

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-010/78-22; 50-237/78-20; 50-249/78-22

Docket No. 50-010, 50-237, 50-249

License No. DPR-02, DPR-19, DPR-25

Licensee: Commonwealth Edison Company
P.O. Box 767
Chicago, Illinois 60690

Facility Name: Dresden Nuclear Station Units 1, 2, 3

Inspection At: Morris, Illinois

Inspection Conducted: June 6-8, 15-16, 20-21, 27-29, 1978

Inspector: *J. L. Barker*
J. L. Barker

7/12/78

Approved By: *R. C. Knop*
R. C. Knop, Chief
Reactor Projects Section 1

7/11/78

Inspection Summary

Inspection on June 6-8, 15-16, 20-21, and 27-29, 1978 (Report No. 50-010/78-22; 50-237/78-20; 50-249/78-22)

Areas Inspected: Routine unannounced inspection of inoffice review of licensee event reports (Units 1, 2 and 3); onsite review of licensee event reports (Units 1, 2 and 3); startup testing-refueling, Unit 3; followup on items of noncompliance/deviations; followup on inspector identified problems and unresolved items; outstanding inspection items, tests, and special reports; and review of plant operations. The inspection involved 76 inspector-hours onsite by two NRC inspectors.

Results: Of the seven areas inspected, no items of noncompliance or deviations were identified in six areas. One apparent item of noncompliance (infraction - failure to adhere to an approved surveillance and testing procedure - paragraph 9) was identified in one area.

8009260 699

DETAILS

1. Persons Contacted

A. Meeting conducted on June 6, 1978

CECo

- F. Palmer, Division Manager, Nuclear Stations
- B. Stephenson, Station Superintendent
- A. Roberts, Assistant Station Superintendent
- B. Shelton, Assistant to the Station Superintendent
- R. Ragan, Lead Operating Engineer
- C. Young, Compliance Administrator
- D. Farrar, Technical Staff Supervisor

RIII NRC Inspectors

- R. C. Knop, Chief, Reactor Projects Section 1
- J. L. Barker, Reactor Inspector, RIII

B. June 1978 Monthly Inspection

- B. Stephenson, Station Superintendent
- B. Shelton, Assistant to the Station Superintendent
- R. Ragan, Lead Operating Engineer
- E. Budzichowski, Unit 1 Operating Engineer
- J. Kolanowski, Unit 2 Operating Engineer
- C. Sargent, Unit 3 Operating Engineer
- G. Reardanz, Quality Assurance Coordinator
- *A. Roberts, Assistant Station Superintendent
- *R. Geier, Quality Assurance
- *F. Petrurich, Quality Control
- *D. Adam, Chemical and Health Physics Engineer

The inspector also talked with and interviewed several other licensee employees including members of the technical and engineering staffs, reactor and auxiliary operators, shift engineers and foremen, and maintenance personnel.

*denotes those attending the exit interview.

2. Meeting Held on June 6, 1978

The inspectors held a meeting with licensee representatives as denoted in paragraph 1 to discuss the licensee's implementation of recommendations to correct recent inadequacies in the licensee's program for out-of-service control and to discuss the licensee's program for better control over the operational staff. The following resolutions were agreed upon by both the licensee representatives and the inspectors present:

- A. The Unit NSO will be responsible for all operations and controls which originate from his unit control boards. The Center Desk Operator may control switching on the unit operators control panels after having first received permission to make the switch operations from the unit operator.
 - B. As a general rule operations personnel will make the majority of the valve operations associated with the out-of-service program. Maintenance personnel may be allowed to operate valves, but only under the supervision of operations personnel. All valving operations downstream of instrument root valves will be conducted by IM personnel.
 - C. Significant recurring outages will be delineated on a preprinted outage sheet for easy reference when operational personnel are making out outage sheets.
 - D. Outages originating from a modification which has multiple parts and departmental responsibilities will not be cleared until all modification and testing associated with that outage is complete.
 - E. A written schedule of periodicity for quality control reviews/audit of the OOS program will be implemented to insure better independent review.
3. Inoffice Review of Licensee Event Reports (Units 1, 2, and 3)

An inoffice review of the following licensee event reports was conducted to verify that details of the event were clearly reported to the NRC as required by the licensee's Technical Specifications, license conditions or regulations; and to verify that reporting requirements had been met, the report adequately assessed the event, corrective actions appeared appropriate to correct the cause of the event, and the generic applicability to other components had been considered.

Unit 1

LER 78-16, Incore Flux Monitor Trip Exceeded the Technical Specifications

Unit 2

LER 78-15, Air Monitor Outboard Isolation Valve Failed to Close
 LER 78-16, Excessive Leakage of LLRT to Torus Vacuum Breakers
 LER 78-20, Unit 2/3 Diesel Generator Failure to Start
 LER 78-21, Diesel Started but Tripped on Overspeed
 LER 78-26, HPCI System Taken out-of-service to Repair a Minor Steam Leak
 LER 78-29, Pressure Switch (PS 504D) Setting in Excess of Technical Specification Limits

Regarding LER's 78-20 and 78-21, the licensee is in the process of continuing a detailed investigation into possible reliability problems with the licensee's emergency diesel generators, and a final report will be forwarded to the NRC when this investigation has been completed. These LER's will be closed for record purposes but will continue to be followed as outstanding items until final recommendations and corrective actions have been completed by the licensee to increase the reliability of the licensee's emergency diesel generators.

Unit 3

LER 78-5, Leak on Minimum Flow Line from 3B Reactor Feedwater Pump
LER 78-6, Vacuum Breaker Binding
LER 78-15, Inoperative Snubber in Drywell
LER 78-16, Leakage Through Standby Liquid Control Checkvalve in Excess of Technical Specifications
LER 78-19, Pressure Switches (PS 504C and 504D) Tripped in Excess of Technical Specification Limits
LER 78-20, Pressure Switch (PS 3-203-5C) Tripped in Excess of Technical Specification Limits

No items of noncompliance or deviations were identified.

4. Onsite Review of Licensee Event Reports (Units 1, 2, and 3)

Through direct observations, discussions with licensee personnel, and review of records, the following licensee 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.

Unit 1

LER 78-12, Dew cell Air Samples periodicity Exceeded Technical Specifications
LER 78-15, Fire Inspection of D1 Cableway Overlooked
LER 78-21, Diesel Generator Failed to Start

Regarding LER 78-12, not drawing dew cell air samples when a six-hour decay results exceed 1.0 E-8 uCi/cc without subsequent daily samples is in violation of the licensee's technical specifications. The violation was caused by the licensee not properly following procedures. The inspector found that the licensee identified the deficiency and has implemented corrective action to prevent recurrence; therefore, this item is considered a licensee identified item and the inspector has no further concerns.

Unit 2

- LER 78-18, Nitrogen Storage Tank Level Fall Below Technical Specification Limits
- LER 78-25, MSIV Scram and Isolation Radiation Monitor Trip Setpoint out-of-service calibration, non-conservatively high
- LER 78-27, Curie Content of "A" WST in excess of Technical Specification Limit
- LER 78-28, Spurious Closure of Recirculation Suction Valve during LOCA
- LER 78-30, Personnel Error Resulting in the Loss of 2 LPCI Pumps and 1 Core Spray Pump

Regarding LER 78-18, a technical specifications limiting condition for operation was violated in that the nitrogen storage tank level dropped to less than technical specifications limits (dropped to 48 inches, T.S. limit 60 inches). The limiting conditions for operations was caused by setpoint drift on the nitrogen storage tank level switch alarm. The low level less than technical specification limits was identified by an operator using local level indication. The calibration of the nitrogen storage tank low level alarm has been placed on a scheduled yearly surveillance (DIS 8500-1). This item is considered a licensee identified item and the inspector has no further questions.

Regarding LER 78-25, the inspector found the reason for the MSIV scram and isolation rad monitor trip setpoint being non-conservatively high was a typographical error in licensee procedure DIS 1700-1 in which an incorrect sign was placed in the calculation for the scram/isolation setpoint. The licensee has corrected the procedure to prevent recurrence. This item is considered a licensee identified item and the inspector has no further questions.

Regarding LER 78-27, the inspector found the licensee reached a limiting condition for operation in that "A" WST total curie content was 1.35 curies, exceeding the 0.7 curie limit of technical specifications. The inspector found that licensee procedures DOP 2000-10, "Decanting the Spent Resin Tank," DOP 2000-14, "Waste Collector Subsystem", and DOP 2000-9, "Decanting Cleanup Filter Sludge Tank B", will be revised to insure that excessive amounts of radioactive liquid will not be pumped to above ground tanks. These procedures will be revised as soon as possible, but no later than July 15, 1978. This item is considered a licensee identified item and the inspector has no further questions.

Regarding LER 78-28, the inspector found that the licensee had removed power to the motor for the suction valves on the recirculation system to prevent possible closure of these valves during a LOCA condition. Further action is being investigated by SNED to complete modification plans to change the LPCI logic for the ECCS initiation such that no shutting signal can be received by the recirculation pump suction valve motors during a LOCA condition. This item will be closed for record purposes but will be followed up as an outstanding item when modifications to the LPCI logic are completed by the facility.

Regarding LER 78-30, the inspector found that the cause of the personnel error was that the equipment operator did not properly adhere to licensee procedure DOS 6600-6, Bus Undervoltage and ECCS Integrated Functional Test for 2/3 Diesel Generator, in that he isolated the "A" LPCI and Core Spray subsystem discharges on Unit 2 instead of on Unit 3. The Unit 3 NSO operator recognized the problem when the integrated functional test was begun, and there was an unidentified increase in the Unit 3 reactor vessel level. Unit 3 was in refuel and in a cold shutdown condition, while Unit 2 was in a hot shutdown condition with the reactor mode switch locked in refuel. The error was immediately corrected, and proper valve lineups were made to the Unit 3 "A" LPCI and Core Spray subsystem discharges, while those discharge valves for Unit 2 were placed in their proper positions. The inspector considers this a significant breakdown in the middle management control of operations and valve lineup changes. This item is considered an item of noncompliance. The licensee conducted an informal investigation into the causes for the event and into what actions should be taken to prevent recurrence of this type of incident. The corrective actions are to remind operating personnel of their responsibilities to the continued control over their respective units, an ongoing program to upgrade the placement of equipment identification tags on all plant equipment so that identification errors of valves and systems will be precluded in the future, pre-shift briefings by the shift engineer with individual unit operators will be held to discuss any extensive operations which will come up in the succeeding shift, and extra personnel assigned to shifts during complicated surveillances and testing will be used to prevent this type of event. The inspector considers the licensee's corrective action to be adequate and has no further questions at this time.

Unit 3

- LER 78-3, Local Leak Rate Test Failure of Valves 1602-21, 22, 55 and 56
- LER 78-7, HPCI Area Temperature Switch in Excess of Technical Specifications
- LER 78-10, Inoperable Hydraulic Snubber Discovered During Surveillance Testing
- LER 78-11, CRD Thermal Sleeve Cracks
- LER 78-12, ISI of CRD Nozzle
- LER 78-13, MSIV Scram and Isolation Rad Monitor Trip Setpoint out-of-calibration, non-conservatively high
- LER 78-14, 24/48 Volt Battery Discharge Test Failed
- LER 78-17, Spurious Closure of Recirculation Suction Valve During LOCA
- LER 78-18, Diesel Oil Storage Tank Gallon Limit Below Technical Specifications

Regarding LER 78-3, this item will be closed for record purposes but will be followed up as an outstanding item when the licensee has identified and repaired the sources of excessive leakage from the containment valves.

Regarding LER 78-13, this item is the same as Unit 2 LER 78-25. The corrective action to prevent recurrence by the licensee is the same as Unit 2 LER 78-25. This item is also considered a licensee identified item and the inspector has no further questions.

Regarding LER 78-17, this item is the same as Unit 2 LER 78-28. The corrective action is identical, and this item will also be followed up as an outstanding item when all modifications to the recirculation suction valve power supply and the LPCI logic circuitry have been completed.

5. Startup Testing-Refueling, Unit 3

The inspector verified that startup testing was conducted in accordance with approved procedures and that the facility was being operated in conformance with NRC requirements and licensee procedures. The inspector verified that the licensee had conducted or had plans to conduct control rod drive friction and scram tests, control rod sequence and reactivity checks, core power distribution limit checks, calibration of LPRM's, calibration of APRM's, core thermal power determinations, and reactor shutdown margin determinations. The inspector reviewed procedures and test results for control rod drive friction and scram tests, core power distribution limits, calibration of local power range monitors, and determination of reactor shutdown margin, and verified that the refueling outage startup testing was conducted in accordance with technically adequate procedures and within license limits.

No items of noncompliance or deviations were identified.

6. Followup on Items of Noncompliance - Deviations

(Closed) - Noncompliance (50-237/77-32): Failure to have and adhere to an adequate procedure. The inspector found that the licensee had revised the recirculation hydrostatic test procedure, DMP 249, to caution against any operations which could cause an overpressurization of the recirculation system.

(Closed) - Noncompliance (50-237/77-32): Failure to control properly copies of approved procedures. The inspector reviewed the licensee's program for control of procedures and found it to be adequate.

(Closed) - Noncompliance (50-237/78-09): Failure to properly control the gland steam leakoff pump switch in accordance with the out-of-service program. The inspector found that the licensee's corrective action to prevent recurrence of taking equipment out-of-service without proper control appeared adequate and was working.

(Closed) - Noncompliance (50-10/78-10): Exceeding Unit 1 Allowable Heatup Rate. The inspector reviewed licensee procedure DGP 1-1, "Unit 1 Normal Unit Startup," and determined that the revisions to the procedure appeared adequate to prevent recurrence of exceeding allowable heatup rates.

(Closed) - Noncompliance (50-237/78-12): Failure to follow an approved procedure. The inspector reviewed the licensee's corrective action to prevent improper switching of the Unit 250 VDC system and determined that the procedure revisions appeared adequate and, if followed properly, would prevent any future switching failures.

(Closed) - Noncompliance (50-237/78-12): Failure to have an adequate preventative maintenance procedure. The inspector reviewed the licensee's procedure for control of the MSIV air pilot thermocouples and found the latest revisions adequate to prevent improper installation and removal of these thermocouples.

(Closed) - Deviation (50-10/78-10), (50-237/78-09), (50-249/78-09): Failure to meet an NRC commitment. The inspector verified that the licensee had completed all training committed to concerning the new facility modification procedures.

7. Followup on Inspector Identified Problems and Unresolved Items

The inspector reviewed the licensee's program of investigation and prevention of control rod drives failure to fully insert upon a scram (control rod drives inserting to position 02 rather than 00). Under recommendation from GE the licensee has been undergoing a program of venting the control rod drive hydraulic systems and control rod drive after extensive maintenance has been completed and has initiated a program to minimize cold scrams of the control rod drives to prevent any further stop piston seal failures. These measures, although being helpful, have not been altogether successful in the prevention of partial insertion of control rods on a scram. It must be emphasized that to date all scrams have inserted within the specified times to the specified positions in accordance with the licensee's Technical Specifications, but the NRC remains concerned about the reliability of the control rod hydraulic systems and the control rods themselves. Long-term investigation is still in progress by the General Electric Company, and this item will remain unresolved until that investigation has been completed and recommendations are brought to the attention of the licensee.

The inspector reviewed the licensee's modification packages for the replacement of Unit 2, 3, and 2/3 diesel generator cooling water pump breakers with larger size breakers to prevent inadvertent tripping of the breakers during a heavy load condition. The modifications appeared to be in accordance with licensee procedures, and the inspector has no further questions on this item. No items of noncompliance or deviations were identified.

8. Outstanding Inspection Items, Tests and Licensee Special Reports

The inspector reviewed the licensee's modification package for the final Unit 3 UV relays replacement in accordance with NRC bulletin 76-02. The modifications appeared to be in accordance with the licensee's approved procedures, and the inspector has no further questions on this item.

The inspector reviewed the licensee's program for the replacement of additional pipe whips and impingement protection for the Essential Service Cable Pan ESS-2 for Unit 3 (Letter BBS to JGK, dated March 30, 1978). The inspector found that the licensee is in the progress of making the requested modifications and will be completed with the modifications in 2-3 weeks. The inspector will review the modifications when they are completed.

The inspector reviewed the Unit 3 secondary containment leak rate test date and results, and determined that the test appeared to be adequate and in accordance with the licensee's Technical Specifications and approved procedures. No items of noncompliance or deviations were identified.

9. Review of Plant Operations (Units 1, 2, and 3)

The inspector reviewed the plant operations including examinations of the control room log books, routine patrol sheets, shift engineer log book, equipment outage logs, special operating orders, and jumper and tagout logs for the period of May 23, 1978 - June 27, 1978. The inspector also made visual observations of the routine surveillance and functional tests in progress during the period. This review was conducted to confirm that facility operations were in conformance with the requirements established under Technical Specifications, 10 CFR, and Administrative Procedures. A review of the licensee's deviation reports for this period was conducted to confirm that no violations of the licensee's technical specifications were made. The inspector conducted a tour of Units 1, 2, and 3 reactor buildings and turbine buildings throughout the month of June and noted that the monitoring instrumentation was recorded as required, radiation control was properly established, fluid leaks and pipe vibrations were minimal, seismic restraint oil levels appeared adequate, and equipment caution and hold cards agreed with the control room records. The inspector noted that although health physics and radiation control procedures were in accordance with NRC requirements and licensee procedures, they were not in accordance with the best health physics practices that could have been observed and that controlled area postings were not always clear as to their intent. The licensee stated that these practices would be investigated and that all postings would be made more clear.

No items of noncompliance or deviations were identified.

10. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 29, 1978. The inspector summarized the scope and findings of the inspection. The licensee representatives acknowledged the item of noncompliance discussed by the inspector.