

December 7, 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 50-341/01-14(DRP)

Dear Mr. O'Connor:

On November 16, 2001, the NRC completed an inspection at your Fermi 2 Nuclear Power Station. The enclosed report documents inspection findings which were discussed on November 16, 2001, with 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 inservice inspection.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). However, because of the 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, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny the 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 20555-001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-001; and the NRC Resident Inspector at the Fermi 2 Nuclear Power Station.

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/reading-rm/adams.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 50-341/01-14(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

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-341/01-14(DRP)

Licensee: Detroit Edison Company

Facility: Enrico Fermi, Unit 2

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

Dates: October 1 through November 16, 2001

Inspectors: S. Campbell, Senior Resident Inspector  
J. Larizza, Resident Inspector  
R. Alexander, Radiation Specialist  
David L. Pelton, Senior Operations Engineer  
B. Palagi, Operator Licensing Examiner  
M. Holmberg, Reactor Inspector

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

## SUMMARY OF FINDINGS

IR 05000341-01-14(DRP), on 10/01-11/16/01, Detroit Edison Company, Fermi 2 Nuclear Power Station. Inservice Inspection Activities.

The 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>.

### **Cornerstones: Barrier Integrity and Initiating Events**

Green. The inspectors identified a Non-Cited Violation of 10 CFR Part 50 Appendix B, Criterion XVI "Corrective Actions" for inadequate licensee corrective actions, that failed to prevent a repeat failure of feedwater check valve cotter pins.

This finding was greater than minor because, if left uncorrected, it could have resulted in feedwater check valve failures, which would degrade the containment barrier and potentially result in a loss of feedwater. Therefore, this finding affected the barrier integrity and initiating events cornerstones. However, based on evaluating the risk significance of the loss of feedwater transient and the loss of containment barrier integrity from a postulated valve disc separation, and considering that no actual disc failure occurred, the finding has very low significance (Section 1R08).

## Report Details

### 1. REACTOR SAFETY

#### **Cornerstone: Mitigating Systems**

##### Plant Status

Fermi 2 began this inspection period at a slightly reduced power (99.9 percent) due to non-conservative bias carryover value in the heat balance calculation with efficient steam dryers. On October 22, 2001, reactor power was further reduced to 97 percent due to thermal limit concerns. Reactor engineers ran a predictor model for the core and predicted that the Maximum Fractional Limiting Power Density value on one core location may be exceeded. Operators reduced power to 97 percent to stay below the Maximum Fractional Limiting Power Density administrative limit. Reactor power remained at 97 percent until October 27, 2001, when the reactor was reduced to less than 10 percent power then manually scrammed to commence Refueling Outage 8 (RF08).

#### 1R05 Fire Protection (71111.05Q)

##### .1 Observation of Hot Work

###### a. Inspection Scope

The inspectors reviewed the licensee's procedures for fire protection, the Fermi Safety Handbook, related work requests, and fire watch training attendance records, and toured the areas where hot work (grinding and welding) was being performed for the following jobs:

- WR 000Z004107, "Welding South Reactor Feedwater Drains.
- WR N91610100, "Grinding Threaded Studs from Moisture Separator Reheater Mainway."

The inspectors observed whether fire extinguishers were present, full and inspected, burn permits were posted, welding machines and gas cylinders were properly stored, and that protective material was installed to prevent igniting flammable material near the activity.

###### b. Findings

No findings of significance were identified.

.2 Emergency Lighting in the Residual Heat Removal Complex and the Station Blackout Combustion Turbine Generator 11-1 Control Room

a. Inspection Scope

The inspectors reviewed the licensee's notification to the NRC Headquarter's Operations Officer (Event Number 38380) and subsequent retraction identifying the noncompliance with License Condition 2.C.9 for Unavailable Emergency Lighting. The areas of concern included the emergency diesel generator (EDG) 11 switchgear room and the control room for station blackout combustion turbine generator 11-1.

b. Findings

No findings of significance were identified.

.3 Inspection of Fire Penetration Seals

a. Inspection Scope

In 1998, the licensee identified about 600 fire penetration seals that had never been inspected. The licensee increased inspection efforts to verify that the seals were in an acceptable condition. Fire seals prevent fire propagation from one plant area to another. Inadequate timely corrective action to resolve the missing seal issue was documented in Inspection Report 50-341/2001-16. The inspectors reviewed Condition Assessment Resolution Document (CARD) 01-18345 that described missing fire penetration seals between the fourth floor and fifth floor of the auxiliary building on about a four-foot by eight-foot pipe chase that spans several elevations between the Reactor and Auxiliary buildings. The inspectors also interviewed engineering personnel and toured the areas involved.

b. Findings

Conduits and pipes that penetrate from safety-related areas to the pipe chase were sealed so a fire risk to these areas did not exist. The penetrations on the fourth and fifth floors were declared fire barriers in 1998. A basis for describing these areas as fire barriers could not be determined. Consequently, the licensee hired a contractor to evaluate whether these fire areas should have fire barriers and whether the missing penetrations should be sealed. This item will be an unresolved item (**URI 50-341/01-014-01**) pending the inspectors' review of the contractor's evaluation.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors observed portions of the performance of surveillance procedure 47.205.02, "Residual Heat Removal Division 2 (South) Heat Exchanger Performance Test," and reviewed data collected during the test. The inspectors



reviewed 1996, 1998 and 2000 data for the previous Division 2 heat exchanger test and examined the performance trending.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08)

a. Inspection Scope

The inspectors evaluated the implementation of the licensee's inservice inspection program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries based on review of records and in-process observation of nondestructive examinations. From November 5, 2001, through November 8, 2001, the inspectors performed the following activities:

- Reviewed a sample of the American Society of Mechanical Engineers (ASME) Code required records for the Division 1 emergency equipment cooling water heat exchanger replacement modification including Code welding records.
- Reviewed licensee corrective actions for Code recordable indications identified in a residual heat removal (RHR) system pipe to nozzle weld and hydrogen recombiner piping weld during previous nondestructive examinations.
- Observed automated ultrasonic examination of the feedwater system nozzle N4D inner radius.
- Observed automated ultrasonic examination of the core spray system nozzle to safe end weld N5B.
- Observed manual ultrasonic examination of the pipe to elbow weld N21-2336-15WP on the feedwater system.
- Observed remote visual VT-1 examination of internal core spray downcomer pipe weld 4b including examination calibration checks.
- Observed remote enhanced visual VT-1 examination of the source range B housing.

The records reviewed and activities observed were evaluated for conformance with requirements in the 1989 Edition, No Addenda, of the ASME Code, Section III, Section V, Section IX, and Section XI. In addition, requirements of 10 CFR 50.55a and the 1995 Edition with 1996 Addenda of the ASME Code, Section XI, Appendix VIII, were used for evaluating the ultrasonic examinations of Category B-J piping welds.

The inspectors also reviewed a sample of inservice inspection related problems documented in the licensee's corrective action program, to assess conformance with 10 CFR Part 50 Appendix B, Criterion XVI "Corrective Action" requirements.

b. Findings

A Non-Cited Violation (NCV) (Green) was identified for inadequate corrective actions implemented for failed feedwater check valve cotter pins.

### Description:

On November 7, 2001, the inspectors identified that licensee corrective actions were not adequate to prevent a repeat failure of cotter pins identified by the licensee on April 15, 2000, in feedwater check valves B2100F032B and B2100F076B. The cotter pin prevents the disc retaining nut from rotating (backing off), which would allow the disc to separate from the hinge arm. The B2100F076B check valve serves as a containment isolation valve and thus the disc separation would cause loss of the safety-related containment isolation function. Further, the separated disc could potentially lodge in the feedwater piping and cause a loss of feedwater transient. Therefore, the cotter pin failures were considered a significant condition adverse to quality.

On April 15, 2000, the licensee documented the failed cotter pins in CARD 00-15396. The apparent cause of the failure was attributed to installation of an undersized cotter pin with inadequate diameter and length. The licensee did not determine why the incorrectly sized cotter pin had been installed in these check valves. The licensee corrective actions included replacing the cotter pins with a revised cotter pin design on each of the four feedwater check valves (two installed in each feedwater header) made by the same vendor. On November 4, 2001, the licensee again found a missing cotter pin with the revised cotter pin design in feedwater check valve B2100F076A and documented this in CARD 01-20931. This condition indicated that corrective actions implemented for the feedwater check valves in April of 2000 were not effective at preventing recurring cotter pin failures.

### Analysis:

This finding was greater than minor because, if left uncorrected, it could have resulted in feedwater check valve failures, which would degrade the containment barrier and potentially result in a loss of feedwater.

This finding affected the barrier integrity and initiating events cornerstones and was determined to be of very low risk significance (Green) by the Reactor Safety Significance Determination Process. This determination was based on evaluating the significance of a loss of feedwater transient and loss of containment barrier integrity caused by a postulated separation of the B2100F076B valve disc. The inspectors used the following assumptions in this evaluation:

- The potential for disc separation on valve B2100F076B had existed for one-half of the previous operating cycle when the cotter pin was last inspected.
- If the feedwater disc had separated, then the remaining check valves in the feedwater system would have functioned to maintain the containment barrier.
- Although both trains of the feedwater system were potentially affected by the degraded check valves, the most degraded check valve (B2100F076B) would have failed first. The failed valve disc would have lodged in the feedwater header piping causing loss of feedwater flow in the B feedwater header.
- The remaining A feedwater header would continue to function for sufficient time to support mitigation of the plant transient caused by loss of feedwater from the B feedwater header check valve failure.

Enforcement:

Notwithstanding, 10 CFR Part 50 Appendix B, Criterion XVI "Corrective Actions" states in part that conditions adverse to quality, such as deficiencies and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition. Contrary to the above, corrective actions for the failed cotter pins in feedwater check valve B2100F076B did not determine the cause for the installation of the undersized cotter pin and corrective actions were not adequate to prevent recurrence of failed cotter pins replaced as part of the corrective actions documented in CARD 00-15396. This issue is considered a violation of 10 CFR Part 50 Appendix B, Criterion XVI. Because of the very low safety significance, this violation is being treated as an NCV (**NCV 50-341/01-014-02**) consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is documented in the corrective action program in CARD 01-20730.

1R11 Licensed Operator Requalification (71111.11)

Written Examination and Operating Test Results

a. Inspection Scope

The inspectors reviewed the pass/fail results of individual written tests, operating tests, and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calendar year 2001.

b. Findings

No findings of significance were identified.

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 for the following systems:

- Steam Jet Air Ejectors (N6200)
- Offgas System (N6100)
- Startup Range Neutron Monitoring System, Source Range (C5110)
- Startup Range Neutron Monitoring System, Intermediate Range (C5111)

b. Findings

No findings of significance were identified.

1R14 Nonroutine Plant Evolutions (71111.14)

.1 Failure to Achieve Required Flow rate

a. Inspection Scope

The inspectors attended system engineering meetings and reviewed documents associated with the failure of the high pressure coolant injection system to achieve discharge flow of greater than or equal to 5000 gallons per minute in less than or equal to 29 seconds. The inspectors also interviewed engineering personnel and reviewed CARD 01-19397 that was written to document the failure to meet the acceptance criteria.

b. Findings

No findings of significance were identified.

.2 High Pressure Coolant Injection System Pressure Transient During Startup

a. Inspection Scope

On October 10, 2001, the high pressure coolant injection system experienced a slight water hammer during system startup. The inspectors performed a partial walkdown of the high pressure coolant injection system to check for instrument and piping damage. Further, the inspectors reviewed the associated engineering evaluation, CARD 01-18949 that documented the event, General Electric Transient Analysis System traces that monitored system parameters during the event and interviewed system engineers to determine impact on system operability.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 High Severe Wear Index on EDG 14

a. Inspection Scope

On October 31, 2001, the licensee performed a load reject test on EDG 14. Following the test, chemists sampled the diesel outboard bearing oil and found a high severe wear index, which meant excessive metallic particles were inside the oil. Condition Assessment Resolution Document 01-20512 was written to document the concern. The inspectors conducted interviews and reviewed the licensee's root cause and operability determination for the event.

b. Findings

No findings of significance were identified.

.2 Bad Grease Found in Several Valve Motor Operators

a. Inspection Scope

The inspectors noted several CARDS describing bad grease and low grease level in motor operators for balance-of-plant equipment. The inspectors reviewed the CARDS and associated vendor information and discussed aspects of the licensee's lubrication program with the lubrication engineer.

b. Findings

No findings of significance were identified.

.3 Local Leak Rate Testing of Standby Liquid Control Discharge Check Valves

a. Inspection Scope

On November 4, 2001, the licensee performed local leak rate testing on two discharge check valves (C4100F006 and -F007) for the standby liquid control system. The check valves are installed in series downstream of the standby liquid control pump. Because both valves failed the acceptance criteria for leakage, the inspectors were concerned that a direct release path could exist during a design basis accident. Condition Assessment Resolution Documents 01-20113 and 01-20114 were written to document the local leak rate test failures. The inspectors conducted interviews with the system engineer, reviewed test procedures, drawings and data results for this issue.

b. Findings

No findings of significance were identified.

.4 Inside Diameter Micrometer Found Out of Tolerance for Work on Emergency Diesel Generator 14

a. Inspection Scope

On October 23, 2001, the licensee discovered that the micrometer used to measure the inside diameter of the bearing enclosure assembly for emergency diesel generator 14 outboard bearing was out of tolerance. The inspectors reviewed CARD 01-19419, written to document this condition, and the associated engineering functional analysis.

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 documents were reviewed for adequacy of the safety evaluation and consideration of design parameters. The modifications were for equipment upgrades of existing equipment.

- Engineering Design Package - 29500, Rev 0, "Retirement of Control Rod Drive Sample Panel H21P450 Continuous Monitoring Capabilities"
- Engineering Design Package - 27238, Rev A, "EDG Governor System Replacement"

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the test data for the components and systems below to ensure compliance with design and licensing bases and to assure that the testing demonstrated that the equipment and system were capable of performing its intended function.

- Performance of system procedure 23.307, "EDG System."
- Performance of surveillance procedure 24.202.01, "High Pressure Coolant Injection Pump Time Response and Operability Test at 1025 psig."

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage (71111.20)

a. Inspection Scope

Throughout RF08, the inspectors conducted and/or observed several activities associated with the refueling outage. The inspectors reviewed CARDS that were written for issues discovered during these activities. The inspectors monitored licensee compliance with Technical Specifications while in Mode 5. During refueling, the inspectors checked the calibration of indicators used to monitor alternate means of decay heat removal.

- Observed the shutdown of the plant
- Observed the cooldown of the unit
- Toured the drywell

- Attended several outage meetings, reviewed previous outage critiques and reviewed outage preparation plans
- Observed five fuel moves from the refueling bridge
- Observed the Infrequently Performed Test or Evolution 01.05, "Control Rod Uncoupling"
- Reviewed division swap restraints
- Reviewed the TS requirements for shutting down the residual heat removal system during the shutdown cooling outage
- Checked safety-tagging record tags hung for the shutdown cooling outage
- Reviewed the freeze seal put on the division 1 RHR pump suction relief valve
- Observed the closeout of the torus

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors witnessed and reviewed test data for the EDG 14 load reject test. The inspectors reviewed the Updated Final Safety Analysis Report and Technical Specifications to confirm that the surveillance activities had verified that the equipment would perform its intended safety functions and was ready for operation. The inspectors observed staffing levels of the control room and other personnel for adequately conducting the test. The inspectors reviewed the use of the corrective action program for the test.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed Temporary Modification 01-0008, which evaluated the installation of alternate backup pumps while the EF2 diesel fire pump was out of service for unplanned maintenance. Further, the inspectors reviewed removal of Temporary Modification 00-0007 which had evaluated installing a torque thrust cell on valve P4400F603B (Division 2 emergency equipment closed cooling supply isolation) during the previous refueling outage. The inspectors also reviewed procedure MES 12, "Performing Temporary Modifications."

b. Findings

No findings of significance were identified.

## 2. 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 Reviews

###### a. Inspection Scope

The inspectors reviewed the implementation of physical and administrative controls over access to radiologically restricted areas, including worker adherence to these controls, by reviewing station procedures, radiation work permits (RWPs), and walking down radiologically significant areas (high radiation areas, radiation areas, and airborne radioactivity areas) of the station. Specifically, areas in the Reactor Building, the Drywell, the Turbine Building, and the Radwaste and Onsite Storage Facilities were observed to verify these areas were posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and Technical Specifications.

###### b. Findings

No findings of significance were identified.

##### .2 Identification and Resolution of Problems

###### a. Inspection Scope

The inspectors reviewed the Nuclear Quality Assurance observations and licensee CARs completed in conjunction with RF08 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-Reasonably-Achievable Planning and Controls (71121.02)

##### .1 Radiological Work/As-Low-As-Reasonably-Achievable (ALARA) Planning

###### a. Inspection Scope

The inspectors reviewed the station's procedures for radiological work/ALARA planning and scheduling, and evaluated the dose projection methodologies and practices implemented for RF08, to verify that sound technical bases for outage dose estimates existed. Specifically, the inspectors reviewed five radiologically significant RWP/ALARA



planning packages to verify that adequate man-hour estimates, job history files, lessons learned, and industry experiences were utilized in the ALARA planning process.

b. Findings

No findings of significance were identified.

.2 Job Site Inspections and ALARA Controls

a. Inspection Scope

The inspectors observed work activities in the radiological restricted areas that were performed in radiation or high radiation areas to evaluate the use of ALARA controls. Specifically, the inspectors reviewed radiological surveys, attended pre-job radiological briefings, and assessed job site ALARA controls, in part, for the following work activities:

- Installation and removal of scaffolding, power, and lights in the Drywell and Steam Tunnel (RWP No. 01-1105)
- Removal and replacement of control rod drives (RWP No. 01-1119)
- Desludging and inspection work in the Torus (RWP No. 01-1164)
- Insulation removal, repair, and replacement in the Drywell and Steam Tunnel (RWP No. 01-1110)
- Inservice inspection work in the Drywell and Steam Tunnel (RWP No. 01-1112)

Worker instruction requirements including protective clothing, engineering controls to minimize dose exposures, the use of predetermined low dose waiting areas, as well as the on-the-job supervision by the work crew leaders and radiation protection (RP) technicians were observed to determine if the licensee had maintained the radiological exposure for these jobs ALARA. Enhanced job controls including RP technician use of electronic teledosimetry and stay-times were also evaluated to assess the licensee's ability to maintain real time doses ALARA in the field. Additionally, the inspectors reviewed RP technicians and staff tracking and evaluations for planned and unplanned personnel contamination events that occurred during RF08, to verify technical adequacy and compliance with licensee procedures.

b. Findings

No findings of significance were identified.

.3 Radiation Worker Performance

a. Inspection Scope

The inspectors observed radiation workers performing the activities described in Section 2OS2.2 and evaluated their awareness of radiological conditions, personal electronic dosimetry alarm set points, and their implementation of applicable radiological controls.

b. Findings

No findings of significance were identified.

4. Verification of Exposure Estimates, Dose Trending, and Exposure Tracking Systems

a. Inspection Scope

The inspectors reviewed the total outage dose goals, selected individual job dose goals, and the related dose trending for RF08. As of November 8, 2001 (day 13 of an approximately 26 day outage), the licensee had recorded an exposure of 65.83 person-rem compared to the total estimate of 104.47 person-rem for the outage. The Job Progress ALARA Review for RWP No. 01-1105 (Drywell scaffold, power, and lighting installation and removal) was examined to evaluate the licensee's ability to assess the effectiveness of the ALARA plans in a timely manner and institute changes in the plan or its execution, if warranted. The licensee's exposure tracking system was also reviewed to determine if the level of exposure tracking detail, exposure report timeliness, and report distribution were sufficient to support the control of collective exposure. Additionally, the inspectors reviewed dose tracking records for all workers on selected RWPs to assess the exposure tracking system and the effectiveness of controls for maintaining individual exposures ALARA and relatively uniform across the workgroup.

b. Findings

No findings of significance were identified.

5. Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed the current Nuclear Quality Assurance audit checklist, Nuclear Quality Assurance observations, and licensee CARDS completed in conjunction with RF08 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.

#### 4. OTHER ACTIVITIES (OA)

##### 4OA5 Management Meetings

###### Exit Meeting Summary

The inspectors presented the inspection results to Mr. Don Cobb and other members of licensee management at the conclusion of the inspection on November 16, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

###### Specific Area Exits

###### Licensed Operator Requalification

Senior Official at Exit:	Kirk Snyder, Operations Training Supervisor
Date:	September 25, 2001
Proprietary:	No
Subject:	Results of Licensed Operator Requalification Testing for Calendar Year 2001 and Applicability of NRC Inspection Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination process (SDP)"
Change to Inspection Findings:	No

###### Inservice Inspection Activities

Senior Official at Exit:	S. Stasek, Director, Nuclear Assessment
Date:	November 8, 2001
Proprietary:	Yes. Proprietary information was received and reviewed by the inspectors and subsequently returned to the licensee. Licensee attendees at the interim exit acknowledged the findings presented and did not identify any potential report input as proprietary information.
Subject:	Biennial Inservice Inspection Activities (IP 71111.08)

Occupational Radiation Safety

Senior Official at Exit:	K. Hlavaty, Acting Plant Manager/Operations Manager
Date:	November 9, 2001
Proprietary:	No
Subject:	Occupational Radiation Safety (Access Control and ALARA)
Change to Inspection Findings:	No

## KEY POINTS OF CONTACT

### Licensee

H. Arora, Nuclear Licensing  
J. Bragg, Supervisor, Nuclear Quality Assessment  
A. Brooks, NDE Level III, Inservice Inspection Performance Engineering  
S. Cashall, Principle Engineer, Nuclear Licensing  
D. Cobb, Plant Manager  
D. Craine, Radiological Engineering Supervisor  
L. Crissman, Radiation Protection Operations Supervisor  
J. Davis, Manager, Outage  
T. Dong, Manager, In-Service Inspection  
Q. Duong, Manager, Plant Support Engineering  
R. Hambleton, Supervisor, Inservice Inspection Performance Engineering  
K. Hlavaty, Manager, Operations  
E. Kokosky, Manager, Radiation Protection  
J. Korte, Manager, Security  
D. Kusumawati, Engineer, Licensing  
R. Libra, Director, Nuclear Engineering  
R. Newkirk, Supervisor, Licensing  
D. Noetzel, Manager, System Engineering  
W. O'Connor, Vice President, Nuclear Generation  
J. Pendergast, Licensing  
N. Peterson, Manager, Nuclear Licensing  
J. Priest, Nuclear Quality Assurance  
C. Ramsey, Manager, Performance Engineering  
L. Sanders, Manager, Nuclear Training  
K. Snyder, Operations Training Supervisor  
S. Stasek, Director, Quality Assessment  
K. Tyger, Supervisor, Nuclear Quality Assurance

### Bartlett Nuclear (Contractor)

R. Paul, Auditor

### NRC

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

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

50-341/01-14-01	URI	Missing Fire Penetration Seals
50-341/01-14-02	NCV	Inadequate corrective actions for failed feedwater check valve cotter pins (Section 1R08)

### Closed

50-341/01-14-02	NCV	Inadequate corrective actions for failed feedwater check valve cotter pins (Section 1R08)
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### Discussed

None

## LIST OF ACRONYMS USED

ALARA	As-Low-As-Reasonably-Achievable
ASME	American Society of Mechanical Engineers
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
EDG	Emergency Diesel Generator
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
RF08	Eighth Refueling Outage
RHR	Residual Heat Removal
RP	Radiation Protection
RWP	Radiation Work Permit
SDP	Significance Determination Process
TS	Technical Specification
URI	Unresolved Item

## 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

WR 000Z004107	Welding South Reactor Feedwater Drains	
WR N91610100	Grinding Threaded Studs from Moisture Separator Reheater Mainway	
Operations Conduct Manual MOP 11	Fire Protection	Revision 5
Work Control Conduct Manual MWC 02	Work Control	Revision 21
Fermi 2 Safety Handbook	Section 13: Welding and Burning	Revision 6
	Nuclear Training Attendance Record	
Event Number 38380	Condition of License Report Due to Unavailable Emergency Lighting	October 11, 2001
CARD 01-17497	No Emergency Battery Pack Lights Provided in Areas with Equipment Operated in Procedure 20.000.18, "Dedicated Shutdown"	October 11, 2001
Abnormal Operating Procedure 20.000.18	Control of the Plant From the Dedicated Shutdown Panel	Revision 30
CARD 01-18345	Missing Fire Seals	10/30/01
Technical Service Request 31181	Changes to Penetration Drawings and UFSAR Figure	August 31, 2000
Procedure 28.507.05	Inspection of Penetration Fire Stops	Revision 9

### 1R07 Heat Sink Performance

Surveillance Procedure 47.205.02	Residual Heat Removal Division 2 (South) Heat Exchanger Performance Test	Revision 6
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EPRI 107397	Service Water Heat Exchanger Testing Guidelines
NRC Generic Letter 89-13	Service Water System Problems Affecting Safety-Related Equipment.

1R08 Inservice Inspection Activities

Audits

00-0104	ISI/IST Special Processes Containment Inservice Inspection Programs	March 13 through July 20, 2000
	NDE-IST Program Evaluation Sheet	February 11, 2000 thru April 15, 2000
	ISI/NDE-IST Program Evaluation Sheet	September 14, 2001

CARDS

00-10511	Rejectable Dye Penetant Examination
00-14372	Incorrect Penetration Listed in ISI-NDE/IST Program Evaluation Sheet
00-14383	Surface Indications Found During Inservice Magnetic Particle Examination
00-14396	Surface Indications Found During Inservice Magnetic Particle Examination
00-15261	Inappropriate Implementation of New Program Prior to a Refueling Outage
00-15396	Feedwater Check Valve Found Missing Cotter Pin
00-15469	Debris Found in RPV Annulus
00-18065	The Visual Exam Procedure for Examination of Containment Bolting Does Not Conform with the Requirements of 1992 Edition of the ASME Section XI Code.
01-00976	Through Wall Erosion of Valve Body
01-20931	Hinge Arm Nut Retaining Pin Missing



Engineering Design Changes & Specifications

29805	Replacement of EECW Heat Exchangers	Revision 0
3071-545	Detroit Edison Design Specification for Emergency Equipment Cooling Water System Plate and Frame Heat Exchangers Fermi-2	Revision B
T-N-990901	EECCW Design Report	December 6, 1999

Nondestructive Examination Reports

MT05	RHR Pipe to Nozzle Weld FW-E113158-10WH4	March 31, 2000
MT05R	RHR Pipe to Nozzle Weld FW-E113158-10WH4	April 14, 2000
MT7-30	MT of Hydrogen Recombiner Pipe to Tee Weld FW-T48-04-2097-20W21	April 4, 2000
MT7-30R	MT of Hydrogen Recombiner Pipe to Tee Weld FW-T48-04-2097-20W21	April 18, 2000
ER2-98-1H5RZ	Final Report for Fermi Nuclear Plant Unit 2 Core Shroud Ultrasonic Examination (Proprietary)	Revision 0
EF2-98-1H5R4-14	Fermi 2 Reactor Pressure Vessel Internal Examination Report	October 2, 1998
EFT-00-15	Fermi 2 Reactor Pressure Vessel Internal Examination Report	May 1, 2000

Procedures

43.000.017	Reactor Pressure Vessel-Invessel Internals Inspection	Revision 11
UNIX DETC	Generic Procedure for the Ultrasonic Examination of Piping Welds Using the Intraspect Automated Imaging System	Revision 2
I/UX-PDI-254	Generic Automated Ultrasonic Procedure for OD RPV Shell Weld Examinations (Proprietary)	Revision 1
ISI-PDI-UT-1	PDI Generic Procedure for the Ultrasonic Examination of Ferritic Piping Welds	Revision 3
ISI-PDI-UT-6	Manual Ultrasonic Examination of Reactor Pressure Vessel Welds in Accordance with PDI-UT-6 (Proprietary)	Revision 0
ISI-PDI-UT-7	Manual Ultrasonic Through Wall and Length Sizing of Ultrasonic Indications in Reactor pressure Vessel Welds in Accordance with PDI-UT-7 (Proprietary)	Revision 0
ISI-UT-210	Manual Ultrasonic Procedure for the Examination of Pressure Vessel Welds Including non-PDI Reactor Vessels and Heads (Proprietary)	Revision 0
ISI-UT-211	Manual Ultrasonic Procedure for the Examination of Nozzle Inner Radius (Proprietary)	Revision 1
GFRM2-ISI-246	Automated Ultrasonic Procedure for Examination of Feedwater Nozzle Inner Radius Areas at Fermi Using the Intraspect Imaging System (Proprietary)	Revision 1
39.NDE.001	Liquid Penetrant Examination, Solvent Removable	Revision 21
39.NDE.002	Magnetic Particle Examination	Revision 22

### Miscellaneous Documents

ISI-NDE Program	Inservice Inspection-Nondestructive Examination (ISINDE) Program Plan for Fermi 2 Power Plant	Revision 2
Engineering Evaluation 9051869-01	Rod, Stainless Steel 5/32 Diameter	August 10, 2000
NIS-2	N5-3 Residual Heat Removal Service Water (Division 1)	October 21, 1999
000Z992391-60	Weld Process Control Sheet	October 15, 1999
000Z992391-60	Weld Material Requisition	November 9, 1999
000Z992391-60	Weld Material Requisition	November 10, 1999
A11-3.1	Weld Procedure Specification	January 8, 1988
WA11-3.1	Weld Procedure Qualification Record	October 21, 1987
WA11-3.3	Weld Procedure Qualification Record	June 15, 1990

### 1R11 Licensed Operator Requalification

Nuclear Training Work Instruction 5.12	Remediation Activities (reviewed completed forms for individuals who had failed portions of the 2001 operator license requalification exam)	Revision 0
Nuclear Training Work Instruction 5.15	Remedial Training (reviewed completed forms for individuals who had failed portions of the 2001 operator license requalification exam)	Revision 1

### 1R12 Maintenance Rule Implementation

	Emergency Operating Procedures	
CARD 00-00093	Off-gas Chiller Unit Tripping	January 27, 2000
CARD 00-00409	Off-gas Chiller Unit Tripping	January 11, 2000
CARD 00-01510	Chiller Tripped	September 8, 2000
CARD 00-01511	Chiller Tripped	September 7, 2000
CARD 00-11309	West Off-gas Chiller Low Oil Pressure Trip	February 27, 2000
CARD 00-17091	Freon Injection Solenoid Burned Up	June 13, 2000

CARD 00-17389	#2 SJAE Isolated Due To N6200F606	June 6, 2000
CARD 00-17618	N6200F608 "4 SJAE Discharge Valve Closed, Isolating SJAE #4	June 13, 2000
CARD 00-17618	Flow Switch Failure	June 15, 2000
CARD 98-22969	W OG Chiller Tripped on low oil pressure	November 18, 1998
CARD 98-22060	E O/G Chiller Unit Trip	October 24, 1998
CARD 99-14062	E OG chiller in manual pre-cool mode and tripped on high freon pressure	May 25, 1999
CARD 99-14226	W OG chiller tripped w/o alarms. C OG chiller also tripped	June 6, 1999
CARD 99-16452	All attempts to restart the E Precooler Chiller have failed.	August 18, 1999
CARD 99-16464	W OG chiller failed to start when required	August 21, 1999
CARD 99-18341	W OG chiller tripped. Reset low oil pressure and freon pressure switches	November 21
CARD 00-01511	Received 6D27, "E. O/G Chiller Refrig Unit Trouble," and a trip of the E. O/G chiller	September 6, 2000
CARD 00-19872	Received 6D32, "W Chiller Refrig Unit Trouble," Noticed the W. O/G chiller tripped.	November 3, 2000
CARD 01-16412	Received 6D36, "E O/G Chiller Outlet High Temp Alarm." W O/G chiller tripped	June 16, 2001
CARD 01-16988	Received alarm 6D32, "W Refrig Unit trouble," due to W O/G compressor oil pressure low. W O/G chiller was attempting to start in pre-cool.	July 12, 2001
01-19255	East O/G chiller not working properly  Second Quarter, year 2001 Health Report for Condenser and Auxiliaries  Second Quarter, year 2001 Health Report for Startup Range Neutron Monitoring	September 26, 2001
CARD 01-14314	IRM C drive motor fuse blown	April 29, 2001
CARD 00-16243	SRM "H" upscale trip, half scram	May 4, 2000
CARD 00-25724	Drifting mean square analog module prevents proper calibration of IRM "D"	December 12, 2000

CARD 01-11477	IRM "C" failed downscale, found F-1 blown	May 16, 2001
CARD 01-12406	Erratic indication for IRM "H" recorder	February 12, 2001
CARD 01-14314	IRM "C" drive motor fuse blown	April 29, 2001
CARD 00-10679	10 consecutive failures of C51R602A during 44.01.105	February 18, 2000
CARD 00-10951	As found out of tolerance readings	June 16, 2000
CARD 00-10996	Pre Reg/Voltage regulator calibration	August 8, 2000
CARD 00-11227	Recorder pen sticking	February 15, 2000
CARD 00-11463	During performance of 44.01.101 the red pen on C51R602A was found sticking	April 2, 2000
CARD 00-15022	SRM "C" failed to insert following reactor scram	April 1, 2000
CARD 00-15476	Repetitive failures of SRM recorders	May 2, 2000
CARD 00-19864	Reset switch does not operate smoothly on SRM "C"	November 2, 2000
CARD 00-19865	SRM "B" recorder sticks at 100% scale	November 2, 2000
CARD 01-13877	SRM's - TRM calibration frequency does not match Tech Specs calibration frequency (TRM = 184 days, TS = 18 months)	May 7, 2001
CARD 01-17116	SRM "B" failed downscale	

#### 1R14 Nonroutine Plant Evolutions

CARD 01-19937	Procedure 24.202.01, Failed Acceptance Criteria	October 10, 2001
Procedure 24.202.01	HPCI Pump Time Response and Operability Test at 1025 psi	Revision 71
Technical Requirements Manual Table 3.3.5.1-1 Function 3a	Emergency Core Cooling System Instrumentation	Revision 31
	General Electric Transient Analysis Report System	October 10, 2001
CARD 01-18949	HPCI Flow Transient on System Startup	October 10, 2001

### 1R15 Operability Evaluations

CARD 01-20512	EDG #14 SWI Sample at 1.8 Billion (O/B)	October 31, 2001
WR 000Z013526	EDG #14 SWI Sample at 1.8 Billion (O/B), Replace Alternator Bearing	October 31, 2001
Drawing 01663701	Beloit Power Systems Drawing of Diesel Bearing Enclosure	1976
CARD 01-17644	Bad Grease in Motor Operator for Valve N6200F622	October 29, 2001
CARD 01-17646	Bad Grease in Motor Operator for Valve N3016F619	October 29, 2001
CARD 01-17647	Bad Grease in Motor Operator for Valve N3013F602	October 30, 2001
CARD 01-17648	Bad Grease in Motor Operator for Valve N2200F676	October 30, 2001
CARD 01-17649	Low Grease Level in Motor Operator for Valve N3016F602	October 30, 2001
CARD 01-20113	Failed LLRT of C4100F006	November 4, 2001
CARD 01-20114	Failed LLRT of C4100F007	November 5, 2001
Job 3145011021	LLRT Closed Test for C4100F007	November 10, 2001
Job 3145011112	Perform 43.401.347 LLRT Closed Test for C4100F007	November 4, 2001
Job 3144011021	Perform 43.401.347 LLRT Closed Test for C4100F006	November 7, 2001
Drawing 6M721- 5704	Standby Liquid Control System Functional Operating Sketch	Revision I
Engineering Functional Analysis	Engineering Functional Analysis of EDG 14 Due to an M&TE Instrument Found Out of Tolerance	October 25, 2001
CARD 01-19419	Failed Calibration of ID Micrometer, ID-40002-M on Work Completed by Mechanical Maintenance	October 5, 2001

### 1R17 Permanent Plant Modifications

Engineering Design Package - 29500	Retirement of Control Rod Drive Sample Panel H21P450 Continuous Monitoring Capabilities.	Revision 0
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Engineering Design Package - 27238	EDG Governor System Replacement.	Revision A
Work Request 000Z990681	Replace EDG 12 Governor Control System per EDP 27238	November 5, 2001
Work Request 000Z002558	Instrument Rack: Reactor Building Control Rod Drive Sample Station.	January 5, 2001

1R19 Post Maintenance Testing

System Procedure 23.307	Emergency Diesel Generator System
Surveillance Procedure 24.202.01	HPCI Pump Time Response and Operability Test at 1025 psig

1R20 Refueling and Outages

Procedure 22.000.03	Shutdown from 100 percent to 25 Percent	Revision 61
Procedure 22.000.04	Plant Shutdown from 25% Power	Revision 43
Procedure 23.143	Hydrogen Water Chemistry System	Revision 11
Procedure 23.108	Extraction Steam and Heater Drains	Revision 55
Procedure 23.107	Reactor Feedwater and Condensate Systems	Revision 89
Procedure 24.603.02	SRM/IRM Overlap Verification	Revision 28
Procedure 23.300.02	345kV Bus Operations	Revision 2
Procedure 23.312	Main Transformer Cooling System	Revision 17
Procedure 23.109	Turbine Operating Procedure	Revision 52
Procedure 23.603	Intermediate Range Monitoring System	Revision 15
Procedure 23.602	Source Range Monitoring	Revision 24
Procedure 23.125	Condenser Vacuum	Revision 43
Procedure 23.113	Turbine Sealing Steam	Revision 28

Procedure 22.000.05	Pressure/Temperature Monitoring During Heatup and Cooldown	Revision 36
Procedure 23.610	Reactor Protection System	Revision 18
Procedure 23.137	Nuclear Boiler System	Revision 38
Procedure 23.205	Residual Heat Removal System	Revision 72
Procedure 23.427	Primary Containment Isolation System	Revision 16
RF-08	Preparation Status Report	October 22, 2001
ISEG Report 01-006	RF08 Outage Schedule Review	September 14, 2001
	Fermi 2 F-07 Post Outage Report and Critique	April 1, 2000 through May 23, 2000
IWMG	Fermi 2 Integrated Work Management Guideline	Revision 4
Technical Specification Surveillance Requirement 3.9.7.1	Verify RHR SDC System is Capable of Decay Heat Removal Every 12 Hours	Amendment 134
Technical Specification 3.9.7, Action A.1	Verify Alternate Method of Decay Heat Removal Available Within 1 hour and at Least 24 Hours thereafter when Required RHR Shutdown Cooling System is Inoperable	Amendment 134
Technical Specification 3.9.4	Verify Full in Position Indication Channel for Each Control Rod is Operable When in Mode 5	Amendment 134
Generic Letter 88-17	Loss of Decay Heat Removal	October 17, 1988
Generic Letter 87-12	Loss of Residual Heat Removal (RHR) While Reactor Coolant System (RCS) is Partially Filled	July 9, 1987
Procedure 24.000.03	Mode 5 Shiftly, Daily and Weekly Surveillances, Attachment 1, "Shiftly/Daily - - Mode 5"	Revision 54
Procedure 24.000.01	Situation Surveillances/ LCO Tracking, Attachment 1, "LCO Action/Situational Surveillance Tracking Log	Revision 43
Procedure 23.800.07	Reactor Coolant Natural Circulation and Residual Heat Removal, Attachment 1, "Natural Circulation Temperature Monitoring Log"	Revision 6



WR B536010100	Calibrate B21-No27, Division 2 Reactor Level Floodup Transmitter	October 27, 2001
WR 000Z012079	G41R600, FPCCU B HX Outlet Temperature Blue Pen is Notching	July 10, 2001
WR 000Z002791	G41N185A FPCCU F/D A Effluent Low Flow Switch	September 26, 2001
WR 000Z002792	G41N185B FPCCU F/D B Effluent Low Flow Switch	September 26, 2001
WR G071010100	Calibrate G33R607, RWCU System Temperature Indicator	April 23, 2001
WR 0548010724	Perform 44.020.152 NS4 Reactor Water Cleanup Differential Flow Calibration/ Functional	June 12, 2001
WR 000Z993116	Implement ERE Modification for RBCCW Heat Exchanger Temperature Recorder P42-R800	September 16, 2001
CARD 01-20217	Calibration of Instruments Used to Perform Shutdown Cooling System Surveillances not Completed	November 17, 2001

#### 1R22 Surveillance Testing

IPTE 01-06	Emergency Diesel Generator Mechanical Overspeed Test	
CARD 01-15493	EDG Reliability Review - Need for O/S Trip Test	June 5, 2001
Regulatory Guide 1.9, Revision 2, Section C.4	Selection, Design, and Qualification of Diesel Generator Units Used as Standby (Onsite) Electric Power Systems at Nuclear Power Plants	December 1979
UFSAR, Appendix A	Conformance with Regulatory Guides	Revision 3
TS Surveillance Requirement 3.8.1.8	Electrical Power Systems	Amendment 134

#### 1R23 Temporary Plant Modifications

Temporary Modification 01-0008	Provide an Alternate Backup Pump for the EF2 Diesel Fire Pump.	Revision 0
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Temporary Modification 00-0007	A Torque Thrust Cell Installed in Between the Valve Yokearm and the Limitorque Operator on P4400F603B, Which is the RBCCW Div 2 Supply Isolation Valve.	Revision 0
CARD 00-15467	Dynamic Thrust Testing Not Being Performed During RF07	April 28, 2000
Work Request 000Z001575	Remove T-Mod 00-0007 (Removal of TTC on MOV)	November 5, 2001

2OS1 Access Control to Radiologically Significant Areas

CARD 01-16206	Signed on the Wrong Task of the RWP	October 29, 2001
CARD 01-20568	Electronic Dosimeter Indicating Incorrect "Mode"	October 29, 2001
CARD 01-20610	Dose Alarms on Electronic Dosimetry Moving the Moisture Separator to the Dryer/Separator Pit	October 30, 2001
CARD 01-20640	Entering the DW on the Wrong RWP	October 30, 2001

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

	BRAC Points and Trending Surveys	November 5, 2001
	Fermi 2 RPM System Summary RWP Activity Report	November 5 - 8, 2001
	RF08 Reportable and Non-Reportable Percons (Personnel Contaminations)	November 7, 2001
01-0115	NQA Audit Checklist	October 22 - November 9, 2001
CARD 01-19341	ALARA Violations Due to Inadequate Performance (Safety Card)	October 29, 2001
CARD 01-20646	Personnel Contaminations Due to Leak While Installing LPRM Drain Cans	October 31, 2001
Plant Technical Procedure 63.000.200	ALARA Reviews	Revision 14
Review 01-1105	Job Progress ALARA Review for RWP 01-1105	November 7, 2001
RWP/ALARA Plan 01-1105	Install and Remove Scaffold, Power, and Lights DW and RB-1 Steam Tunnel	Revisions 0 & 1

RWP/ALARA Plan 01-1110	Insulation Removal, Repair, and Replacement in the Drywell and RB-1 Steam Tunnel	Revision 2
RWP/ALARA Plan 01-1112	ISI Inspections in the Drywell and RB-1 Steam Tunnel	Revision 0
RWP/ALARA Plan 01-1119	Replace Control Rod Drives	Revision 0
RWP/ALARA Plan 01-1164	Torus Diving - Desludge, Inspection (Above and Below Water), Coating Inspection, Retrieve Any Dropped Material Including Support Work and Filter System	Revision 1

INFORMATION REQUESTED ON JULY 17, 2001 BY E-MAIL (To Rod Johnson)

- A. Please provide the following information to Melvin S. Holmberg at the Region III NRC office located at 801 Warrenville Rd, Lisle IL 60532, no later than October 29, 2001, to support the NRC Inservice Inspection (IP 71111.08) scheduled to begin at the Fermi site November 05, 2001.
- 1) A detailed schedule of nondestructive examinations planned for Class 1 & 2 systems and containment, performed as part of your ASME Code ISI Program during the scheduled inspection week. This should also include any special nondestructive examinations of core internal components such as the core shroud welds.
  - 2) A copy of the procedures used to perform the examinations identified in A.1. For ultrasonic examination procedures qualified in accordance with Appendix VIII, of Section XI of the ASME Code, provide documentation supporting the procedure qualification. This documentation should include the test data identifying the types of defects used in the procedure qualification, the equipment used (cables, probes, transducers including serial numbers) and the Code Edition used for qualification. Additionally, the data supporting the detection and sizing capability of the procedure is to be provided.
  - 3) A copy of any ASME Section XI, Code Relief Requests applicable to the examinations identified in A.1.
  - 4) A copy of the 90 day ISI summary report from the previous outage.
  - 5) A list identifying nondestructive examination reports (ultrasonic, radiography, magnetic particle, dye penetrant, visual (VT-1, VT-2, VT-3)) which have identified relevant indications on Code Class 1 & 2 systems in the past two refueling outages.
  - 6) List of welds in Code Class 1, 2 and 3 systems which have been completed since the beginning of the last refueling outage (identify system, weld number and reference applicable documentation).
  - 7) Copy of the most recent quality assurance department audit, which included the ISI program and activities. Copies of documents resolving findings in this audit.
  - 8) For any reactor vessel weld examinations scheduled during the inspection, provide a detailed description of the welds to be examined, extent of the planned examination and a copy of your responses to the NRC, associated with Generic Letter 83-15.
  - 9) Identify any non-code repairs (if any) performed on Code Class 1,2, or 3 systems within the last two refueling outages.
  - 10) Provide a list with description of ISI related issues entered into your corrective action system beginning with the date of the last refueling outage.

- 11) Provide a copy of any part 21 reports submitted beginning with the date of the last refueling outage.
- 12) Copy of responses to NRC Generic Letter 94-03: INTERGRANULAR STRESS CORROSION CRACKING OF CORE SHROUDS IN BOILING WATER REACTORS and core shroud weld examination schedule.

B. Information to be provided on-site to the inspectors at the entrance meeting:

- 1) For welds selected by the inspectors from A.6 above, provide copies of the following documents:
  - a) Document of the weld number and location (e.g., system, train, branch)
  - b) Document with a detail of the weld construction
  - c) Applicable Code Edition and Addenda for weldment
  - d) Applicable Code Edition and Addenda for welding procedures
  - e) Applicable weld procedures (WPS) used to fabricate the welds
  - f) Copies of procedure qualification records (PQRs) supporting the WPS on selected welds
  - g) Copies of mechanical test reports identified in the PQRs above
  - h) Copies of the nonconformance reports for the selected welds
  - i) Radiographs of the selected welds and access to equipment to allow viewing radiographs
- 2) For core shroud welds examined within the previous two refueling outages, provide the non-destructive examination records for the core shroud welds inspected.