

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-010/82-14(DPRP); 50-237/82-18(DPRP); 50-249/82-19(DPRP)

Docket Nos. 50-010; 50-237; 50-249 Licenses No. DPR-02; DPR-19; DPR-25

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

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

Inspection At: Dresden Site, Morris, IL

Inspection Conducted: August 10 through September 3, 1982

Inspectors: *R. D. Walker for*
T. M. Tongue

10-22-82

R. D. Walker for
M. J. Jordan

10-22-82

R. D. Walker

Approved By: R. D. Walker, Chief
Projects Section 2C

10-22-82

Inspection Summary

Inspection on August 10 through September 3, 1982 (Reports
No. 50-010/82-14(DPRP); 50-237/82-18(DPRP); 50-249/82-19(DPRP))

Areas Inspected: Routine unannounced resident inspection of Followup on Previous Inspection Findings; Regional/Headquarters Requests; Operational Safety Verification; Monthly Maintenance Observation; Monthly Surveillance Observation; Licensee Event Reports Followup; Review of Plant Operations; Plant Trips; Fire Protection/Prevention Annual Inspection; Spent Fuel Pool Modifications; Inspection During Long Term Shutdown; and Meetings, Training and Offsite Functions. The inspection involved a total of 130 inspector-hours onsite by two NRC inspectors including 20 inspector-hours onsite during off-shift.

Results: Of the 12 areas inspected, there were no items of noncompliance identified in 11 areas; one item of noncompliance (failure to have adequate fire protection equipment surveillance - Paragraph 10) was identified in one area.

DETAILS

SECTION I

1. Persons Contacted

- *D. Scott, Station Superintendent
- *R. Ragan, Operations Assistant Superintendent
- *J. Eenigenburg, Maintenance Assistant Superintendent
- *D. Farrar, Administrative Services and Support Assistant Superintendent
- *J. Brunner, Technical Staff Supervisor
 - J. Wujciga, Unit 1 Operating Engineer
 - J. Almer, Unit 2 Operating Engineer
 - M. Wright, Unit 3 Operating Engineer
 - J. Doyle, QC Supervisor
 - D. Sharper, Acting Waste Systems Engineer
 - G. Myrick, Rad-Chem Supervisor
 - B. Saunders, Station Security Administrator
- *B. Zank, Training Supervisor
- *E. Wilmer, QA Coordinator
- *S. Harris, Technical Staff 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, electrical, mechanical and instrument personnel, and contract security personnel.

*Denotes those attending one or more exit interviews conducted on August 20, 27 and September 3, 1982.

2. Followup on Previous Inspection Findings

(Closed) Noncompliance (50-10/80-14-01(DPRP); 50-237/80-17-01(DPRP); 50-249/80-21-01(DPRP)): Inadequate Radiation Protection for Personnel Involved in Maintenance. The licensee instituted a practice where the work request package is stamped to identify the need for radiation protection concurrence. In addition, the licensee is upgrading the station to new radiation protection standards effective September 1, 1982.

(Closed) Noncompliance (50-237/80-16-01(DPRP); 50-249/80-20-01(DPRP)): Inattentive Operators. The licensee action was to reemphasize the importance of attentiveness to responsibilities and CECO issued a station directive in August 1980, to reaffirm this position. The NRC imposed a civil penalty of \$18,000 on the licensee as a result of this noncompliance. Routine observations by the resident inspectors of control room activities and persons involved in safety related work has shown appropriate attentiveness.

(Closed) Noncompliance (50-237/80-25-01(DPRP)): Failure to Follow DGP 1-1 Requiring Pressure Regulator be Set 50 psig Greater than Reactor Pressure. The licensee has added appropriate caution statements to DGP 1-1, "Unit 2/3 Normal Startup," and DGP 1-3, "Unit 2/3 Hot Standby

to Power Operation," informing operators of possible scrams if the pressure regulator is not maintained at 50 psig greater than reactor pressure. Subsequent observations by the resident inspectors has shown greater care by supervisory personnel, especially during startup and shutdown operations, to prevent a confusing situation for the NSO's.

(Closed) Unresolved Item (50-237/80-25-03(DPRP)): Foreman on Refuel Floor Did Not Have Knowledge of Approval of Pen and Ink Procedure Changes. Subsequent review by inspectors showed that current, approved procedures have been kept on the refuel floor during refueling activities.

(Closed) Open Item (50-249/80-29-01(DPRP)): Possible Modifications for Throttling the Reactor Building Closed Cooling Water (RBCCW) System for Temperature Control Vice Controlling Shutdown Cooling (SDC) Flow. Licensee action was to modify the systems whereby full flow will be maintained with the SDC system during cool down and cold shutdown, thereby insuring optimum flow through the reactor vessel. In addition, the licensee has modified the MO 2(3) 3704 valve (RBCCW common outlet valve for the SDC heat exchangers) such that it is now used as a throttle valve for temperature control of the reactor.

(Closed) Open Item (50-249/80-29-02(DPRP)): Procedure Modifications to Prevent Reactor Vessel Thermal Stratification and/or Pressurization with Shutdown Cooling System Running. The inspector verified that the licensee has made procedure modifications to run the SDC system at maximum flow, to ensure sufficient water level in the reactor vessel and to periodically monitor reactor temperatures. In addition, the inspector verified that the procedures have been modified to reflect the change in reactor temperature control from throttling the SDC system flow to throttling the RBCCW system flow to the SDC heat exchangers.

(Closed) Noncompliance (50-249/80-29-03(DPRP)): Inadvertant Repressurization of the Reactor Vessel While in a Cold Shutdown Condition. The inspector verified that the licensee has met the commitments stated in their letter dated July 27, 1981. In addition, the inspector verified the licensee has evaluated the recommendations of General Electric Service Information Letter (SIL) No. 357 dated June 1981, and the Nuclear Safety Analysis Center (NSAC/27), dated September 1981. The licensee has made appropriate equipment modifications and procedure changes as recommended in these documents.

(Closed) Noncompliance (50-249/80-29-04(DPRP)): Failure to Notify the NRC of a Significant Event Within One Hour per 10 CFR 50.72. The licensee informed all applicable station personnel of the reporting requirements in 10 CFR 50.72 and subsequent observation by NRC resident inspectors shows acceptable reporting.

(Closed) Open Item (50-237/81-24-01(DPRP)): Temperature Monitoring Panel with Alarms Bypassed. The licensee has converted the bypass/normal panel lights to long life bulbs. The licensee has also added a daily surveillance to the operators log to verify the condition of the lights and bypass/normal switches. These changes have also been made to Unit 3.

(Closed) Open Item (50-237/81-37-02(DPRP); 50-249/81-29-02(DPRP)): Delays in Investigating Events Involving Safety Related Equipment Resulting in Conflicting and Confusing Information. Licensee action on and investigation of recent events has improved considerably. Examples of these improvements were observed in the licensee's prompt response to the recent Unit 2 High Pressure Coolant Injection (HPCI) problems involving the Motor Gear Unit (M.G.U.) and the licensee's action after the inadvertent deluge of the HPCI room by the sprinkler system.

(Closed) Open Item (50-237/81-37-04(DPRP); 50-239/81-29-04(DPRP)): Licensee Reluctance to Declare a System Inoperable. Observation of licensee actions concerning safety related components or systems which are inoperable has shown a significant improvement. Examples of this improvement were observed during the following events: declaring the HPCI system inoperable after inadvertent activation of the fire sprinkler systems in the HPCI room, failure of the Unit 2 HPCI Motor Gear Unit, and licensee followup on the recent Unit 2 HPCI pressure transient event that resulted in a trip on August 10, 1982.

(Closed) Open Item (50-237/81-37-05(DPRP); 50-249/81-29-05(DPRP)): Need for Verification of Valve Positions Following Surveillance Activities Where a Tag Out System is Not Used. The licensee reviewed Dresden Instrument Procedure DIP 010-2, "General Surveillance Requirements for Instrument Mechanics" and implemented Dresden Instrument Procedure DIP 260-3, "Reactor Level Instrument Sensing Line Backfill Procedure" to correct this problem.

(Closed) Noncompliance (50-237/81-37-06(DPRP); 50-249/81-29-06(DPRP)): Safety Related Instrument Valves Found Mispositioned. Licensee action was to implement Dresden Instrument Procedure DIP 010-11 "Instrument Valve Audit for Safety and Reliability Related Work Requests" and Dresden Instrument Procedure DIP 260-3 "Reactor Level Instrument Sensing Line Backfill Procedure."

(Closed) Open Item (50-237/82-05-03(DPRP); 50-249/82-06-03(DPRP)): QA Manual Modification Approval Sheet Change to Provide Prompt Training Department Notification of Modifications. The licensee changed the Modification Approval Sheet in the QA manual so that the training department is notified of a modification before construction work is started. This will give the training department sufficient time to prepare and train personnel before the modification is completed.

(Open) Open Item (50-237/82-09-02(DPRP); 50-249/82-10-02(DPRP)): Procedure Review for Correctness and Explanation of Terms. The licensee provided a copy of a publication from Oak Ridge National Laboratory, "US Reactor Containment Technology; A Compilation of Current Practice In Analysis, Design, Construction, Test and Operation, Volume II," dated August 1965, which explains the term (Pave - 1/Pave). The remainder of the concerns remain open.

(Open) Noncompliance (50-237/82-10-02(DPRP); 50-249/82-11-02(DPRP)): Failure to Follow Color Coding of Hoses. By letter dated August 18, 1982, acknowledged by NRC Region III letter dated August 31, 1982, the licensee

has committed to issue a station memorandum to all involved work groups by October 1, 1982. The licensee has also committed to conduct a study of possible hardware changes. The study is expected to be completed by October 1982, and associated modifications expected to be complete by February 1982.

3. Regional/Headquarters Requests

a. Purging and Venting Reactor Containment (AITS F03029782)

The resident inspectors were requested to compile the total annual purging and venting times for calendar year 1981 in a followup to TMI Task Action Plan Item II.E.4.2. Since this data is not routinely maintained, it required a review of licensee's monthly reports and a comparison of these reports with each unit log for the times when containment venting and purging occurred. The summaries are as follows:

Dresden 1	8760 hours
Dresden 2	3432 hours
Dresden 3	461 hours

It is noted that Unit 1 was in a shutdown and defueled condition during this period. It should be also noted that these times are approximates and do not account for whether primary containment was required to be in effect. Small periods of venting such as Drywell to Standby Gas Treatment System (SBGTS) or Drywell to Torus were not considered as they were of short duration (10-15 minutes each) and would have had minimal effect on the total times.

- b. The SRI was requested to follow up on an issue at Dresden that was identified by the resident inspectors at Quad Cities Nuclear Power Station related to Dresser Electromatic Safety Relief Valves (EM SRV) and their spare parts. The licensee had acquired and used inferior spare parts (guide sleeves and piston rings) and had knowledge of the problem for several years. The inferior parts had a history of excessive wear causing the EM SRV to fail closed. It was also found that these parts were not on the safety-related parts list (Q list). Licensee personnel at Dresden conducted an extensive review of receipt records and found that five of the inferior sleeve guides were received on site in 1979. A comparison was made between receipt dates, unit outages and safety relief valve overhauls and replacements and it was found that several sleeve guides had been used, but only one was in use at this time (3C EM SRV). Two of the sleeve guides could not be accounted for. The licensee is submitting a Technical Specification 30 day report. This matter is being reviewed at the Quad Cities Station and Zion Station and the findings and results will be forthcoming under a special combined report for Dresden, Quad Cities, and Zion (50-237/82-20(DPRP); 50-249/82-21(DPRP); 50-254/82-16(DPRP); 50-265/82-18(DPRP); 50-295/82-20(DPRP); 50-304/82-18(DPRP)).

4. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the period of August 8 through September 3, 1982. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of Units 2 and 3 reactor buildings and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the period of August 8 through September 3, 1982, the inspector walked down the accessible portions of the Unit 2 diesel generator, Unit 3 diesel generator and Unit 2/3 diesel generator systems to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

No items of noncompliance or deviations were identified.

5. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed 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 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:

Unit 2

2D Containment Cooling Service Water (CCSW) Pump
K-10 (38-39) control rod drive Hydraulic Unit accumulator.

Unit 2/3

Diesel Generator

Following completion of maintenance on the Unit 2/3 diesel generator, the inspector verified that this system had been returned to service properly.

No items of noncompliance or deviations were identified.

6. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Unit 3 Source Range Monitor (SRM) and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, 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 properly reviewed and resolved by appropriate management personnel.

No items of noncompliance or deviations were identified.

7. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports for Unit 2 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.

(Closed)	50-237/81-20	Reactor Head Spray Line Failure
(Closed)	50-237/82-01	2/3 Chimney Monitor Recorder Failure
(Closed)	50-237/82-02	Reactor Building to Torus Vacuum Breaker Failure to Operate
(Closed)	50-237/82-03	SBGTS Train 'B' Charcoal Bed Failure
(Closed)	50-237/82-04	"A" Floor Drain Sample Tank in Excess of Technical Specification Limit of 0.7Ci.
(Closed)	50-237/82-05	CRD H-10 Failed to Scram During Single Rod Scram Test
(Closed)	50-237/82-06	ATWS Division II Pressure Transmitter Off Scale and Tripped High

(Closed) 50-237/82-07 Reactor Vessel Low Water Level Scram Switch
Set Point out of Specification

No items of noncompliance or deviations were identified.

8. Review of Plant Operations

During the period of August 8 through September 3, 1982, the inspector reviewed the following activities:

a. Review and Audits

On August 12, 1982, the inspector sat in on a safety review committee meeting. The inspector verified that provisions of technical specifications dealing with membership, review process, frequency, and qualifications were met. The inspector also verified that decisions made were reflected in the meeting minutes and that corrective actions proposed were taken.

b. Training

At the invitation of the licensee, on August 19 and 20, 1982, the inspectors attended licensee presentations concerning Drug Awareness. The session on August 19 was provided for all station personnel and the session on August 20 was presented to all station management personnel. The presentations were provided in response to recent allegations reported by a Chicago television station concerning drug and alcohol abuse onsite. Investigation report numbers concerning these matters are 50-010/81-22(DPRP), 50-237/81-40(DPRP), and 50-249/81-33(EIS).

No items of noncompliance or deviations were identified.

9. Plant Trips

Following the plant trips of Unit 2 on August 10 and September 1, 1982, the inspector ascertained the status of the reactor and safety systems by observation of control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, and the plant was returned to operation on August 14 and September 2, 1982.

No items of noncompliance or deviations were identified.

10. Fire Protection/Prevention Annual Inspection

The inspectors examined the licensee's installed fire detection and suppression systems, manual fire fighting equipment, fire brigade training and administrative controls over combustible materials and

ignition sources. These aspects of the fire protection program were reviewed using the requirements in the facility technical specifications and the fire protection/prevention program implementing procedures.

a. Areas of Inspection:

(1) Procedures

<u>Number</u>	<u>Revision Date</u>	<u>Title</u>
DFPP4114-3	8/82	Turbine Building Monthly Fire Equipment Inspection
DFPP4134-1	9/78	Hydrogen Seal Oil Unit Deluge Systems
DFPP4185-2	7/81	Smoke Detector Semi-Annual Maintenance Tests
DFPP4125-1	9/78	Fire System Annual Flush
DFPP4114-2		Master list of Portable Fire Extinguisher Annual Inspection Extinguisher Numbers

(2) Drawings (Sargent and Lundy)

	<u>Revision</u>	<u>Title</u>
12E-2058A	Revision J	Elect. Install. Turbine Bldg. El. 549'-0"
12E-2057B	Revision A	Elect. Install. Sections and Details Turbine Bldg. El. 534'-0"
12E-2057A	Revision Q	Elect. Install. Turbine Bldg. El. 534'-0"
12E-117	Revision E	Area 3 Conduit and Tray Layout Plan Below El. 551'-0" Unit 1
12E-109	Revision J	Area 1 Conduit and Tray Layout Unit 1 Plan Below El. 551'-0"

(3) Technical Specifications Surveillance Tests

<u>Tech. Spec. Numbers</u>	<u>Surveillance Requirements</u>
4.12.A.1.	Each of the fire detection instruments given by Table 3.12-1 (of Tech. Specs.) shall be demonstrated OPERABLE at least every 6 months by a channel functional test. (For the Control Room)

Tech. Spec. Numbers

Surveillance Requirements

4.12.B.1c.

Fire Suppression Water System shall be demonstrated operable: At least once per year by performance of a system flush.

4.12.C.4

At least every other operating cycle, a flow test will be performed to verify that each open head spray nozzle is unobstructed.

4.12.E.1.

At least once per 31 days, a visual inspection of each fire hose station shall be made to assure all equipment is available at the station.

4.12.E.2.

At least once per operating cycle, the hose will be removed for inspection and repacked. Degraded gaskets in the couplings will be replaced.

4.12.D.1.

At least once Per 7 days the CO Storage Tank level and pressure will be verified.

4.12.D.2.

(CO) At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in the correct position.

(4) Plant Tours

The inspectors examined combustible material and ignition source controls during tours of the following plant areas:

LPCI and Core Spray Rooms
Emergency Diesel Rooms

(5) Observations

The inspectors observed maintenance, modification and work request activities to verify proper implementation of fire protection/prevention controls.

b. Findings

While reviewing the surveillance testing the resident inspector found that of the 34 smoke detectors in the Control Room that the technical specification 4.12.A.1 requires to be functionally tested every 6 months, only 32 were being tested. One detector was not

included in the Procedure which lists the detectors that are functionally tested (Procedure DFPP 4185-2). Also, one detector that is included in the test procedure does not exist. This detector is shown on installation drawings for the Control Room Fire detection system.

The Technical Specification also states that only 24 detectors need be operable to consider the system operable. Review of the previous surveillance demonstrated that more than 24 of the 32 smoke detectors which were tested were operable.

Technical Specification surveillance test (4.12.D.2) requires a 31 day verification of the valve lineup for the CO system. There is a manual isolation valve downstream of the CO tank that is not checked. This valve was found to be in the proper position when examined by the inspectors. Failure to accomplish these two surveillance requirements is considered an item of noncompliance (50-237/82-28-01(DPRP); 50-249/82-19-01(DPRP)).

One item of noncompliance was identified in this area.

11. Spent Fuel Pool Modifications

The licensee informed the SRI of finding a discrepancy while conducting reracking of the Unit 2 spent fuel pool. The discrepancy was a failure to follow a portion of the testimony of Mr. Scott Pedigo submitted to the Atomic Safety and Licensing Board (ASLB) dated May 4, 1981. The testimony stated the licensee would meet the conditions of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants." Specifically, in order to meet the terms of NUREG-0612, the licensee would have to use the 125 ton refuel floor crane for moves of spent fuel racks associated with this project.

Through a licensee QA audit, it was found that most or all of the spent fuel rack moves to date had been performed with the 9 ton crane. This crane is not single failure proof as required in NUREG-0612. The 9 ton crane had recently been used to remove 6 old spent fuel racks from the Unit 2 spent fuel pool and the crane had been used in 1981 to remove 13 old spent fuel racks and place 5 new high density spent fuel racks in the Unit 3 spent fuel pool. In addition, the licensee also informed the SRI that several moves of 9 x 13 high density fuel racks combined with the shipping cradle (a total of 19,500 lbs.) had been made with the 9 tone crane. This is in excess of 9 tons, but, based on conversations with licensee and NRR personnel, this load appears to be within the design and tested capabilities of the 9 ton crane. The licensee's immediate actions were to suspend all activities associated with reracking the spent fuel pools, inform the NRC of the discrepancy, perform a surveillance test on the 9 ton crane, and commence a review of all testimony submitted relevant to the spent fuel pool modification to verify that no other commitments had been overlooked.

The office of NRR prepared a transmittal to the ASLB describing the event and attached the licensee's letter of August 26, 1982. NRR and ASLB reviewed this event and determined that the licensee had taken appropriate corrective action and provided adequate assurance to prevent recurrence.

By letter dated August 27, 1982, at the direction of the ASLB, the office of NRR issued Amendment No. 74 to Licensee No. DPR-19, and Amendment No. 66 to Licensee No. DPR-25, authorizing full reracking of the spent fuel pools of Units 2 and 3.

Since the licensee took appropriate action as described above no enforcement action will be taken for this event. For tracking purposes, this event is assigned as Open Item No. 50-237/82-18-02(DPRP); 50-249/82-19-02(DPRP), and is considered closed.

No items of noncompliance or deviations were identified.

12. Inspection During Long Term Shutdown

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the period of August 8 through September 3, 1982. The inspector verified surveillance tests required during the shutdown were accomplished, reviewed tagout records, and verified applicability of containment integrity. Tours of Unit 1 accessible areas, including exterior areas were made to make independent assessments of equipment conditions, plant conditions, radiological controls, safety, and adherence to regulatory requirements and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector observed plant housekeeping/cleanliness conditions, including potential fire hazards, and verified implementation of radiation protection controls. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

No items of noncompliance or deviations were identified.

13. Meetings, Training, and Offsite Functions

During this inspection period, the resident inspector attended a one week training session conducted at the GE-BWR Training Center located at Morris, Illinois. In addition, on August 30, 1982, the resident inspector commenced a 90 day special assignment in the NRC Region III office as a Projects Manager in Projects Branch 2, Section 2C.

On August 19 and 20, 1982, Messrs. S. Roessler and M. Cashatt from the NRC Training Center in Chattanooga, Tennessee, were on site for site familiarization.

14. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on September 3, 1982, and summarized the scope and findings of the inspection activities. The licensee acknowledged the findings of the inspection.