastrophic failure of the EDG 14 alternator outboard bearing. The cause of the failure was inadequate oil in the alternator bearing reservoir. This issue was documented on CARD 01-14004.

To determine the component issues, the licensee tagged out the standby feedwater system and began troubleshooting. The licensee disassembled the oil supply line orifice to the inboard bearing and found that the orifice was tilted. The tilted orifice caused a flow increase to the inboard bearing and a flow decrease to the outboard bearing. However, as mentioned in Inspection Report 50-341/01-012, the pump remained operable in this condition. The licensee was unable to find out how this orifice was installed improperly. Maintenance personnel realigned the orifice properly and oil flows to the bearings were corrected.

Regarding the inadequate oil level in the outboard motor bearing, the licensee concluded that the standby feedwater pump remained operable because the system had an auxiliary oil pump that supplied oil from an oil tank to the bearing before a pump start. Manually starting the oil pump was the primary method to lubricate the bearings. Rotating slinger rings on the shaft scooped oil from the oil reservoir to lubricate the bearing and served as the secondary means of lubrication. No oil in the reservoir meant that the secondary method may have been ineffective at lubricating the motor bearings. System operability was based on the primary lubricating system remaining functional.

A vendor arrived onsite and visually inspected the bearing oil reservoir internals. The vendor found that a weld between the bearing housing casing and a saddle piece was cracked. The saddle piece, which was manufactured from a block of metal, and had a semicircle machined out to allow clearance for the motor shaft to rotate, was welded into the casing and was part of the bearing oil reservoir. During pump manufacture, the weld was coated with paint. Over time, the paint wore away and uncovered the crack. This provided an oil leak path through the supply line, past a leaking supply line check valve and into the oil tank, which caused bearing oil reservoir level to drop slowly. Currently, operators are monitoring oil level continuously and starting the auxiliary oil pump as needed to maintain oil level in the bubbler. A proposed fix included creating loop seals on the oil supply lines for pumps A and B to provide sufficient static oil head and prevent any back leakage. The inspectors concluded that this corrective action was acceptable.

The operators did not identify the lack of oil in the bearing housing because checks of the level during operator plant tours were not in the log sheets. To correct the condition, the licensee added a check of the oil level in the operators' rounds sheets. Also, operators did not verify this level before a pump start because they were trained that starting the auxiliary oil pump was sufficient to lubricate bearings and, therefore, a level check was unnecessary. The proposal to correct this issue included the development of pre-start checklists for all rotating equipment. The inspectors determined these corrective actions to be acceptable.

The licensee missed identifying the lack of oil level in the standby feedwater pump during the extent of condition review for CARD 01-14004 that documented the EDG 14 bearing failure. During this review, the inspectors thought that the licensee had looked at all system oil levels in the plant. After interviews, the inspectors found that the licensee limited their reviews to systems that had "green bands" installed on oil level indicators. "Green bands" provided a visual band of acceptable operating and stand still levels. The licensee did not install "green bands" on the oil indicator for the standby feedwater pump motor, and therefore, this system was not included in the extent of condition review for the CARD 01-14004.

4OA5 Management Meetings

.1 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 October 5, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

Specific Area Exits

| | |
|--------------------------------|--|
| Senior Official at Exit: | William O'Connor, Vice President of Nuclear Generation |
| Date: | August 31, 2001 |
| Proprietary (explain "yes"): | No |
| Subject: | Results of an Inspection of the Licensee's Licensed Operator Requalification Program |
| Change to Inspection Findings: | No |
| Senior Official at Exit: | W. O'Connor, Site Vice President |
| Date: | 09/28/2001 |
| Proprietary: | No |
| Subject: | Occupational Radiation Safety (Access Control and ALARA); Public Radiation Safety (REMP) |
| Change to Inspection Findings: | No |

KEY POINTS OF CONTACT

Licensee

H. Arora, Principle Engineer, Nuclear Licensing
L. Burkholder, Work Control, Specialist-Scientist
S. Cashall, Principle Engineer, Nuclear Licensing
D. Cobb, Plant Manager
L. Craine, General Supervisor, Environmental
J. Davis, Manager, Outage
J. Davis, General Supervisor, Nuclear Training
T. Dong, Manager, In-Service Inspection
J. Dudlets, Supervisor, Plant Support Engineering
Q. Duong, Manager, Plant Support Engineering
J. Green, General Supervisor, Nuclear Maintenance
T. Haberland, Manager, Nuclear Maintenance
S. Hassoun, Principle Engineer, Nuclear Licensing
D. Hemmele, Supervisor, Nuclear Control Room
M. Hobbs, Supervisor, Electrical System Engineering
R. Johnson, Supervisor, Nuclear Licensing
E. Kokosky, Manager, Radiation Protection
J. Korte, Manager, Security
R. Libra, Director, Technical
M. McDonough, Fire Protection Engineer
J. Moyers, Manager, Nuclear Quality Assurance
W. O'Connor, Vice President, Nuclear Generation
N. Peterson, Manager, Nuclear Licensing
J. Priest, Nuclear Quality Assurance, Technician
R. Salmon, Acting Supervisor, Independent Safety Engineering Group
K. Snider, Supervisor, Nuclear Training
S. Stasek, Director, Quality Assessment
E. Vinsko, CARD Coordinator, Maintenance
D. Williams, Assistant Radiation Protection Manager

NRC

M. Ring, Chief, Division of Reactor Projects, Branch 1

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

| | | |
|-----------------|-----|--|
| 50-341/01-13-01 | NCV | Failure to Notify the NRC of Changes in Licensed Operator Physical Conditions (Section 1R11) |
|-----------------|-----|--|

Closed

| | | |
|-----------------|-----|--|
| 50-341/01-13-01 | NCV | Failure to Notify the NRC of Changes in Licensed Operator Physical Conditions (Section 1R11) |
|-----------------|-----|--|

| | | |
|------------------|-----|---|
| 50-341/01-012-01 | URI | No Oil Level in the Outboard Motor Bearing for Standby Feedwater Pump A |
|------------------|-----|---|

Discussed

None.

LIST OF ACRONYMS USED

| | |
|-------|--|
| ALARA | As-Low-As-Is-Reasonably-Achievable |
| CARD | Condition Assessment Resolution Document |
| CFR | Code of Federal Regulations |
| DRP | Division of Reactor Projects |
| EDG | Emergency Diesel Generator |
| JPM | Job Performance Measure |
| LORT | Licensed Operator Requalification Training |
| NCV | Non-Cited Violation |
| NRC | Nuclear Regulatory Commission |
| OPRM | Operating Power Range Monitor |
| RP | Radiation Protection |
| RWP | Radiation Work Permit |
| SDP | Significance Determination Process |
| TS | Technical Specifications |

LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings.

1R05 Fire Protection

| | |
|---------|---|
| UFSAR | 9A.4.3, "Residual Heat Removal Complex" |
| Drawing | 6A721N-2041, "Fire Protection Evaluation Residual Heat Removal Complex, Grade Floor -Plan-El. 590'-0" |
| Drawing | 6A721N-2042, "Fire Protection Evaluation Residual Heat Removal Complex, Grade Floor -Plan-El. 617'-0" |

1R11 Licensed Operator Requal

| | | |
|--|---|------------|
| Regulatory Guide 1.134 | Medical Evaluation of Nuclear Power Plant Personnel Requiring Operator Licenses | Revision 1 |
| ANS-3.4 | Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants | Dated 1976 |
| CARD 01-14500 | Apparent Discrepancy Between UFSAR and Practice Regarding Licensed Operator Physicals | |
| CARD 01-18845 | Licensed Operator Not Medically Qualified in Accordance with 10 CFR Part 55 | 8/30/01 |
| CARD 01-18846 | Licensed Operator Not Medically Qualified in Accordance with 10 CFR Part 55 | 8/30/01 |
| CARD 01-18847 | Individual Did Not Meet Criteria of Licensed Operator Medical Certification and the Condition was Not Reported to the NRC | 8/30/01 |
| Medical Evaluation Records | Various | |
| Licensed Operator Requalification (LOR) Exam Sample Plan | | 2000 |
| LOR Exam Sample Plan | | 2001 |

| | | |
|--|--|-----------------------------------|
| Nuclear Training Work Instruction (NTWI) Section 3.0 | Design and Development of Test Items for Written and Oral Examinations | Revision 1 |
| LOR Annual Written Exam | Reactor Operator Exam | 2000 |
| LOR Annual Written Exam | Senior Reactor Operator Exam | 2000 |
| LOR Annual Written Exam | Reactor Operator Exam | 2001 |
| LOR Annual Written Exam | Senior Reactor Operator Exam | 2001 |
| General Administration Conduct Manual MGA 13 | Fermi Medical Requirements | Revision 5 |
| JPM JP-OP-315-0010-402 | Control Rod Drive Pump Trip | Revision 11 |
| Evaluation Scenario SS-OP-904-1013 | Recherche Pump Trip/72M Bus Trip/Loss of All High Pressure Feed/ED | Revision 0 |
| Evaluation Scenario SS-OP-904-1016 | 2B Transformer Leak/Turbine Vibration/Turbine Trip with Breaker Flash over/ATS | Revision 0 |
| JPM JP-OP-315-0064-002 | Placing BOP Battery in Service | Revision 1 |
| JPM JP-OP-315-0150-001 | Start up the D1/D2 Fuel Pool Ventilation Exhaust Radiation Monitors | Revision 1 |
| JPM JP-OP-315-0020-401 | SATS Exhaust Damper Failure | Revision 1 |
| JPM JP-OP-315-0210-002 | Disarming a C.D. that is Not Stuck | Revision 4 |
| NTWI, Section 1.0 | Examination Safeguards and Controls | Revision 2 |
| NTWI, Section 6.0 | Training Program Feedback Process | Revision 3 |
| Management Observation of Operations Training | | January, February, and March 2001 |
| Training Feedback Forms | Courses CP-OP-233 and CP-OP-202 | |

Nuclear Training
Health Performance
Indicators Report

1st and 2nd
Quarter 2001

Lesson Plan
LP-OP-233-0131

Operating Experience for LOR

Operations
Department
Expectations (ODE) 8

Administrative Guideline and Desk Instruction

Revision 1

ODE-8, Attachment 3

Shift Active License Required Hours, 1st, 2nd, and
3rd Quarter of 2001

Attendance Records
for Licensed Operator
Requalification
Training

2000 and 2001 through Training Cycle 3

Remediation
Packages

Shift Four Crew Failure in Training Cycle 3, 2000
and Two Individuals who Failed the Training
Cycle 1, 2001 Written Exams

1R12 Maintenance Rule Implementation

CARD 00-00105

Tripped MCC Position.

CARD 00-00329

Fault on Positive Wiring

CARD 00-00516

Fault on Neutral Wiring Suspect

CARD 00-00523

Voltage Low OOS

CARD 00-00566

Charger Amps OOS

CARD 00-00944

Thermal Oil Reset Button Cracked

CARD 00-10538

Incorrect Labeling of Control Wires to Position 11A
and 11B Results in Wrong Circuits Red Tagged

CARD 00-10891

Possible Electrolyte Leakage

CARD 00-12331

Work Request Required for Stock Battery Test

CARD 00-12348

Drawing SD-2530-10 Incorrect

CARD 00-12539

Loose Ground Wire on R3200S033A

CARD 00-12737

Incorrect PMT on PM Y132000100 Due to Change-
Out of MCC 72B-2A Position 2A

| | |
|---------------|--|
| CARD 00-14325 | Incorrect Situational Surveillance Time Requirement Listed in ARPs 9D17 and 10D68 |
| CARD 00-14357 | 2PC3-16 DC Distribution Cabinet Circuit No. 11 has Wrong Fuse Size in it |
| CARD 00-14622 | Acceptance Criteria Not Met |
| CARD 00-15122 | Fuses Not in Compliance with EJ Specifications |
| CARD 00-15169 | Undersize/Incomplete Welds |
| CARD 00-17253 | 48/24V Electrical Lineup |
| CARD 00-18167 | Label Request: Security Electrical Equipment |
| CARD 00-18877 | Procedure Specification 3071-128-EJ Not Correct |
| CARD 00-18918 | Annunciator 9D18-Div 1 48/24V Battery 21A Trouble |
| CARD 00-19354 | CMC Switch Knob is Missing Part of Plastic |
| CARD 00-20627 | 2PC2-17 DC Distribution Cabinet Circuit Four Fuses |
| CARD 00-24773 | Division 1 and Division 2 Battery Room Temps Above Max Design Temp Limit per 27.000.02 Attachment 1 |
| CARD 00-25500 | Replaced Inservice Battery with Capacity Tested Spare |
| CARD 00-00581 | Receiving Low Volt Alarm |
| CARD 00-01352 | Soft Ground BOP Battery |
| CARD 00-01366 | 2C-1 Charger Trips in EQ Mode |
| CARD 00-01367 | 2C-2 Charger Trips in EQ Mode |
| CARD 00-10721 | Fuse Change per 3071-128-EJ |
| CARD 00-10766 | Ground Getting Worse |
| CARD 00-10777 | Operator Shocked While Removing Indicator Bulb |
| CARD 00-13662 | Implement Battery Test Procedure Changes to Decrease Inoperability Time on Battery |
| CARD 00-13961 | Audit finding: CARD 00-13700 Closed 11/2/00, evaluated cannibalization process not properly followed |

| | |
|---------------|--|
| CARD 00-14058 | Abnormal Voltage Seen on Charger 2C-2 When Placing in Service |
| CARD 00-14621 | Division 2 24/48 Battery Electrolyte Low |
| CARD 00-14657 | Specification EJ Does Not Match Field |
| CARD 00-15349 | 24/48 Battery Bank 21A Low Water |
| CARD 00-15797 | Low Battery Electrolyte |
| CARD 00-16224 | Low Electrolyte Level in All Cells, Above Minimum |
| CARD 00-17101 | Spare BOP Battery Charger 2C1-2 Tripped in Equalize and Float Mode |
| CARD 00-10036 | Remove TWMS Pump Suction Strainer Alarms |
| CARD 00-10178 | Increase Allowable Stem Thrust/torque for P4400F601A, F607A, F607B, G5100F604, F605, and F697 MOVE |
| CARD 00-10216 | Labels for EDP-30932 |
| CARD 00-11200 | 24.000.02, Attachments 2 and 3 Change Request |
| CARD 00-11380 | Revise Basis to TRY (TR 3.3.6.5) Narrow Range Suppression Pool Level Instrumentation |
| CARD 00-11476 | The Valve Failed to Stroke Close From the Control Room |
| CARD 00-12762 | Drawing Possibly Incorrect |
| CARD 00-13142 | Hot Spots identified in G1101F1412, RB Equipment Drain Sump Discharge Isolation Valve |
| CARD 00-14349 | Packing Follower Nuts Missing |
| CARD 00-14456 | Unbolted Rusty Piping |
| CARD 00-15472 | 2 DAM Packing Leak - Must be Reached |
| CARD 00-16233 | Wires Landed Incorrectly |
| CARD 00-17620 | South TAMS Pump CAC Switch in "Off" Causes Motor Trip Alarm |
| CARD 00-17874 | Revise 23.144, "Torus Water Management System" |
| CARD 00-18009 | Work Requests Needed for MOV Thermal Overload Testing |

| | |
|---------------|---|
| CARD 00-20163 | Evaluate EDP 30932, Removal to TAMS Pump Suction Strainer Alarm, for Simulator Impact |
| CARD 00-24771 | Dual Indication on G5100F609 |
| CARD 00-15847 | Determine if "TTC" Can be Used to Test MOV |
| CARD 00-16125 | Updated Information for Next Revision to DC-5719 |
| CARD 00-16428 | TAMS Outboard Isolation Valves Found Closed |
| CARD 00-10928 | Out of Tolerance Readings |
| CARD 00-11412 | Loss of Division 2 SDC While Tagging Division 2 Core Spray |
| CARD 00-13194 | Need Work Requests for Jog Dynamic Testing (MOV) |
| CARD 00-14278 | Body to Bonnet Leak on Discharge Relief of Division 1 Core Spray |
| CARD 00-15457 | Leaks Identified During Core Spray Division 2 Leakage Monitoring Test |
| CARD 00-15579 | Division 1 Core Spray Valve Stroke Time Outside First Limits |
| CARD 00-16258 | PMT Failed for E2150-F015B |
| CARD 00-18009 | Work Requests Needed for MOV Thermal Overload Testing |
| CARD 00-24791 | Inspect Valve Actuators for Loose Cap Screw |
| CARD 01-00035 | Division 1 CS Break Detection Reading Changed for no Apparent Reason |
| CARD 01-00215 | Air Leak |
| CARD 01-10781 | E2150F031A Did Not Auto Open During 24.203.02 |
| CARD 01-10939 | Repacking Valves E1150F028B, F015B, F006A, B, C, D, F036A, F603A, F004A, D, F005B |
| CARD 01-13271 | Potential Deficiencies in the Load |
| CARD 01-13917 | P44 Cooling Water Nipple at Pump Cooler Lead (Oil Level) |
| CARD 01-14178 | Installation of Star Lugs on Terminal Board to Facilitate Surveillance Testing |

| | |
|-----------------------------|---|
| CARD 01-14658 | Electrical Wrench Time Study Identified Process Delay |
| CARD 01-16120 | Housing Cover Bolts Found Below Recommended Torque |
| CARD 01-10409 | Licensing Basis Compliance |
| CARD 01-14939 | ESF Room Cooler Determination |
| Control Room Logs | |
| Maintenance Rule Desk Guide | |
| Maintenance Rule Procedure | Maintenance Rule Program Manual MR010, "Continuous Monitoring" |
| Maintenance Rule Manual | Maintenance Rule Program Manual MR011, "Periodic Assessment" |
| Maintenance Rule Manual | Maintenance Rule Program Manual MR012, "Equipment Out of Service Risk Management" |

1R13 Maintenance Risk Assessment and Emergent Work

| | | |
|----------------------------|---|---------|
| Work Request 000Z012657 | EDG 14 Acrid Odor During Loaded Run | |
| CARD 01-16952 | Acrid Odor EDG 14 During SOP Run | |
| Technical Document | Engineering Support Organization Report 01J075-0024, Functional Test of Three Linear Reactors | 8/23/01 |

1R15 Operability Evaluations

| | | |
|-------------------------|---|---------|
| CARD 01-10536 | "Action: Perform Cycle 8 Option III Stability Analysis with Revised Interim DIVOM Curve Slope" | |
| QA1 Design Calculation | DC-6109, Volume 1, Shows that Existing OPRM Upscale Trip Amplitude Setpoint of 1.11 has Been and Continues to be conservative for Protecting the Cycle 8 MCPR Safety Limit During a Thermal Hydraulic Instability | |
| Nuclear Generation Memo | Restoration of OPRM System to Operable Status | 8/17/01 |
| | Control Room Logs | 8/21/01 |

| | | |
|----------------------------------|---|---------|
| Licensing Evaluation | Post Accident Monitoring Instrumentation Interpretation | 8/21/01 |
| Limiting Condition for Operation | LCO 01-0317, "Division 1 PCMS 02/H2 Input Failed" | |
| Limiting Condition for Operation | LCO 01-0317A, "Division 1 and Division 2 PCMS 02/H2 Inoperable" | |
| CARD 01-17395 | DGSW Pump CAC Switch Position Misaligned for EDG Start | |
| | Control Room Logs | 8/22/01 |
| Design Basis Document | Emergency Diesel Generators R30-00 | |
| Limiting Condition for Operation | LCO 01-01-305, "MES 27 Evaluation of Division 1 NIAS Room Cooler Motor" | |
| Engineering Functional Analysis | For CARD 01-17267 | |
| Engineering Functional Analysis | For CARD 01-16912 | |
| Control Room Logs | | 9/18/01 |
| Sequential Event Recorder Log | | 9/18/01 |
| CARD 01-16912 | Division 1 CCHVAC Chiller | |
| Limiting Condition for Operation | LCO 01-0352, "Division 2 CCHVAC Outage" | |
| Limiting Condition for Operation | LCO 01-0355 "MES 27 Division 1 CCHVAC Chiller" | |
| UFSAR | Section 9.4.1.2.1, Control Center Description | |
| Alarm Response Procedure | ARP 8D5, "Division 1 Control Room A/C Trouble" | |

1R17 Permanent Plant Modifications

| | |
|---------------------------|--|
| Technical Service Request | TSR 31113, "Penetration in the Reactor Building that Requires Sealing" |
| Work Request 000Z003550 | RBHVAC - Unlisted Components and Items |

CARD 99-18531 Ventilation Flow (RBHVAC) Low to the RWCU Hx and Phase Separator Rooms

1R19 Post Maintenance Testing

| | |
|----------------------------|--|
| Work Request 000Z003741 | Test Thermal Overloads |
| Work Request E256961002 | Clean and Regrease Stem, Lubricate Gear Operator for E1150F004A |
| Work Request E405010100 | Megger Motor and Perform Polarization Index Test by NE-6.6-EQMS.036 for E1102C002A |
| Work Request E357940126 | Inspect, Lube and Test MOV, Test Associated Feed Position for E1150F004A |
| Surveillance Procedure | 24.205.05, "Division 1 RHRSW Pump and Valve Operability Test" |

1R22 Surveillance Testing

| | |
|--------------------------------|---|
| Information Notice | IN 97-16, "Preconditioning of Plant Structures, Systems, and Components Before ASME Code InService Testing or Technical Specification Surveillance testing" |
| NUREG | NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants" |
| Surveillance Test Procedure | Surveillance Test Procedure 24.207.08, "Division 1 EECW Pump and Valve Operability Test" |

2OS1 Access Control to Radiologically Significant Areas

| | | |
|--|---|------------------|
| | RP Daily Plant Status Report | 9/25/01 |
| CARD 01-15977 | Problems with "High Radiation Area" Doors and Gates | 9/5/01 |
| MRP06 | Accessing and Control of High Radiation, Locked High Radiation, and Very High Radiation Areas | Revision 3 |
| NPRC-00-0269 | Self-Assessment of the Fermi 2 Access Control System | 8/15/00 |
| Nuclear Quality Assurance Audit Report 00-0114 | Radiological Protection and Environmental Protections (Non-REMP) Programs | 10/16 - 11/16/00 |

2OS2 As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls

| | | |
|--------------------------------------|---|-------------|
| | Fermi 2 RPM System Hot Spot Detail Report | 9/27/01 |
| | Radiation Protection RF08 Outage Tracking List | 9/27/01 |
| | Refinement of Cobalt Reduction Plan (TOBP Goal 2B2b) | 1998 |
| | RF07 ALARA Post Outage Assessment | 8/2000 |
| | RF08 Job Estimates (> 1 person-rem) | 9/25/01 |
| CARD 00-14880 | Please Address the RF-07 Critique Items on Attached List that Concern Radiation Protection | 8/17/00 |
| CARD 00-16012 | Improper Use and Control of Hard Hats in the RRA | 4/22/00 |
| CARD 00-17685 | Refuel Floor Opportunities for Improvement - Radiation Protection | 6/26/00 |
| CARD 01-14700 | Critique Items from Planned Outage 01-01 | 6/6/01 |
| MQA11 | Condition Assessment Resolution Document | Revision 6 |
| MRP05 | ALARA/RWPs | Revision 3 |
| MRP10 | Fetal Protection Program | Revision 3 |
| NPRC-00-0415 | Self-Assessment of Radiation Work Permit Program | 12/5/00 |
| NPRC-01-0200 | Radiation Protection Department's RF08 Readiness Self-Assessment | 6/28/01 |
| NPRC-01-0298 | Contingency Plan for High Drywell Dose Rates | 9/21/01 |
| PIS G4100F084A | Flush Hotspots from FPCCU Piping | 3/20/01 |
| Plant Technical Procedure 63.000.100 | Radiation Work Permits | Revision 17 |
| Plant Technical Procedure 63.000.200 | ALARA Reviews | Revision 14 |
| Plant Technical Procedure 63.000.300 | Hot Spot Tracking and Removal | Revision 3 |
| RWP/ALARA Plan 01-1101 | Radiation Protection Job Coverage, Surveys, Surveillances, and Inspections in the Drywell and RB-1 Steam Tunnel | Revision 0 |
| RWP/ALARA Plan 01-1103 | Install and Remove Drywell Shielding | Revision 0 |

| | | |
|---------------------------|---|------------|
| RWP/ALARA Plan 01-1105 | Install and Remove Scaffold, Power, and Lights DW and RB-1 Steam Tunnel | Revision 0 |
| RWP/ALARA Plan 01-1112 | ISI Inspections in the Drywell and RB-1 Steam Tunnel. Work to Include Welds and Weld Preps, Snubbers and Spring Cans, Bioshield Doors, and All Other Associated Tasks | Revision 0 |
| RWP/ALARA Plan 01-1121 | MSIV's - Disassemble, Rework, and Transfer to Hot Machine Shop (HMS) | Revision 0 |
| RWP/ALARA Plan 01-1251 | Perform Refuel Activities on RB-5. Includes Vessel Assembly and Disassembly, Core Alterations, ISI Work, Bridge Repair, LPRM Replacements, RP and Radwaste Support of All Activities | Revision 0 |
| Survey 02436-R01 | SA-39 Survey Open, Accessible Hot Spots | 6/29/01 |
| TMPR-00-0034 | RF08 Scope Review for Cobalt Reduction Program | 11/14/00 |

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs

| | | |
|---|---|------------|
| | Fermi 2 - 2000 Annual Radioactive Effluent and Radiological Environmental Operating Report | 5/1/01 |
| Plant Technical Procedure 62.000.206 | Air Sample Calibration Verification Check - Digital Low Volume Air Sampler Model DL | Revision 1 |

4OA1 Performance Indicator Verification (71151)

| | | |
|-------|---|------------|
| | Fermi 2 - 2000 Annual Radioactive Effluent and Radiological Environmental Operating Report | 5/1/01 |
| | Fermi 2 Effluent Doses - 1 st Qtr 2000 through 2nd Qtr 2001 | 9/25/01 |
| PEP14 | Performance Data Reporting Programs and Procedures | Revision 1 |