

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-237/84-24(DRS)

Docket No. 50-237

License No. DPR-19

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

Facility Name: Dresden Nuclear Power Station, Unit 2

Inspection At: Morris, Illinois

Inspection Conducted: December 10-13, 1984, January 24 and February 1-8 and 28, 1985

Inspectors: *W E Milbrot*  
W. E. Milbrot 3/7/85  
Date

*D Butler*  
D. Butler 3/7/85  
Date

Approved By: *L A Reyes*  
L. A. Reyes, Acting Chief 3/7/85  
Operational Programs Section Date

Inspection Summary

Inspection on December 10-13, 1984, January 24 and February 1-8 and 28, 1985 (Report No. 50-237/84-24(DRS))

Areas Inspected: Routine, announced inspection of refueling preparations and refueling activities. The inspection involved a total of 94 inspector-hours onsite by 2 NRC inspectors including 2 inspector-hours on-site during an offshift.

Results: No items of noncompliance or deviations were identified.

## DETAILS

### 1 Persons Contacted

#### Licensee Employees

#\*D. Scott, Station Superintendent  
#R. Ragan, Operations Assistant Superintendent  
J. Almer, Unit 2 Operating Engineer  
J. Paczolt, Lead Nuclear Engineer  
M. Wagner, Nuclear Engineer  
W. Pierce, Project Engineer  
J. Wulf, Fuel Handling Foreman  
J. Gilligan, Shift Engineer  
#\*R. Stobert, QA Inspector  
\*W. Arrens, QA Inspector

#### NRC Representatives

T. Tongue, Senior Resident Inspector  
#S. Stasek, Resident Inspector

The inspectors also contacted and interviewed other licensee personnel during this inspection.

\*Denotes personnel attending the February 8, 1985 exit.

#Denotes personnel attending the February 28, 1985 exit.

### 2. Refueling Preparations

The inspector reviewed documentation of training activities completed by personnel assigned to operate fuel handling equipment, and procedures, tests and surveillances covering the maintenance and check out of fuel handling equipment and refueling support systems to assure that the applicable Technical Specifications and licensee procedural requirements had been satisfied. The results of fuel reuse inspections and fuel sipping operations were reviewed. Parts of control blade shuffle operations were observed.

A review was made of recorded data and verification signatures of completed procedures, surveillances, and valve line-up check sheets. It was noted that there was extensive use of pencil entries for recording data and making verification initials. Also, several valve line-up check sheets used to verify valve positions of the Core Spray System noted valves to be in a position other than that specified by the procedure. No explanation was given on the check sheet as to the reason for the difference. The licensee stated that the valves currently were in the position specified on the check sheet. There was no follow-up check sheet completed to verify this. On another check sheet there was an entry made in the "as left condition" column that noted the valve number to be different than that specified in the procedure with no explanation or temporary change issued to support the change. The licensee noted that a field change to the system could have

resulted in changing valve numbers. The information recorded on data sheets and valve line-up check sheets is important for good control of operations. Practices that result in accurate documentation and evaluation of plant conditions must be followed. Resolution of this issue is considered an open item (237/84-24-01(DRS)) pending action by the licensee to clarify administrative procedures with regard to adequately documenting and evaluating plant conditions.

The licensee completed a 10 CFR 50.59 core reload safety evaluation and verified that the core reload does not require prior NRR review.

No items of noncompliance or deviations were identified.

### 3. Refueling Activities

a. The inspector verified that the following refueling activities were completed:

(1) All surveillance testing required by the Technical Specification (TS) and licensee procedures, including:

DOS 800-1, Revision 5, Refueling Interlock Check

DFP 800-1, Revision 11, Refueling Prerequisites Checklist

DTS 1600-22, Revision 4, Secondary Containment Leak Rate Test

DOS 800-3, Revision 3, Source Range Instrumentation Response During Refueling

DOS 700-1, Revision 1, Source Range Monitor (SRM) Inoperable

DOS 700-2, Revision 1, Intermediate Range Monitor Downscale Rod Block

DOS 700-3, Revision 3, SRM Detector Position Rod Block Functional Test

DOS 700-4, Revision 2, Intermediate Range Monitor (IRM) Detector Position Rod Block Functional Test

DOS 700-6, Revision 2, SRM Functional Test Prior to Core Alterations

Reactor Mode Switch Locked in Refueling Position.

(2) Periodic testing was completed using the Unit Operation's Daily Surveillance Log, Revision 15. Checks important to refueling include fuel pool level, fuel pool temperature, and operability checks on the SRM and IRM.

b. The inspector witnessed portions of two shifts of fuel handling operations, including shift turnover. The movement of fuel was handled safely and efficiently. Continuous communications were

maintained between the refueling bridge and control room (CR). The high/low range refuel floor area radiation monitor alarms were calibrated on December 6, 1984 and were operable during fuel movement. Isolation doors were interlocked and operating properly to maintain secondary containment integrity.

- c. The inspector observed good housekeeping conditions and radiological controls on the refueling floor. Signs were posted to inform all personnel near the pool area to secure any loose items to prevent them from dropping into the pool. The area around the Fuel Storage Pool and Reactor Vessel Pool were roped off and tagged as a radiation area.
- d. The inspector observed adequate licensee staffing in the CR and on the refueling floor. A Nuclear Station Operator (NSO) was in direct communication with the refueling bridge. The Control Room Nuclear Observer (CRNO) verified fuel movement from the Nuclear Component Transfer Checklist (NCTC). SRM counts were written on the NCTC to ensure compliance with Technical Specification requirements. CECO QA personnel provided spot checks of fuel movement and witnessed the placement of that fuel in the core. The Refueling Senior Reactor Operator (RSRO) was on the refueling floor during fuel movement. The RSRO was knowledgeable on all aspects of refueling activities to ensure full compliance with Technical Specification and licensee procedures.

No items of noncompliance or deviations were identified.

#### 4. Independent Inspection

The inspector observed four (4) maintenance items with potential impact on refueling activities.

- a. Technical Specifications and licensee's procedures require that SRM's and IRM's be operable during core alterations. To support this requirement jumpers were installed per Nuclear Work Request (NWR) 41977 to provide coincident SRM and IRM scrams. The red jumpers that supported the IRM's were logged, installed with alligator clips, and tagged according to DAP 7-4, Revision 7, Control of Jumpers or Lifted Leads. This alteration was not considered a system modification. During the six (6) day fuel movement period source range instrumentation response was checked daily. No periodic visual inspection was conducted to verify that the temporary jumpers were still in place. Should a jumper inadvertently become disconnected there would be no indication that IRM capability had been lost. Since the temporary jumper installation supports a Technical Specification and licensee requirement it is necessary that these installed jumpers be properly maintained.
- b. The licensee requires Fuel Pool Temperature to be recorded in the Unit Operator's Surveillance Log. Temperature recorder TR-1040-2, point 11, provides this indication in the CR. The temperature channel is not in a Preventive Maintenance (PM) program.

The thermocouple and recorder, point 11, were last checked on September 16, 1980. The recorder was last calibrated on April 8, 1982. While not required by Technical Specifications, the information is important for good operating practices. Good maintenance practices should be followed to maintain the temperature channel.

- c. The refueling bridge crane refueling interlock signals are carried in cable 23216. The cable is located on the refueling floor and connects to the refueling bridge crane. The cable was observed to be inadequately maintained. Approximately six (6) inches of the outer jacket were missing from the cable where it terminates to its plug connector. The inner bundle of wires was exposed. The cable was kept from pulling on the plug by strain relieving it with hose clamps. Electrical failure of the cable due to a mechanical failure would violate Technical Specification requirements for refueling interlock operability. Cable maintenance should reflect its function.
- d. Area Vent Monitor recorder, TR2-1801-06, records the output of various Area Radiation Monitors (ARM). Points five (5) and six (6) indicate the output from the refueling floor high and low range radiation monitors. The inspector observed the recorder not inking on February 6, 1985. Operation personnel had initiated NWR 42016 on February 5, 1985, and it was logged in by the instrument mechanic on the same day. The recorder was still not inking on February 8, 1985.

The chart paper would be the only permanent trend record available if there was a release of radioactivity. Prioritizing maintenance NWR's to support the operational activity in progress is essential. The licensee should review their preventive maintenance program to ensure inclusion of those items required by procedures and Technical Specifications to support refueling activities. Additionally, the licensee should ensure that their work request prioritization scheme adequately reflects plant evaluations in progress as planned. Resolution of the individual deficiencies noted above as well as the general concerns they represent will be tracked as an open item (237/84-24-02(DRS)).

No items of noncompliance or deviations were identified.

## 5. 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 2 and 4.

## 6. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on February 8 and 28, 1985 to discuss the scope and findings of the inspection. The licensee acknowledge the statements made by the inspectors with respect to items discussed in the report. 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.