U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-010/85004(DRP); 50-237/85009(DRP); 50-249/85008(DRP)

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

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

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

Inspection At: Dresden Site, Morris, IL

Inspection Conducted: February 16 through April 18, 1985

Inspectors: T. M. Tongue

S. Stasek

C. D. Anderson

Approved By: N. J. Chrissotimos, Chief
Reactor Projects Section 2C

4-25-85
Date

Inspection Summary

Inspection during the period of February 16 through April 18, 1985
(Reports No. 50-010/85004(DRP); 50-237/85009(DRP); 50-249/85008(DRP)
Areas Inspected: Routine unannounced resident inspection of previous inspection findings, 10 CFR 21 reports, headquarters requests, operational safety, events, licensee event reports, maintenance, surveillance, refueling activities, independent inspection, and report review. The inspection involved a total of 366 inspector-hours onsite by three NRC inspectors including 68 inspector-hours onsite during off-shifts.
Results: Of the eleven areas inspected, no items of noncompliance were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison Company

*D. Scott, Manager
*J. Wujciga, Production Superintendent
*R. Flessner, Services Superintendent
T. Ciesla, Assistant Superintendent - Operations
R. Zentner, Assistant Superintendent - Maintenance
*J. Brunner, Assistant Superintendent - Technical Services
R. Christensen, Unit 1 Operating Engineer
J. Almer, Unit 2 Operating Engineer
J. Kotowski, Unit 3 Operating Engineer
J. Achterberg, Technical Staff Supervisor
J. Doyle, Q.C. Supervisor
D. Sharper, Waste Systems Engineer
S. McDonald, Radiation Chemistry Supervisor
B. Saunders, Station Security Administrator
W. Johnson, Chemistry Supervisor
J. Schrage, Radiation Protection Supervisor
*M. Luoma, Q.A. Supervisor
*R. Stobert, Q.A. Inspector
*W. Ahrens, Q.A. Inspector

The inspectors 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 February 27, March 22, April 8, and April 18, 1985 and informally at various times throughout the inspection period.

2. Followup of Previous Inspection Findings

(Closed) Inspection Item (50-237/82-10-01(DRP); 50-249/82-11-01(DRP)). ASME Component Load Capacity Data Sheets Changed By Suppliers At Other Stations. The licensee conducted a review of modification component data sheets and found no evidence of modification from the original specifications. The review was conducted by Station Nuclear Engineering Department (SNED) personnel.

(Closed) Inspection Item (50-237/83-07-02(DRP); 50-249/83-06-02(DRP)). Some Agastat (time-delay) Relays May Not Meet Environmental and Seismic Qualifications. This potential generic issue was reviewed by SNED personnel along with IE Information Notices 82-48 and 84-20 and an INPO notification. The licensee found that the GP and GC series agastats may

exhibit post mold plastic shrinkage and cracking and, electrical contact problems. These series are not used in safety related applications at Dresden. The ECR socket and EGR relays used at Dresden are environmentally and seismically qualified.

(Closed) Noncompliance (50-237/83-32-01(DRP)). Failure to Have a Procedure for the Control of Locked Valves. The licensee has implemented Dresden Administrative procedure DAP 7-14 "Controls and Criteria for Locked Valves", which describes the criteria for selection of valves to be locked, controls for operating locked valves and issuing the associated keys.

(Closed) Noncompliance (50-237/84-18-02(DRP); 50-249/84-17-02(DRP)). Two Examples of Inadequate Procedures. The standby gas treatment procedures were revised to account for the 300 scfm flow through the nonrunning train. The battery surveillance procedures were revised to include inspections of the battery racks.

No items of noncompliance or deviations were identified in this area.

3. 10 CFR 21 Report Followup

(Closed) Inspection Items (237/82-01-PP(DRP); 249/82-01-PP(DRP)). 10 CFR 21 Report That Certain Battery Chargers Were Identified With Defects. Power Conversion Products identified and reported several battery chargers that could blow existing fuses if they were operated at full power for 8 to 10 hours. Their evaluation resulted in recommending changing from 200 to 300 amp fuses. At Dresden, one 125 volt battery charger was identified as affected and the fuses were replaced under work request Number D 25220.

(Closed) Inspection Item (237/83-29-01(DRP); 249/83-27-01(DRP)). 10 CFR 21 Report That Certain General Electric HEA Electrical Relays Displayed Misoperation. The licensee conducted a review of all safety-related HEA relays and found 3 spare units with dates corresponding to those in the 10 CFR 21 report. Tests of those units were under work request D 31419 and all showed satisfactory performance.

No items of noncompliance or deviations were identified in this area.

4. Headquarters Request

a. The resident inspector was requested to review the potential generic problem of installing GNB (formally Gould) batteries with end and side gaps between the battery cells and rack stringers that were greater than those seismically qualified. The inspector was also asked to measure the gaps. Dresden station was informed of the end gap discrepancy by CECo Station Nuclear Engineering Department (SNED) in a letter dated November 26, 1984, based upon a verbal response from GNB. The station then reduced the end gaps on the 24/48V batteries for both units 2 and 3. The 125 and 250V batteries for both units are of a different rack configuration and are to be

upgraded. The schedule for these modifications is at present undetermined and will be made an open inspection item (237/85009-01(DRP); 249/85008-01(DRP)).

Following discussions with the resident inspectors, the licensee reduced the side gaps on the Units 2 and 3 24/48V batteries to an acceptable size.

b. The resident inspector was also requested to inspect station battery operation and maintenance. The visual inspection did not note abnormal gassing or sediments except in the case of the Unit 2 125V battery. Considerable sediment has collected in the bottoms of some cell jars. This battery is scheduled to be replaced this fall. In the meantime, a temporary modification will be installed to use the Unit 1 High Pressure Coolant Injection (HPCI) battery.

Battery installation and construction was also inspected. As previously noted, the 24/48V gap sizes are adequate and the 125V and 250V racks are to be upgraded. The cell spacing material is acceptable for the 24/48V battery design but the 125V and 250V current design uses three metal prongs as spacers.

Each unit has two 125V chargers and two pairs of 24/48V chargers. Each unit has one 250V charger plus there is one that is shared by the two units. This configuration is allowed for this vintage plant per the FSAR.

The inspector reviewed certain battery surveillances for technical specification requirements and for incorporation of IEEE standards. Several discrepancies between IEEE standard 450-1975 and the procedures were noted and discussed with the licensee. This will be an unresolved item (010/85004-01(DRP); 237/85009-02(DRP); 249/85008-02(DRP)).

The inspector will continue this inspection in the next inspection period.

No items of noncompliance or deviations were identified in this area.

5. Operational Safety Verification

The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the period from February 16 to April 18, 1985. The inspectors 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.

During the inspection period while Unit 2 was in a refuel outage, the inspectors verified that surveillance tests were conducted, containment integrity requirements were met, and emergency systems were available as necessary. Unit 2 ended its refueling outage on 4/14/85.

Throughout the entire inspection period, Unit 1 remained in a longterm shutdown condition with all fuel removed from the vessel. The inspectors verified that all applicable requirements for Unit 1 were met during this period.

The inspectors, by observation and direct interview, verified that the physical security plan was being implemented in accordance with the station security plan.

The inspectors observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the inspection, the inspectors walked down the accessible portions of the following systems to verify operability by comparing system lineup with plant drawings, as-built configuration or present valve lineup lists; observing equipment conditions that could degrade performance; and verified that instrumentation was properly valved, functioning, and calibrated.

Unit 2

Standby Liquid Control System
24/48V Battery
125V Battery
250V Battery
Portions of the DC Distribution System
Unit 1 High Pressure Core Spray Battery for upcoming Unit 2 tie-in
Low Pressure Coolant Injection System (Loop A)
Core Spray System (Loop A)

Unit 3

Low Pressure Coolant Injection System
Core Spray System
Isolation Condenser
High Pressure Core Spray
ECCS Keep Fill System
24/48V Battery
125V Battery
250V Battery
Portions of the DC Distribution System

Units 2/3

Standby Gas Treatment System

The inspectors reviewed new procedures and changes to procedures that were implemented during the inspection period. The review consisted of a verification for accuracy, correctness, and compliance with regulatory requirements.

The inspectors 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 in this area.

6. Followup of Events

During the inspection period, the licensee experienced an event which required prompt notification of the NRC pursuant to 10 CFR 50.72. The inspectors pursued the event onsite with licensee and/or other NRC officials. The inspectors verified that the notification was correct and timely, 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 event is as follows:

February 27, 1985, Unit 1. An unusual event was declared when a small amount of oil was discovered in the Unit 1 intake canal. The oil, from an oil storage tank bunker, had migrated (due to rain) to a nearby storm sewer which discharges to the intake canal. No significant quantities of oil were released to the river.

No items of noncompliance or deviations were identified in this area.

7. Licensee Event Reports Followup

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.

LER Unit 2

(Closed) 80-022-00. Control Rod Drive Scram Discharge Piping Did Not Meet Seismic Requirements as Described in the FSAR. The licensee's immediate analysis showed that the piping met the criteria of IE Bulletins 79-02 and 79-14. New seismic supports were designed, fabricated and installed as required. During the refueling outage of 1984 and 1985, the final modification per IE Bulletin 80-17 for the integrated scram/instrument volumes was installed.

(Closed) 84-019-01. Indications Detected During Inservice Inspection. Indications were noted in sixteen reactor water cleanup welds. Weld overlay was applied to one and the others were corrected by piping replacement. A regional specialist inspected portions of the replacement (reference Inspection Report 237/85004).

(Closed) 84-024-02. Unit 2 517' Elevation Turbine Building/Reactor Building Interlock. Revision 2 adequately addresses the common secondary containment of Units 2 and 3.

(Closed) 84-025-01. 4 kV Feed Breaker Failure. The supplement addresses the generic considerations and potential consequences that were missing in the original LER.

(Closed) 85-001-01. Bus 23-1 to Bus 23 Breaker Protective Relaying. Four wires were found to be disconnected in the breaker. These wires were reconnected. Other similar breakers were checked for similar problems but none were noted. The licensee's review of the incident and the manner in which the wires were disconnected led the licensee to the conclusion that this was not done with malicious intent.

(Closed) 85-002-02. Reactor Building/Turbine Building 517' Interlock Door failure. Revision 2 adequately addresses the common secondary containment of Units 2 and 3.

(Closed) 85-003-00. Inadvertent Group 2 Isolation. A shift foreman did not verify if jumpers still existed on the Group 2 isolation relays during a modification test. The shift foreman was reinstructed and now realizes the importance of verifying the installation of the jumpers.

(Closed) 85-004-00. Unit 2 Reactor Scrams. While the unit was shutdown for refueling, two scrams were experienced while switching the power supply for the reactor protection system (RPS) without defeating two scram signals. A procedure will be written to ensure all prerequisites for transferring RPS power supplies are completed.

(Open) 85-005-00. Inadvertent Group II Isolation. This LER will remain open until the licensee's investigation of the root cause is complete and a supplemental report is submitted.

(Closed) 85-006-00. Reactor Scram During Undervoltage Tests of the RPS Channel B ECCS Power Supply. The cause was determined to be erroneous design by the architect engineer that resulted in power supplies to both RPS channel trips on low reactor water level coming from the same source. The licensee redesigned, rewired and functionally tested the modification. In addition, a schematic review was conducted of their work performed by that architect engineer.

(Closed) 85-007-00. Rod Block Surveillances Missed For Seven Days While the Reactor Was in the Refuel Mode. Upon discovery, the licensee immediately performed the surveillances and has added a module to the routine training program to assure there is no recurrence.

(Closed) 85-008-00. Reactor Scram From Tripping of the ±B' RPS MG Set. The MG trip was due to thermal overload relays tripping early.

The relays were replaced and a routine surveillance was performed. The reactor was in cold shutdown when the scram occurred.

(Closed) 85-009-00. Late Standby Liquid Control Operability Surveillance. The surveillance was not performed immediately on the 2B pump when the 2A pump was removed from service. The test was performed and the pump was found operable about 10 to 11 hours later.

(Closed) 85-010-01. Fire Watch Not Established Within 1 Hour. The door to the 125 V battery room was found propped open. It was open for approximately 102 minutes, while draining water from a portion of the fire header during maintenance. The shift foreman will be admonished and a review of technical specification fire watches will be reviewed during operator training sessions.

(Closed) 85-011-00. Reactor Vessel Not Vented With Vessel Below Minimum Pressurization Temperature. The duration of the event was approximately 53 minutes. The cause was attributed to a lack of procedure steps while replacing the vessel head and vent piping. The evaluation showed that the event significance was minimized because no condensate or control rod drive pumps were running, the mode switch was in shutdown, and the control rods could not be moved. The licensee is changing the head replacement procedure DMP 200-18.

(Open) 85-012-00. Unit 2 Reactor Scram Caused by the RPS System. This will remain open until a supplement is issued to address the second scram that occurred 14 minutes after the first. Both were due to switching the power supply to the reactor protection system without having the relay contacts adequately blocked.

(Closed) 85-013-00. Channel A ATWS Trip on Reactor Vessel Low Level During Vessel Hydrostatic Test. The trip was caused by a leaking instrument isolation valve. The Hydrostatic Test procedure (DOS 201-2) will be modified to have level detector cells bypassed during hydrostatic tests.

(Closed) 85-014-00. Reactor Scram. While in the shutdown mode, a jumper was placed on the scram discharge volume hi level relay instead of the required main steam line closure bypass relay. The cognizant engineer was instructed to pay closer attention to detail when performing functional tests.

LER Unit 3

(Closed) 84-012-02. Reactor Scram from IRMs Not Being Fully Inserted in a Timely Manner. The licensee determined that additional training was appropriate for the new operator involved and additional training would be provided to all operators and shift supervisors on the event.

(Closed) 84-016-01. Reactor Scram. The licensee submitted the supplemental report to show the correct S-1 valve nomenclature.

(Closed) 85-002-00. Unit 3 Reactor Scram. The cause was determined to be from vibration of a reactor protection system (RPS) instrument rack. A 150-200 pound inservice inspection standard was dropped in the vicinity of the rack and is the suspected cause of the vibration. The resident inspectors were on site at the time of the scram and observed the licensee's actions. This scram is documented in Inspection Report 84-20/26/23 paragraph 6.

(Closed) 85-003-00. HPCI Room Cooler Inoperable. The fan belts were found broken and replaced. A surveillance will be revised to include operability verification of the fans.

(Closed) 85-004-00. Reactor Vessel Low Low Water Level Isolation Due to Set Point Drift. The switches were recalibrated, tested and placed back in service. The licensee will be replacing the switches during the upcoming refueling outage.

(Closed) 85-005-00. Loss of Undervoltage Protection on Bus 34-1. This resulted from personnel taking Unit 3 emergency diesel generator (E D/G) out of service while conducting a test on the Unit 2 E D/G. For a period of about 4 1/2 minutes, all low pressure ECCS capability would have been lost if there had been a loss of offsite power. The equipment would have responded if offsite power was available. This event along with several others was the subject of an enforcement meeting on March 25, 1985, and is addressed in a special inspection report, (50-237/85010(DRP); 50-249/85009(DRP)). Followup on this issue will be through the inspection findings in that report.

(Closed) 85-006-00 and 01. High Pressure Coolant Injection (HPCI) Room Cooler Inoperable. The service water valves were found shut. This LER along with several others was the subject of an enforcement meeting on March 25, 1985, and is addressed in a special inspection report, (50-237/85010(DRP); 50-249/85009(DRP)). Followup on this event will be through the inspection findings in that report.

(Closed) 85-007-00. Torus (Suppression Pool) Water Sample Line Valves Found Open. This LER along with several others, was the subject of an enforcement meeting on March 25, 1985, and is addressed in a special inspection report, (50-237/85010(DRP); 50-249/85009(DRP)). Followup on this event will be through the inspection findings in that report.

(Closed) 85-008-00. Unit 2/3 Emergency Diesel Generator Automatically Started. The start was caused by vibration of the auto-start relay from modification work on the relay cabinet. This was expected and assessed by management personnel prior to allowing the work to begin.

(Closed) 85-009-00. Torus Primary Upper Sightglass Isolation Valve Left Partially Open. This condition existed for approximately one hour and was promptly corrected. In addition, from a previous similar event, the licensee had implemented changes such that no flow path to secondary containment existed and the sightglass and associated piping outside the normal primary containment boundary have been statically tested to accident pressure. Initially, licensee personnel considered this to be nonreportable; however, after discussions with the resident inspectors, it was agreed to be reportable because the sightglass and associated piping is not seismically qualified.

The preceding LERs have been reviewed against the criteria of 10 CFR 2, Appendix C, and when the incidents described meet all of the following requirements, no Notice of Violation is normally issued for that item.

a. The event was identified by the licensee,
b. The event was an incident that, according to the current enforcement policy, met the criteria for Severity levels IV or V violations,
c. The event was appropriately reported,
d. The event was or will be corrected (including measures to prevent recurrence within a reasonable amount of time), and
e. The event was not a violation that could have been prevented by the licensee's corrective actions for a previous violation.

No items of noncompliance or deviations were identified in this area.

8. 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

Emergency Diesel Generator Routine Maintenance
Control Rod Drive J-6 Scram Outlet Valve Maintenance

Unit 3

Low Pressure Coolant Injection Heat Exchanger Cleaning and Divider Repair
Containment Cooling Service Water C and D pumps Examination and Repair

No items of noncompliance or deviations were identified in this area.

9. Monthly Surveillance Observation

The inspectors observed surveillance testing required by technical specifications for Unit 2 Core Spray Pump Operability 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.

The inspectors also witnessed portions of the following test activity:

Unit 2

Unit 1 High Pressure Core Spray Battery Discharge Test for upcoming Unit 2 tie-in

No items of noncompliance or deviations were identified in this area.

10. Refueling Activities

The inspectors verified that during the outage periodic testing of refueling related equipment was performed as required; verified that containment integrity was maintained as required by Technical Specifications; verified that good housekeeping practices were maintained in the refueling area; and verified that staffing during refueling was in accordance with applicable requirements. The inspector participated in the American Society of Mechanical Engineers (ASME) required reactor vessel hydrostatic test walkdown. Several leaks were noted by the inspector and licensee personnel to be corrected prior to unit start up.

The inspectors observed portions of the shutdown margin tests, control rod scram time tests, the initial and subsequent criticalities, and ascension into the power range.

No items of noncompliance or deviations were identified in this area.

11. Independent Inspection - Generating Stations Emergency Plan (GSEP) Drill

The inspector observed licensee activities in the control room and the technical support center (TSC) during an emergency drill. The drill progressed from the unusual event to the general emergency state. This was done in preparation for the upcoming exercise scheduled for later this month.

No items of noncompliance or deviations were identified in this area.

12. Report Review

During the inspection period, the inspectors reviewed the licensee's Monthly Operating Reports for January, February and March 1985. The inspectors confirmed that the information provided met the requirements of Technical Specification 6.6.A.3 and Regulatory Guide 1.16.

No items of noncompliance or deviations were identified in this area.

13. Open Inspection Items

Open inspection items are matters which have been discussed with the licensee, which will be reviewed further by the inspectors, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 4a.

14. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 4b.

15. Meetings

a. Enforcement Conference

An enforcement conference was held on March 15, 1985, with licensee personnel to discuss recent events, their seriousness and possible enforcement actions. The meeting is discussed in a special inspection report, (50-237/85-010(DRP); 50-249/85-009(DRP)).

b. Regulatory Performance Improvement Program (RPIP)

The licensee provided a status report on the RPIP at a meeting on March 7, 1985. A summary of the meeting is discussed for all operating CECo stations in a special report. The Dresden report number is (50-10/85-005(DRP); 50-237/85-012(DRP); 50-249/85-011(DRP)).

16. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) informally throughout the inspection period and at the conclusion of the inspection on April 18, 1985, and summarized the scope and findings of the inspection activities. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary. The licensee acknowledged the findings of the inspection.