

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-341/92007(DRP)

Docket No. 50-341

Operating License No. NPF-43

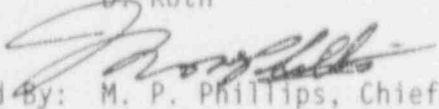
Licensee: Detroit Edison Company
2000 Second Avenue
Detroit, MI 48226

Facility Name: Fermi 2

Inspection At: Fermi Site, Newport, MI

Inspection Conducted: March 12 to May 7, 1992

Inspectors: S. Stasek
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Approved By:  M. P. Phillips, Chief
Reactor Projects Section 2B

5/22/92
Date

Inspection Summary

Inspection on March 12 to May 7, 1992 (Report No. 50-341/92007(DRP))

Areas Inspected: Action on previous inspection findings; operational safety; safety system walkdown; maintenance; surveillance; event followup; LER followup; spent fuel pool activities; and the Part 21 program.

Results: Overall, performance of the operating crews was good this inspection period. The April 7 unit shutdown and subsequent restart evolutions were well conducted (paragraph 7). Adherence to administrative procedures was adequate. However, one instance of where an Abnormal Lineup Sheet (ALS) was improperly implemented was identified (paragraph 3.a) and resulted in a non-cited violation. Surveillance and maintenance activities reviewed during the inspection period appeared to be conducted in accordance with all applicable requirements including radiation protection controls. However, due to improper o-ring installation on one of the Emergency Diesel Generator No. 14 lube oil filters, a fire occurred which resulted in increased unavailability of the engine (paragraph 7). Two potential FSAR discrepancies needing resolution were identified (paragraphs 3.d and 3.g). An absence of permanently installed communications equipment in the control air compressor room was identified (paragraph 3.i). This situation could significantly hamper the capability of personnel in the subject room from hearing plant announcements including emergency notifications. Plant housekeeping practices, in general, were good. However, storage of combustible material in a storage cage in the turbine building exceeded the permit limits (paragraph 3.e) and weaknesses in the housekeeping procedure itself were identified (paragraph 3.f). Two open items were identified (Paragraphs 3.i and 4.b).

DETAILS

1. Persons Contacted

a. Detroit Edison Company

- * T. Bradish, Supervisor, QPA
- C. Cassise, General Supervisor, Mechanical Maintenance
- * S. Catolz, Vice President, Nuclear Engineering and Services
- * J. Contoni, Supervisor, Plant Systems
- * R. Eberhardt, Superintendent, Radiation Protection
- * P. Fessler, Director, Nuclear Training
- * D. Gipson, Assistant Vice President, Nuclear Operations
- L. Goodman, Director, Quality Assurance
- R. Henson, Operations Engineer
- J. Hughes, General Supervisor, Electrical Maintenance
- * J. Joy, Senior Engineer, Compliance
- J. Korte, Director, Nuclear Security
- * A. Kowalczyk, Superintendent, Maintenance and Modifications
- * R. McKeon, Plant Manager, Nuclear Production
- W. Miller, Superintendent, Technical Engineering
- * R. Newkirk, General Director, Regulatory Affairs
- G. Ohlemacher, Licensing
- * W. Orser, Senior Vice President, Nuclear Operations
- * J. Plona, Superintendent, Operations
- * J. Rotondo, Supervisor, Fire Protection and Operating Experience
- * L. Schuerman, General Supervisor, Plant Engineering
- * A. Settles, Director, Licensing
- R. Stafford, General Director, Nuclear Assurance
- D. Stone, Supervisor, Production Quality Assurance
- * J. Tibai, Supervisor, Compliance
- * J. Wald, Supervisor, QE
- * J. Walker, General Director, Nuclear Engineering

b. U.S. Nuclear Regulatory Commission

- * S. Stasek, Senior Resident Inspector
- * K. Riemer, Resident Inspector
- T. Tongue, Project Inspector, RIII
- M. Peck, Resident Inspector, Dresden
- D. Roth, RIII Intern

*Denotes those attending the exit meeting on May 7, 1992.

The inspectors also interviewed others of the licensee's staff during this inspection.

2. Action on Previous Inspection Findings (92701)

- a. (Closed) Open Item (341/86019-02(DRP)): Facility communication improvements. The licensee replaced the sound-powered phone jacks

with standard telephone jacks, installed sound-dampening telephone booths in noisy areas of the plant, and expanded the emergency announcement system. All appropriate safety-related areas of the plant have phone jacks installed. This item is considered closed.

- b. (Closed) Open Item (341/86032-03(DRP)): Corrective actions to loss of modular power unit (MPU) 3. The licensee subsequently completed all MPU load lists and calculations 5024 - 5029. The load list was subsequently incorporated into Procedure 23.308, "120V AC Instrument and Control Power System." Additionally, appropriate alarm response procedures (ARPs) were revised to incorporate capability of identifying MPU failures from associated alarms received in the control room. This item is closed.
- c. (Closed) Violation (341/88014-01(DRP)): Failure to meet limiting condition for operation actions when a division of the non-interruptible air system (NIAS) was taken out of service. The licensee issued revision 3 to Technical Specification Clarification (TSC) 89-011. Specifically, Revision 3 was issued to reflect the inoperability of systems supported by an inoperable control air compressor. This item is considered closed.
- d. (Closed) Open Item (341/88014-02(DRP)). Non-interruptible air system design document reconciliation. The licensee has one more document yet to revise (design specification 3071-520). This is the part of the design specification discussing the interdivisional crosstie valves. The licensee originally committed to change the design specification upon issuance of a Technical Specification (TS) governing the Non-interruptible Air Supply (NIAS) system. Per discussion with licensing department personnel, the inspector was informed that a TS request will not be submitted for the NIAS system. The cognizant system engineer informed the inspector that the design specification will be changed after Detroit Edison formally notifies the NRC that a TS will not be issued for the NIAS system. Both the NRC notification and the design specification change are expected to occur during 1992. This item is closed.
- e. (Closed) Violation (341/88021-02(DRP)): Improper setting of HPCI and RCIC flow controllers. Subsequent submittals made by the licensee identified this matter as a generic industry issue. Specifically, the methodology used to establish the flow setpoints for HPCI and RCIC was consistent with General Electric's generic methodology for establishing emergency core cooling systems (ECCS) flow setpoints. To resolve this issue, NRC Office of Nuclear Reactor Regulation (NRR) is participating in a topical review of industry submittal(s) (reference NEDC-31336) on this matter. Since this has been identified as a generic industry issue and is currently being tracked to resolution within NRC Office of Nuclear Reactor Regulation (NRR), the Fermi specific open item is considered closed.

- f. (Closed) Open Item (341/89002-06(DRP)): Implementation of on-the-job training (OJT) to familiarize electricians with the proper techniques and critical performance elements for performing maintenance on the GE AKF-2-25 type circuit breakers. This matter was previously inspected and addressed in inspection reports 341/89025 and 341/90002. The remaining issue was the closure of deviation event report (DER) 89-1129 to assure improvements to the training document index/training document revision interface such that document revisions on training were adequately incorporated into the training files. Through review of the closed DER and QP-EM-727, Revision 4 "Nuclear Training, Selection, Training and Qualification Program Description" for electricians, the inspector verified that the committed changes were made. In addition, similar actions were verified complete for the other disciplines as well. This item is considered closed.
- g. (Closed) Open Item (341/89008-11(DRP)): Licensee initiatives to prevent a turbine trip from a single failure. The licensee reviewed trip signal initiators to the main turbine to ascertain which should be single failure resistant. A number of turbine trip initiations were evaluated under DER 89-0685 and the licensee determined that none of the corrective actions would be cost effective. However, DER 89-1458 reviewed an area dealing with the turbine thrust bearing trip and involved utilizing two diverse signals to cause the trip function. This review identified one design change to be implemented. The design change, EDP-10868, added a dual thrust monitor for the main turbine thrust bearing wear trip. This EDP was targeted for implementation during refuel outage 02 (RF02) conducted early in 1991. Per discussion with the system engineer, the inspector verified that a dual thrust monitor for the main turbine thrust bearing wear trip was installed during RF02. The licensee plans no further changes. This item is considered closed.
- h. (Closed) Open Item (341/89008-16(DRP)): Licensee actions to improve safety relief valve (SRV) performance. As previously documented under this item, this matter continues to be an industry generic issue (GI) for those utilities with this type SRVs. Although the licensee's evaluation and potential corrective actions are still ongoing, this matter is being tracked generically by NRC Office of Nuclear Reactor Regulation (NKR) (reference GI-94). Therefore, the Fermi specific item is considered closed.
- i. (Closed) Violation (341/89011-02B(DRP)): Improper design and testing of the control room ventilation system. As previously documented, this matter was forwarded to NRR for review and disposition. (Reference TAC No. M77687). Because adequacy of system design and testing will be determined by NRR as part of that review, this item is considered closed.

- j. (Closed) Unresolved Item (341/89015-02(DRP)): Use of potential design changes (PDCs) to correct deficiencies identified in lead documents. The inspector reviewed the licensee response on: (1) how the PDC program addressed root cause and trending, as well as additional reviews and actions if lead document deficiencies were found to be pervasive; (2) how management directives and implementing procedures were not in conflict with each other concerning the use of a PDC instead of a deviation event report (DER); and (3) how the PDC program assured that design document discrepancies receive adequate engineering and QA reviews for considerations such as seismic and environmental qualification, as well as other design related analyses that may be necessary when components originally thought to be installed properly were later found not to be. In its response dated June 7, 1989, the licensee clarified the status of existing procedures. The Inspector reviewed the following procedures:

.	FMD-CM1	"Design Control"
.	FIP-CM1-01	"Potential Design Changes"
.	FIP-CM1-04	"Lead Design Document Index"
.	FMD-CM1	"Design Control"

and verified that the change had been implemented as stated in the response. The response was found to be acceptable and, therefore, this item is considered closed.

- k. (Closed) Open Item (341/89034-06(DRP)): Non-conservative deviation of reactor wide range level indication during startup. The licensee had indicated that this matter had previously been analyzed and the analysis would be provided to the inspector for review. The inspector reviewed design calculation (DC) 2695, "Reactor Water Indicator Level Versus Actual Level During Reactor Shutdown, Refuel, Startup, or Hot Standby Operating Modes," revised November 16, 1985. Based upon the review, the inspector confirmed that the non-conservative deviation was within the bounds of current analysis. This item is considered closed.
- l. (Closed) Violation (341/90007-02(DRP)): Programmatic breakdown of management controls governing maintenance activities on the east main steam bypass valve. The inspector verified that the licensee had implemented the actions described in their response dated August 3, 1990. In addition, a root cause analysis was provided which identified the following causes: (1) Inadequate work package preparation, (2) Technical expertise lacking with oversight personnel, (3) missed generic Quality Assurance/Quality Control (QA/QC) hold point for placing additional hold points, prior to the start of work, and (4) inadequate post-maintenance testing through failure to recognize unacceptable "as found" data. The root cause analysis and the corrective actions were found to be acceptable. This item is considered closed.

- m. (Closed) Violation (341/90007-03(DRP)): Failure to identify root cause of a failed surveillance on the east main steam bypass valve which resulted in the unit operating with reduced bypass flow capability. The licensee conducted and submitted a technical analysis dated August 3, 1990, evaluating the impact of operating with reduced main steam bypass capability and its effect on minimum critical power ratio (MCPR) as defined in the technical specifications. The analysis showed that the reduced bypass flow configuration still conformed with system design requirements. The licensee also modified the instrumentation and control (I&C) loop calibration test documents to compare the main turbine bypass valve position (or percent valve stroke) with the percentage shown on the remote indicators. The corrective action is considered acceptable and this item is considered closed.
- n. (Closed) Unresolved Item (341/90013-04(DRP)): Recording of as-found data. Electrical maintenance personnel subsequently reviewed procedures for all adjustable type relays and added the recording of as-found data where appropriate. Six out of 27 procedures reviewed required revision. This item is considered closed.
- o. (Closed) Violation (341/91002-02(DRP)): Performing work instruction steps out-of-sequence. The licensee subsequently determined that administrative procedure, NPP-MA1-04, was overly restrictive and revised the procedure to allow work steps to be performed out-of-order under certain conditions. Currently, administrative procedure NPP-MA1-01, "Work Control" governs overall maintenance field activities and includes the same limitations. This item is considered closed.
- p. (Closed) Open Item (341/91009-06(DRP)): Emergency Diesel Generators (EDG) 11 and 13 concurrently inoperable due to motor operated potentiometer (MOP) problems. In response, the licensee committed to developing and implementing a maintenance procedure and an inspection procedure for the Woodward electric governors and motor-operated potentiometers. The licensee developed four maintenance events to inspect the MOPs every six months. This item is considered closed.

3. Operational Safety Verification (71707) (82301)

The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operators throughout the inspection period. The inspectors verified the operability of selected safety-related systems, reviewed tagout records, and verified proper return to service of affected components. The inspectors observed a number of control room shift turnovers. The turnovers were conducted in a professional manner and included log reviews, panel walkdowns, discussions of maintenance and surveillance activities in progress or planned, and associated LCO time restraints, as applicable.

The inspectors conducted tours of the reactor, auxiliary and turbine buildings. During these tours, observations were made regarding plant equipment conditions, fire hazards, fire protection, adherence to procedures, radiological controls and conditions, housekeeping, tagging of equipment, ongoing maintenance and surveillance activities, containment integrity, and availability of safety-related equipment. Walkdowns of the accessible portions of the following systems were conducted to verify operability by comparing system lineups with plant drawings, as-built configuration or present valve lineup lists; observing equipment conditions that could degrade performance; and verifying that instrumentation was properly valved, functioning and calibrated.

- . Standby Liquid Control System
- . Emergency Diesel Generator No. 11
- . Emergency Diesel Generator No. 12
- . Emergency Diesel Generator No. 13
- . Emergency Diesel Generator No. 14
- . Emergency Equipment Service Water System - Divisions I and II
- . Non-interruptible Air Supply System - Divisions I and II

Additionally, the inspectors observed implementation of portions of the licensee's security program during the inspection period including: badging of personnel; access control; security walkdowns; security response (compensatory actions); visitor control; security staff attentiveness; and operation of security equipment.

Significant observations and reviews included the following:

- a. During review of abnormal lineup sheet (ALS) 92-0324, the inspector noted that two of three containment isolation valves that were listed on the ALS included requirements to be chain locked closed. However, the third valve, E11-F028, did not include requirements for chain locking. Upon further discussion with licensee management, it was recognized that valve E11-F028 should have been chain locked consistent with the other two valves. The ALS was subsequently revised and an operator dispatched to chain lock the valve.

However, the operator, upon arrival at the valve, observed a chain and lock already installed. The chain and lock was subsequently determined to have been placed during the ALS tagout activities. Additionally, an independent verification (IV) was performed after the chain and lock had been installed without the problem being recognized.

Because the chain and lock were placed on valve E11-F028 in violation of the prepared administrative controls, this is considered a violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings. However, the placement of the chain and lock were conservative in that the ALS was originally in error and should have included that step. In

addition, once identified, the licensee took appropriate corrective actions to prevent recurrence, including reinforcement to those involved of the requirement to follow ALS tagout steps as written. Therefore inspector review determined the situation was of minimal safety significance, and in reviewing 10 CFR 2, Appendix C, the criteria specified in Section VII.B.1 of the Enforcement Policy was met to allow exercising of enforcement discretion. Therefore, a Notice of Violation will not be issued.

- b. On April 23, 1992, the inspectors observed the conduct of a radiological emergency response drill onsite. No substantive concerns were noted as a result. Inspector comments and observations were subsequently communicated to the licensee's radiological emergency response program (RERP) personnel.
- c. As documented in Inspection Report 341/92004, a concern with the evacuation route for persons residing in the Stony Point area was identified and that a NRC Region III Emergency Preparedness Specialist would further review the matter. As documented in Inspection Report 341/92006, the regional specialist subsequently completed review of the matter and determined that this evacuation road was not taken into account when calculating the evacuation times for the Stony Point area, nor does the evacuation plan highlight this road as an evacuation route. In addition, the licensee further clarified to the inspector that the subject road was not constructed by Detroit Edison. Rather, Detroit Edison provided a certain amount of funding as well as support to Frenchtown Township to obtain easements for construction of the roadway. At the end of the current inspection period the licensee indicated that Detroit Edison's Corporate Real Estate Group was continuing to look into the property easement and maintenance responsibility issue. The inspector will continue to review this matter until resolution is reached.
- d. During a routine walkdown of the plant, the inspector noted that Fire Zone 2 (Division II Core Spray) and Fire Zone 3 (High Pressure Coolant Injection) were connected through large penetrations. Per UFSAR Section 9A.4.1.3.3, the objective of Fire Zone 2 is "to prevent the spread of a fire in this zone to another zone containing shutdown equipment and/or from damaging redundant shutdown equipment within this zone." The UFSAR Chapter 9A drawings of the fire zones did not indicate a rated barrier or a zone boundary between Zones 2 and 3. Discussions with fire protection personnel revealed that the objective of Zone 2 should be to prevent the spread of fire to a Division I area, and that the UFSAR drawing was incomplete. Because HPCI is Division II equipment, the licensee maintained that no fire barrier between Zones 2 and 3 was needed. Corrections to the text and to the drawings were being prepared at the end of the inspection period. The inspector will followup on the matter further during the next inspection period.

- e. During a routine walkdown of the turbine building, the inspector noted that combustible materials in a storage cage in the Turbine Oil Reservoir Room were outside permit-approved limits. The area was approved for up to 1000 gallons of liquid storage, with no plastic containers allowed. There were, however, 41 55-gallon steel drums and one half-gallon plastic container. The licensee was informed, and subsequently removed the plastic container and approved the area for up to 45 steel drums. The Plant Safety group, along with other groups, reinforced the need to be aware of material storage in the plant, and increased its inspection level. The Fire Protection Supervisor indicated the program was adequate as written and that plant personnel would be more alert to potential storage problems.
- f. During a routine tour of the plant, the inspector observed the implementation of housekeeping related to maintenance activities. The requirements for material and personnel accountability logs, postings at the job site, close-out inspections, and document retention appeared to be unclear. Following discussion with the inspector, the General Supervisor, Mechanical Maintenance indicated that administrative procedure NPP-HK1-01, "Plant Housekeeping" needed to be revised and initiated the necessary actions to that end.
- g. During a walkdown of the Emergency Diesel Generators (EDGs), the inspector noted several procedural, drawing, and labelling discrepancies that were subsequently communicated to the system engineer for further followup and correction. In addition, a question was raised as to the appropriateness of the Short Time (2 Hour) rating specified for the EDGs. Specifically, UFSAR 8.3.1.1.8.1 stated: "The individual rating of each EDG is:

a. Continuous	2850 kW
b. Short time (2hr)	3135 kW
c. 2000 hr	3100 kW
d. 300 hr	3250 kW
e. 30 minute	3500 kW."

The nameplate on each EDG provided the same information but omitted the "Short time" rating. Based upon discussion with licensee personnel, the two-hour rating was put in the UFSAR based on a letter from Colt Industries. The system engineer indicated each of the above items would be addressed and that he would be contacting Colt to resolve the question on rating. The inspector will continue to follow licensee corrective actions on the above items.

- h. During a routine plant walkdown the inspector noted a pair of cotton glove liners in a "Hicom" speaker located on the fourth floor of the reactor building. The speaker was located adjacent to a personal communication monitor (PCM-1). Apparently, the cotton liners had been inserted into the speaker to reduce the

noise level of announcements made at that point. The Nuclear Shift Supervisor was subsequently contacted on the matter and an operator was dispatched to remove the cotton liners. This is the second incident which had been noted by the inspectors of late where loud speakers located in safety-related areas have been modified to reduce or eliminate noise levels (reference inspection report 341/91024, paragraph 3.e). The inspectors will continue to note discrepancies of this type as part of the routine inspection program.

- i. During a walkdown in the non-interruptible air supply (NIAS) control air compressor room, the inspector noted no permanently installed inplant communications equipment. There was a telephone station hookup that had recently been installed in the room without plug-in jacks or a telephone installed. Further, no hicom stations (or plant public address speakers) were installed. However, Fermi's FSAR, Section 9.5.2 specifies that all areas of the plant can be communicated with from the control room. This omission could have an impact on adequately communicating an emergency classification or assembly/accountability to personnel in that area. Following discussion with the licensee, engineering personnel initiated a review to determine if the subject area was an isolated case or if there were other areas of the plant that did not have the requisite communications capability. Subsequent licensee actions were to be developed upon completion of that review. This matter is considered an open item (341/92007-01(DRSS)) which will be further evaluated by a Region III emergency preparedness specialist in a future inspection.
- j. The inspectors reviewed Design Calculation DC-0623, "Standby Liquid Control System Design Calculations," for the standby liquid control (SLC) system net positive suction head (NPSH) requirements. The inspectors reviewed DC-0623, Volume II DCD, Rev 0, (dated January 1992) and ascertained that calculation methodology did not include the acceleration head loss term in the available NPSH calculation. Acceleration head loss is an additional pressure loss term contained in the NPSH available calculations for reciprocating pumps. This factor is unique to reciprocating pumps and in many cases is the predominant factor in the NPSH equation. The inspectors considered this to be of minimal safety significance, however, since pre-operational testing of the SLC system verified that the actual as-built system functioned as required. The inspector reviewed the SLC system pre-operational testing data and had no questions or concerns about the operability of the system. However, several revisions of DC-0623 had gone through the review and approval process with omission of the acceleration head loss term in the NPSH calculation. Prior to the end of the inspection period, the licensee revised the calculation to include the acceleration head loss term.

One non-cited violation was identified in this area.

4. Safety System Walkdown (71710)

During the inspection period, in addition to the system walkdowns discussed in Paragraph 3, the inspector performed a more in-depth walkdown of the accessible portions of the Core Spray System (CS) to verify operability. Plant drawings and system operating and surveillance procedures were reviewed to confirm consistency with the as-built configuration. Hangers and supports were verified against drawings for proper placement, alignment, and makeup. System components were inspected for proper installation, position, energization, and labelling.

The following were noted during the walkdown:

- a. Minor discrepancies were identified such as pipe insulation/lagging damage, missing valve labels, etc. The inspector met with the CS system engineer to discuss the findings, and the items were turned over to the licensee for resolution. The items presented to the system engineer were of minor significance and the inspector had no concerns about the operability of the system.
- b. Two piping supports installed on the Division 2 CS discharge piping were not identified on controlled drawings. The inspector contacted the applicable engineer to resolve the issue. The licensee engineer indicated that there should be an existing calculation or analysis that justified the additional supports. At the end of the inspection period the licensee was gathering the appropriate documentation for the inspectors to review. Pending the inspector's receipt and review of the documentation, this is an open item (341/92007-02(DRP)).

No violations or deviations were identified in this area.

5. Maintenance (62703)

Station maintenance activities on safety-related systems and components listed below were observed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and fire prevention controls were implemented.

Work requests were reviewed to determine the status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

- . PM X304920303 Inspect EDG 12 Oil Storage Room Ventilation Fan/Motor.
- . PM S987911003 Recalibrate EDG 12 Auxiliary Fuel Oil Pump Pressure Switch.
- . PM S947911003 Recalibrate EDG 12 Tachometer.
- . PM W363911003 Calibration Check EDG 12 Air Cooler.
- . PM A608911212 PM Core Spray South Room Cooler.
- . PM E584911003 Inspect/Test MOV E21-F004B.
- . PM E602910531 Inspect/Test MOV E21-F031B.
- . WR 0072921672 Remove/Inspect EDG 14 Lagging.
- . WR A911911003 Calibration Check SGT5 Division I Humidity Indicator.

Following completion of maintenance activities associated with the Emergency Diesel Generators, the inspectors verified that the affected portions of the EDGs had been returned to service properly.

No violations or deviations were identified in this area.

6. Surveillance (61726)

The inspectors observed/reviewed the following Technical Specification required surveillance testing.

- . 24.404.002 Section 5.2, RHR Valve Lineup and System Filled Verification
- . 24.413.003 Section 5.1, Control Room Emergency Filter Monthly Operability Test
- . 44.010.203 RPS - APRM Div II Flow Biased Channel Calibration
- . 24.307.015 Emergency Diesel Generator No. 12 - Start and Load Test

The following items were considered during the inspection: the testing was performed in accordance with approved procedures; that test instrumentation was calibrated; that test results conformed with Technical Specifications and procedure requirements and were reviewed by personnel other than the individual directing the test; and that any deficiencies identified during the testing were reviewed and resolved by appropriate management personnel.

The inspectors also performed a record review of the completed surveillance tests listed below. The review was to determine that the test was accomplished within the required time interval, procedural steps were properly initialled, the procedure acceptance criteria were met, independent verifications were accomplished by individuals other

than those performing the test, and that the test was signed in and out of the control room surveillance log book.

- . 24.137.18 Main Steam Line Drain and Drain Isolation Valve Operability Test
- . 24.138.06 Jet Pump Operability Test
- . 24.205.010 Division II RHR Cooling Tower Fan Operability
- . 24.404.004 Division II SGTS Filter and Secondary Containment Isolation Damper Operability Test
- . 24.413.003 Section 5.2, Control Room Emergency Filter Monthly Operability Test
- . 44.030.214 ECCS - RHR Pump B Discharge Pressure (ADS Permissive), Functional Test
- . 44.030.216 ECCS - RHR Pump D Discharge Pressure (ADS Permissive), Functional Test
- . 44.170.001 Loose Parts Monitoring System Functional
- . 54.000.006 APRM Calibration

No violations or deviations were identified in this area.

7. Followup of Events (93702)

During the inspection period, the licensee experienced several events, some of which required prompt notification of the NRC pursuant to 10 CFR 50.72. The inspectors pursued the events onsite with licensee and/or other NRC officials. In each case, the inspectors verified that the notification was correct and timely, if appropriate, that the licensee was taking prompt and appropriate actions, that activities were conducted within regulatory requirements and that corrective actions would prevent future recurrence. The specific events are as follows:

April 7 - Notification of Unusual Event (NOUE) due to Technical Specification (TS) required plant shutdown. During performance of surveillance procedure 24.402.01, "Drywell and Suppression Chamber Vacuum Breaker Operability Test", vacuum breaker T23-F400k was opened per procedure and became stuck in the open position. The licensee entered TS 3.6.4.1.b which required closing the vacuum breaker within two hours. When attempts to shut the vacuum breaker were unsuccessful, the licensee entered a limiting condition for operation (LCO) which required the plant to be in hot shutdown within 12 hours and cold shutdown within the following 24 hours. The licensee declared an unusual event per its emergency procedures when the plant shutdown was commenced.

In parallel with the plant shutdown, the licensee attempted to troubleshoot and repair the affected vacuum breaker. An onsite review organization (OSRO) meeting was convened to approve an acceptable method to troubleshoot and shut the vacuum breaker. The inspector attended the OSRO meeting and verified that conservative and appropriate measures were discussed and agreed upon. The inspector had no substantive

concerns related to the conduct of the OSRO meeting or the licensee's troubleshooting activities.

The licensee's attempts to shut the vacuum breaker failed and the unit proceeded to cold shutdown. The licensee entered the hot shutdown condition as required by TS 3.6.4.1.b several minutes before the 12 hour time limit expired. The plant was subsequently placed in the cold shutdown mode within the TS required time limit.

The inspector monitored the licensee's event classification, required notifications and shutdown activities. The inspector had no substantive concerns relative to the above mentioned items. The licensee subsequently initiated Licensee Event Report (LER) to document the event.

April 16 - Lube oil fire on Emergency Diesel Generator (EDG) No. 14. Cause of the fire was subsequently determined to be lube oil that had sprayed onto the engine's exhaust manifold and turbocharger inlet lagging from the west lube oil strainer. With the engine running, the manifold area became hot enough to allow the lube oil to ignite. The fire was quickly extinguished by use of portable extinguishers.

During preventive maintenance activities that had just been completed, the lube oil strainer's top cover O-rings had been replaced. During installation, the O-rings had rolled over (and out of their respective grooved slots) and were flattened when the strainer cover was installed. This allowed a flow path to exist between the strainer housing and cover and resulted in lube oil to spray out once the oil system was placed into operation.

Licensee review determined that the O-rings were not purchased from the EDG manufacturer (Colt Industries) but were obtained through a different vendor. A decision to do this was made several years ago to make use of a thicker O-ring material that would give a better seal. However, although the O-rings were thicker, the major diameter was slightly smaller, requiring the O-rings to be somewhat stretched to be installed in their retaining grooves.

The lube oil strainers were thereafter repaired, and associated lagging replaced. A second engine run was attempted with good results. At the end of the inspection period, the licensee was continuing to review potential selection alternatives for the subject O-rings.

No violations or deviations were identified in this area.

8. Followup of Licensee Event Reports (92700)

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent

recurrence had been accomplished in accordance with technical specifications.

- a. (Closed) LER 85-069-01, Simultaneous Ventilation of Drywell and Torus. Revision 0 to this LER was reviewed and closed in Inspection Report 341/88030. During that review it was determined that the violation identified by that LER was similar in nature to violations identified in Inspection Report 341/85040 and occurred during the same timeframe. Since the licensee was in process of taking appropriate corrective actions to previously identified violations, no violation was issued for the event described in the subject LER. Revision 1 was submitted to clarify that the subject procedure (SOP) 23.406, "Primary Containment Nitrogen Inerting and Purge System," was subsequently revised and issued on December 26, 1985. In addition, all shift personnel were informed of the pending procedure revision via an operating order issued during the same approximate timeframe. This LER, therefore, is closed.
- b. (Closed) LER 90-002-01, Area Radiation Monitors (ARM) Surveillance Procedure Listed Incorrect Values For Alarm Setpoints. The correction to the procedures were documented in the closure of LER 90-002. A review of the Technical Specification Improvement Program (TSIP) data was completed in September 1991, and no other ARM setpoint deficiencies were found. This item is considered closed.

No violations or deviations were identified in this area.

9. Spent Fuel Pool Activities (86700)

During the inspection period the inspector performed a survey of the licensee's process and controls for storing items, other than fuel assemblies, in the Spent Fuel Pool (SFP). The inspector, accompanied by a licensee individual, performed a walkdown and visual inspection of the SFP and verified its contents against the SFP inventory checklist. The inspector verified that the inventory checklist accurately reflected the current condition of the SFP. In addition, the inspector observed and monitored a portion of the licensee's performance of procedure NPP-SE3-01, "Special Nuclear Material Physical Inventory". The inspector had no substantive concerns associated with the licensee's control of items stored in the SFP.

No violations or deviations were identified in this area.

10. Part 21 Program (36100)

During the inspection period, the inspector reviewed the licensee's program for implementing the requirements of 10 CFR 21, "Reporting of Defects and Non-compliance." Fermi Interfacing Procedure FIP-CA1-04, "10 CFR 21 Evaluations," as well as FIP-RM1-01, "Records Management," were reviewed to verify proper implementation of the regulation. The inspector also reviewed two Part 21 reportability evaluations the

licensee had recently completed. No substantive concerns were noted as a result of the review. Each of the evaluations reviewed appeared to be technically adequate with appropriate levels of management review and approvals incorporated. Additionally, the licensee's record retention requirements met or exceeded those specified in the regulations.

No violations or deviations were identified in this area.

11. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraphs 3 i and 4 b.

12. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) on May 7, 1992 and informally throughout the inspection period and summarized the scope and findings of the inspection activities. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents/processes as proprietary. The licensee acknowledged the findings of the inspection.