U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-237/93029(DRP); 50-249/93029(DRP)

Docket Nos. 50-237; 50-249

License Nos. DPR-19; DPR-25

Licensee: Commonwealth Edison Company Opus West III 1400 Opus Place - Suite 300 Downers Grove, IL 60515

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

Inspection At: Morris, IL

Inspection Conducted: October 7 through November 29, 1993

Inspectors:

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Inspection Summary

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Inspection from October 7 through November 29. 1993 (Report Nos. 50-237/93029(DRP); 50-249/93029(DRP))

<u>Areas Inspected:</u> Routine, unannounced resident inspection of operations, operational safety verification and engineered safety feature (ESF) system walkdown, maintenance and surveillance observations, engineering and technical support observations, plant support observations, safety assessment and quality verification, licensee action on previous inspection findings, licensee event report review, and management meetings.

<u>Results:</u> Of the nine areas inspected, one violation concerning failure to post a Notice of Violation was identified in paragraph 6. Two unresolved items regarding disconnected drywell ventilation duct supports and missing main steam line isolation valve seal assemblies were identified in paragraphs 3.e and 4.a, respectively.

EXECUTIVE SUMMARY

Assessment of Plant Operations

Operations continued to control unique activities very well, such as Unit 2 shutdown and startup. One exception was the level of senior reactor operator involvement in the approach to criticality. Personnel errors continued to affect plant operations. Errors involving supervisors were of particular concern. Operations closeout of the Unit 2 drywell was better than previous occasions. However, the general cleanliness level in Unit 2 drywell was below management expectations.

Assessment of Maintenance and Surveillance

Observed maintenance and test activities were performed well. However, low priority work requests had the same average age as higher priority items and the number of safety related work items increased.

Assessment of Engineering and Technical Support

Engineering performed a good review of the modification to the reactor vessel water level instrument and identified an unreviewed safety question.

<u>Assessment_of_Plant_Support</u>

The licensee failed to post a Notice of Violation within the required time period.



DETAILS

1. Persons Contacted

- Commonwealth Edison Company (CECo)
 - M. Lyster, Site Vice President
 - G. Spedl, Manager, Dresden Station
 - D. Ambler, Executive Assistant to the Site Vice President

 - E. Carroll, Chemistry Supervisor R. Flahive, Technical Services Superintendent
 - L. Jordan, Health Physics Supervisor
 - M. Korchynsky, Senior Operating Engineer
 - J. Kotowski, Operations Manager
 - * G. Kusnik, Quality Control Supervisor
 - * S. Lawson, Operating Engineer
 - * H. Massin, Manager, Station Engineering and Construction T. O'Connor, Maintenance Superintendent
 - * R. Radtke, Services Superintendent
 - S. Reece-Koeniq, Performance Assistant Administrator
 - * R. Robey, Director, Site Quality Verification
 - * J. Shields, Regulatory Assurance Supervisor R. Speroff, Operating Engineer
 - R. Stobert, Operating Engineer* M. Strait, Technical Staff Supervisor B. Viehl, Modification Design Supervisor
 - * J. Williams, Operations Support Supervisor R. Wroblewski, NRC Coordinator
 - * Indicates persons present at the exit interview on November 29, 1993.

The inspectors also contacted other licensee personnel including members of the operating, maintenance, security, and engineering staff.

Summary of Operations 2.

Unit 2

Unit 2 power level was administratively derated 1% power due to feedwater flow nozzle calibration uncertainties. On October 26, the reactor was placed in the shutdown mode for a planned 3-day outage to repair two traversing incore probes.

On October 30, the 2A and 1D main steam isolation valves (MSIV) failed a local leak rate test and required replacement of the seat ring. The outage was extended to facilitate the repair. Also, the licensee identified an air leak on the 1B MSIV and determined that the manufacturer had not installed air side seal assemblies in all eight MSIV actuators.

Unit 2 was made critical on November 28 and synchronized to the grid on November 29.

<u>Unit 3</u>

Unit 3 operated at power levels up to 99% for most of the period. The unit was derated 1% power due to feedwater flow nozzle calibration uncertainties. On November 4, the unit began coastdown in preparation of the March 1994 refueling outage.

No violations or deviations were identified.

3. <u>Plant Operations (71707, 71710, and 93702)</u>

The inspectors verified that the facility was operated in conformance with the licenses and regulatory requirements and that the licensee's management control system was effectively carrying out its responsibilities for safe operation. During tours of accessible areas of the plant, the inspectors made note of general plant and equipment conditions, including control of activities in progress.

On a sampling basis, the inspectors observed control room staffing and coordination of plant activities, observed operator adherence with procedures and technical specifications, monitored control room indications for abnormalities, verified that electrical power was available, and observed the frequency of plant and control room visits by station managers. The inspectors also monitored various administrative and operating records.

Accessible portions of ESF systems and associated support components were inspected to verify operability through observation of instrumentation and proper valve and electrical power alignment. The inspectors also visually inspected components for material condition. Specifically, the following systems were inspected by direct field observations:

<u>Unit 2</u>

Reactor protection system relays and components Suppression pool cooling system 2/3 diesel generator ATWS logic and relay system Diesel generator

<u>Unit 3</u>

Reactor protection system relays and components ATWS logic and relay system Diesel generator



Plant Operations Observations

a. <u>Personnel Errors</u>

A number of significant personnel errors occurred during the period. The following provides a summary of the events:

- On October 13, an operator failed to wear required protective clothing for a task in the 34 kv switchyard, opened the wrong disconnect, and then re-closed the disconnect without direction.
- On October 26, an operator removed Unit 3 offgas filter train from service instead of Unit 2 train. The operator failed to self-check.
- On October 30, while removing cable from Unit 2 drywell, a supervisor incorrectly cut a cable for the "B" traversing incore probe indexer.
- On November 8, an electrical mechanic (EM) inadvertently tripped the 3B fuel pool cooling pump. The EM was troubleshooting the 3A pump and worked on the wrong mercury switch.
- On November 9, Unit 3 ECCS jockey pump was found running with the suction, discharge, and recirculation valves closed. The pump had been incorrectly returned to service earlier in the day. A supervisor had decided not to use the procedure for this task.
- On November 11, a station laborer supervisor directed two laborers to hang hoses and cable more than 6 feet above ground. The required radiological survey was not obtained.
- On November 16, instrument maintenance personnel worked on the incorrect local power range monitor and caused a channel "A" half scram on Unit 2.
- On November 16, while clearing an out-of-service (OOS) for work on the service air compressors, operators found four valves open. As stated on the OOS cards, these valves were required to be closed. The initial investigation suggested that contractors had opened the valves.

These events demonstrated a continuing problem with licensee personnel attention to detail and procedural adherence. The involvement of first line supervision in three of these events demonstrated that upper management expectations have not reached the lower levels of supervision. Therefore, first line supervision was unlikely to set the appropriate standards for the bargaining unit personnel.

The event involving the high voltage operator in the 34 kV switchyard showed a disregard for electrical safety as well as a failure to self check. The involvement of a trainee in this event also showed a failure to establish the correct standards for future operators. In addition, specific corrective actions for this event have been slow.

A number of enforcement actions have been taken in the past with regards to procedural adherence at Dresden station. The corrective actions for the most recent Notice of Violation (50-237/93020-01) have not yet had sufficient time to be implemented. Therefore, the above personnel errors are considered further examples of this violation.

b. <u>Observations During Unit 2 Shutdown and Startup</u>

The inspectors monitored activities of control room operators and other operations support personnel during the Unit 2 shutdown on October 25 and startup on November 28. Management expectations, with one exception, were clearly communicated to the operating crews prior to both activities. The operators were attentive to the panels and all observed activities were conducted in accordance with plant procedures. Discrepancies such as intermediate range monitor 14 problems were identified and resolved promptly. The startup activities were conservatively controlled with the nuclear engineers and the nuclear station operators communicating effectively. The pre-job briefing by the nuclear engineers and the shift control room engineer (SCRE) was complete, with opportunity for input and questions from personnel.

The inspectors raised a question of senior reactor operator (SRO) involvement during reactor startup at the beginning of 1993. Licensee management stated a SRO should devote a majority of oversight to the startup (Inspection Report 50-237/92036) and the inspectors considered the lack of management direction to the operating crews to be a weakness. On November 28 during rod withdrawal to criticality, there was no direct involvement by a SRO. Both the shift engineer and the SCRE periodically monitored the startup activities. There was no formal communications to the SROs on the status of the startup from either the nuclear engineers or the nuclear station operators. The level of involvement of the SROs in reactor startups remained a weakness and is considered an Inspector Followup Item (50-237/93029-01(DRP)).

c. <u>Operator Response to Unit 3 Electro-Hydraulic Control Problems</u>

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On October 27, the operators received an electro-hydraulic control electrical malfunction annunciator and initiated a work request. The instrument maintenance foreman observed the 24 Vdc power supply to the turbine supervisory controls was at 22 Vdc. On October 28, the foreman noted that the voltage had decreased below 20 Vdc. The operating engineer immediately authorized a power reduction to 40% power to prevent a potential reactor trip from a turbine trip. The inspectors observed the power reduction and verified the operators were aware of the potential reactor trip condition. The inspectors had no concerns.

d. <u>Operations Involvement in Bus 29 Maintenance Work</u>

On November 10, the inspectors observed operations involvement with the safety related Bus 29 maintenance troubleshooting. The troubleshooting activities rendered several safety related systems inoperable: high pressure coolant injection, one train of core spray and low pressure coolant injection, Unit 2 diesel generator cooling water, and Unit 2/3 diesel continuous lubrication pumps. The licensee installed a temporary alteration to maintain operability of the Unit 2/3 diesel generator continuous lubrication pumps through a Unit 3 motor control center. The inspectors verified equipment status, compliance with technical specifications, system lineups, and equipment tagouts. No problems were identified. The heightened level of awareness meeting for restoration of equipment was very good and resulted in good communication and coordination between all departments. The operations foreman identified a potential concern with breaker operability and halted further work until the concern was resolved. The inspectors had no concerns.

e. Unit 2 Drywell Closeout

The inspectors accompanied licensee personnel on a Unit 2 drywell closeout inspection. The operations department improved in the ability of finding debris than previous closeouts. However, the cleanliness standards for the drywell were lower than the remainder of the plant; there were still many minor discrepancies. The operations personnel removed significant quantities of duct tape from the drywell. This represented a weakness in the foreign material exclusion program. Improving drywell cleanliness with due consideration for ALARA concerns is a challenge for the licensee.

The inspectors identified two disconnected ventilation duct supports in the drywell. This issue is considered an Unresolved Item pending review of the licensee's evaluation (Unresolved Item 50-237/93029-02(DRP)).

Several examples of a previous violation for failure to follow procedures were identified. One inspector followup item was identified concerning SRO involvement in reactor startup activities. One

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unresolved item was identified regarding disconnected drywell ventilation duct supports.

4. <u>Monthly Maintenance and Surveillance (62703 and 61726)</u>

Station maintenance and surveillance activities were observed and/or reviewed to verify compliance with approved procedures, regulatory guides, and industry codes or standards, and in conformance with technical specifications (TS).

The following items were considered during this review: approvals were obtained prior to initiating maintenance work or surveillance testing and operability requirements were met during such activities, functional testing and calibrations were performed prior to declaring the component operable, discrepancies identified during the activities were resolved prior to returning the component to service, quality control records were maintained, and activities were accomplished by qualified personnel.

The inspectors witnessed portions of the following maintenance activities:

<u>Unit 2</u>

Troubleshooting of drywell equipment drain sump Troubleshooting of Bus 29 to motor control centers 29-2 and 4 Repair of 2B control rod drive (CRD) motor Replacement of 2B circulating water pump motor Installation of reactor vessel level indication system (RVLIS) modification Replacement of service air compressor Main steam isolation valves refurbishment Replacement of 2A Reactor recirculation pump lower guide bearing HPCI turning gear engagement mechanism modification 2/3 Diesel generator 18-month inspection

<u>Unit 3</u>

Installation of 250 Vdc balance-of-plant battery Installation of fire protection system upgrade Installation of non-outage piping for RVLIS modification Installation of station blackout diesels and auxiliary equipment 3A CRD pump reducing gear rebuild 3B Circulating water pump

The inspectors also witnessed sections of the following test activities:

<u>Unit 2</u>

SP 91-10-134 Triennial Fire Main Yard Loop Flow Test SP 93-3-32 Differential Pressure Testing of MO 2-1501-13B SP 93-3-101 Differential Pressure Testing of MO 2-1501-20B

DIS 0700-08 Rod Block Monitor Calibration and Functional Test DIS 1400-06 Core Spray Flow Transmitter Calibration DOS 0250-02 Closure Timing and Exercising of Main Steam Isolation Valves DOS 1400-01 Core Spray System Valve Operability Test DOS 1400-02 Core Spray System Full Flow Test DOS 1500-06 Low Pressure Coolant Injection System Full Flow Test DOS 2300-03 High Pressure Coolant Injection System Full Flow Test

<u>Unit 3</u>

DIS 0500-10 Scram Discharge Volume Level Instrumentation Functional Test and Calibration DOS 0250-06 ADS Acoustic Monitor Surveillance DOS 1400-01 Core Spray Pump Test with Torus Available DOS 1400-05 Core Spray Valve Operability Test DOS 1500-02 CCSW In-Service Pump Test DOS 1500-03 CCSW Pump Test DOS 1500-05 LPCI System Quarterly Flow Rate Test DOS 1500-10 LPCI Quarterly In-Service Pump Test

Maintenance and Surveillance Observations

a. <u>Seal Assembly Missing from Main Steam Isolation Valve Actuator</u>

On November 8, a maintenance foreman discovered an air leak on Unit 2 1A and 2B main steam isolation valve (MSIV) actuators. The leakage was past the weep hole on the air side of the operator. Upon disassembly, the licensee determined the air side seal assembly had not been installed by the manufacturer, Miller Fluid Power. The licensee had ordered 17 actuators in 1991. Eight of these were installed in Unit 2 and five were installed in Unit 3 during previous refueling outages. The licensee replaced the seal assemblies on Unit 2 MSIVs during the recent forced outage. The licensee performed an engineering evaluation and concluded Unit 3 MSIVs were operable. Contingency actions included: raising the minimum drywell pneumatic system pressure and revising operator procedures to ensure operability during worst case accident conditions. The five Unit 3 actuators will be repaired during the March 1994 refueling outage. The inspectors had no concerns with the operability evaluation.

The licensee's preliminary investigation indicated that the actuators were designed by Commonwealth Edison Company and built by Miller Fluid Power. The double seal was designed in 1982; however, appropriate design diagrams were not revised. The root cause for the missing seal assemblies and corrective actions are considered an Unresolved Item (50-237/93029-03(DRP)) pending review of the licensee's investigation.

b. <u>Maintenance Backlog</u>

The maintenance staff has completed a review of the work request backlog of currently available corrective maintenance items. The review showed some weaknesses in the work control and maintenance programs:

- Low priority work requests had the same average age as higher priority work.
- Although the total number of work requests had decreased, the number of outstanding safety related work requests continued to increase.

The systems with the largest number of outstanding work requests were radwaste, ventilation, and some Unit 2 safety related and important to safety systems. This was a concern because Unit 2 recently completed a major maintenance outage.

One example of failure to complete safety related work in a timely manner was a work request on Unit 2 diesel generator. Work request D16676 involved two loose bolts on the diesel, was written on March 5, 1993. As of November 24, this item was not yet scheduled for work. Although the diesel generator remained operable, this did not meet management's expectations for timely corrective action. The timeliness of maintenance activities will be reviewed further in future inspections.

c. <u>Replacement of Traversing Incore Probes</u>

The inspectors observed the replacement of the traversing incore probe detector tubing and the recovery of detector probes. The work was performed in accordance with WR D22322. The pre-job briefing was excellent. Both health physics support and ALARA planning considered various contingencies and precautions associated with the evolution. In addition, the instrument maintenance staff performing the evolution was well coordinated, enthusiastic, and precise.

No violations or deviations were identified. One unresolved item was identified regarding MSIV seal assemblies.

5. <u>Engineering and Technical Support (37700)</u>

The inspectors evaluated the extent to which engineering principles and evaluations were integrated into daily plant activities. This was accomplished by assessing the technical staff involvement in non-routine events, outage-related activities, and assigned TS surveillances; observing on-going maintenance work and troubleshooting; and reviewing deviation investigations and root cause determinations.



<u>RVLIS Modification in Response to Bulletin 93-03</u>

NRC Bulletin 93-03, "Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in Boiling Water Reactors," was issued on May 28, 1993. The bulletin alerted licensees of potential reactor water level indication errors during normal depressurization. The licensee's immediate corrective actions were reviewed and were discussed in Inspection Report 50-237/93017(DRP).

The long term corrective actions involved a modification to provide continuous backfill through the instrument lines using control rod drive (CRD) water. Due to the system configuration, the licensee determined the modification created an unreviewed safety question, in that, the probability of a loss of coolant accident increased. An inadvertent closure of the reference leg root valve would cause the CRD water to pressurize the instrument line and cause all relief valves to open. The licensee planned to implement administrative controls to prevent root valve manipulation. However, after further review by NRR, the licensee was not granted permission to implement the modification. The licensee was reviewing possible design changes and planned to resubmit a proposed design by early 1994.

No violations or deviations were identified.

6. <u>Plant Support (71707 and 93702)</u>

The inspectors evaluated the involvement of support organizations in assuring safe and effective plant operation. Specific areas included:

<u>Radiation Protection Controls</u>

The inspectors verified workers were following health physics procedures and randomly examined radiation protection instrumentation for operability and calibration. An example of failure to follow radiation protection procedures was discussed in paragraph 3a.

• <u>Security</u>

The inspectors monitored the licensee's security program to ensure that observed actions were being implemented according to the approved security plan. No discrepancies were identified.

<u>Emergency Preparedness</u>

The inspectors verified the operational readiness of the control room technical support center and operation support center. Nonroutine events were reviewed to ensure proper classification and appropriate emergency management involvement.

Housekeeping and Plant Cleanliness

The inspectors monitored the status of housekeeping and plant cleanliness for fire protection and protection of safety related equipment from intrusion of foreign material.

Posting Notice of Violation

On October 18, the licensee received a Notice of Violation, included in Inspection Report 50-237/93022(DRSS), for a lack of procedures for control of contaminated material. This Notice involving radiological working conditions was not posted within 2 working days as required by 10 CFR 19.11. This Notice was not posted until October 26. Failure to post a Notice of Violation involving radiological working conditions within the required period was a Violation of 10 CFR 19.11 (50-237/93029-04).

One violation of 10 CFR 19.11 was identified.

7. Safety Assessment and Quality Verification (SAQV) (40500)

The effectiveness of management controls, verification and oversight activities in the conduct of jobs observed during this inspection were evaluated. Management and supervisory meetings involving plant status were attended to observe the coordination between departments. The results of licensee corrective action programs were routinely monitored by attendance at meetings, discussion with plant staff, review of deviation reports, and root cause evaluation reports.

SAQV Related Events

a. <u>Problem Identification Form (PIF) Review</u>

The inspectors performed a review of the Integrated Reporting Program, including approximately 20 PIFs, which were originated during the first 6 months of 1993. The licensee has commenced trending causal factors; however, this information has not yet been incorporated into the corrective action program. In some cases, the inspectors observed delays or omissions in submitting PIFs. Several weaknesses were observed from the sample of PIFs:

• PIF 2-201-93-509 was written to document an adverse trend in missed NRC commitments. This PIF was closed by incorporating it into another PIF, one which addressed some specific service water system commitments. The second PIF did not address the generic concerns raised by the original PIF.

- PIF 2-200-93-033 involved problems with using correct procedure revisions and had an original due date of February 26, 1993. This PIF due date had been revised seven times and had a final due date of November 25.
- On November 8, an electrical maintenance mechanic inadvertently tripped the 3B fuel pool cooling pump. An entry in the Unit 3 operator logbook stated a PIF would be written. However, as of November 24, a PIF had not been generated. After inspectors' prompting, the licensee initiated a PIF for the event and a second PIF for the failure to write a PIF initially.
- An operator wrote a PIF on a Unit 3 green backlit annunciator in October; however, the PIF was not tracked by the integrated reporting system. Regulatory assurance personnel were unaware of the issue. The operator initiated another PIF for the concern. A PIF was also generated to determine why the original PIF was not included in the system.
- In October a radiation protection technician wrote a number of PIFs. These PIFs were not submitted to event screening for 3 weeks.
- b. <u>Review of Safety Quality Verification Audit</u>

The inspectors reviewed the safety quality verification (SQV) audit, "License/Technical Specification Compliance and Corrective Actions," conducted between July 7 and 19, 1993. The audit involved a team of five individuals and included conduct of operations, technical specification interpretations, use of temporary alterations, equipment status, procedural compliance, effectiveness of corrective actions for NRC commitments, INPO issues and corrective action requests (CARs), and corrective actions for the September 1992 rod mispositioning event.

The inspectors observed the following:

- A CAR was written on temporary alterations not reflected in critical control room drawings. The lack of critical control room drawings control was identified by the NRC in April 1993. The licensee's corrective actions addressed design control records, but did not consider temporary alterations. The effectiveness of the previous corrective actions was not evaluated.
- The audit did not identify problems with the corrective actions taken for September 1992 rod mispositioning event. During initial license examinations, NRC operator licensing

examiners identified problems with job performance measures on this issue.

The team observed only four surveillances in progress and did not identify procedural adherence problems. The team reviewed 51 completed surveillances and identified administrative related problems.

 Only two equipment operators were observed during the conduct of operations review.

The inspectors discussed the findings with the SQV supervisor. The structure of the SQV audits has been modified to allow auditors flexibility in performing audit activities. Additionally, the audit periodicity was reduced from 3 months to 6 weeks. The SQV department was also reorganized and increased by three auditors. The inspectors will review the effectiveness of these changes in future inspections.

No violations or deviations were identified.

8. <u>Licensee Actions on Previous Inspection Findings (92701 and 92702)</u>

<u>(Closed) Violation (50-237(249)/92009-03(DRP))</u>: Failure to have procedures to support engineering development and submittal of MOV thrust calculation. The inspectors reviewed "Guideline for Determining Target Thrust Windows" which incorporated requirements for documentation of assumptions when generating target thrust windows. This item is closed.

<u>(Closed) Violation (50-237(249)/92009-04(DRP))</u>: Failure to perform an adequate 10 CFR 50.59 evaluation for the installation of measuring and test equipment under a temporary alteration. The inspectors reviewed Dresden Administrative Procedure (DAP) 10-2, "10 CFR 50.59 Review Screenings and Safety Evaluations," which required completion of form 10-2D, "Design Issues Worksheet" for each safety evaluation prepared. This item is closed.

<u>(Closed) Violation (50-237(249)/92009-05(DRP))</u>: Failure to complete and follow administrative procedures. This item is closed to Violation 50-237/93020-01.

<u>(Closed) Violation (50-237(249)/92009-06(DRP))</u>: Failure to document causes and corrective action taken for MOV non-conformance. The inspectors reviewed DAP 2-29, "Integrated Reporting Process" and CECo's engineering and construction (ENC) integrated reporting program (IRP) prescribed in ENC-QA-40. Additionally, the inspectors sampled several MOV related problem identification forms (PIFs) both from the station and corporate office. The IRP appeared to provide a mechanism for tracking issues and a systematic root cause evaluation method for nonconformance. This item is closed.



<u>(Closed) Violation (50-237(249)/92009-07(DRP))</u>: Failure to notify the NRC of conditions that resulted in automatic actuation of engineered safety feature. The inspectors reviewed DAP 2-28, "Reportability Determination and Event Notifications" and the CECo Reportability Manual. This item is closed.

(Closed) Unresolved Item (237/90016-03(DRS); 249/90015-03(DRS)): Neutron flux monitoring instrumentation did not meet Regulatory Guide (RG) 1.97, Category 1 requirements. The Office of Nuclear Reactor Regulation (NRR) completed an evaluation of the boiling water reactor (BWR) owners group report, NEDO-31558, "Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post-Accident Neutron Monitoring System." NRR concluded that for current BWR license holders, the NEDO-31558 criteria was an acceptable alternative to the recommendations of RG 1.97. NRR requested the licensees to review their neutron flux monitoring instrumentation against the NEDO criteria and submit the results of that review to NRR. On August 17, 1993, the licensee provided some of the requested information; however, the licensee stated that further review would be required to assess the actions necessary to comply with those NEDO recommendations not currently addressed by system design. The licensee stated that this information would be submitted to NRR in 90 days. No further Region III action is required. This item is closed.

<u>(Closed) Unresolved Item (50-237/91031-03 (DRP))</u>: Division II, 480V motor control center (MCC) main power feeder cables, located in the turbine building, were run in Division I cable trays. During Unit 2 cable walkdowns to resolve degraded voltage concerns, the licensee identified four safety related cables that did not meet MCC feeder cable separation requirements. These cables were classified as balance-ofplant during original plant construction. Several of the systems fed by these cables were upgraded from non-safety to safety related after Dresden received an operating license. The licensee indicated in the safety assessment that the system upgrades were for future maintenance and procurement purposes.

The licensee analyzed the potential failure mechanisms for each of the identified cables. The analysis included seismic, high energy line break, internal and external missiles, and fire. The licensee determined that the most probable failure mechanism would be a fire. The fire scenario was analyzed in the Dresden Appendix R Safe Shutdown Report. For the cables of concern and the fire areas they were located in, systems and components from the opposite unit were available to achieve and maintain safe shutdown. Procedures were in place at the time of discovery to mitigate this event. The licensee has re-routed the affected cables and now meets the divisional separation requirements. Unit 3 MCC safeguards cables were also walked down. Two cables were identified with the balance-of-plant segregation code. However, divisional separation requirements were satisfied. This item is closed.



<u>(Closed) Unresolved Item (50-237/92020-07 (DRP))</u>: Apparent Rounds Falsification. This item has been resolved through generic communication to the industry. This item is closed.

(<u>Closed</u>) Unresolved Item (50-237/92026-03(DRP)): Loss of CCSW train separation. This issue was discussed in previous Inspection Reports (50-237/93011, 93020, and 93024) and was the subject of Violation (50-237/93024-03(DRP)). This item is closed.

<u>(Open) Inspector Followup Item (50-237/92005-01 (DRP))</u>: Extended out-ofservice periods. The operations department identified those components with extended out-of-service periods. System engineers were to review these for possible modifications or other resolutions. This review did not occur. This item remains open.

<u>(Closed) Inspector Followup Item (237/92010-01(DRP))</u>: Failure to perform a 10 CFR 50.59 safety evaluation associated with the installation and use of a portable containment air sample pump. The inspectors reviewed the licensee's procedure revisions and the rebaselining of the FSAR section 5.2.2. This item is closed.

<u>(Closed)</u> Inspector Followup Item (249/92010-02(DRP)): Completion of licensee initiatives to ensure against radioactive releases when using the isolation condenser for extended time periods without offsite power. The licensee's corrective actions included the installation of redundant diesel driven clean demineralized water makeup pumps to supply makeup to the isolation condenser shell side. These corrective actions were either completed or planned for completion at the next refueling cycle. This item is closed.

<u>(Closed)</u> Inspector Followup Item (50-237/92014-02(DRP)): Licensee initiatives to improve performance and reduce engineered safety features actuations associated with the reactor water cleanup (RWCU) system. The licensee performed various maintenance activities during last Unit 2 refuel outage. The licensee planned to perform similar activities during the next Unit 3 refuel outage. This item is closed.

<u>(Closed)</u> Inspector Followup Item (50-237(249)/92021-02(DRS)): Review of modification package to eliminate noise in the neutron monitoring system. Modification package P12-2-92-726 was reviewed and found acceptable. This item is closed.

<u>(Closed) Inspector Followup Item (50-237/92036-03(DRP))</u>: Elevated high pressure coolant injection (HPCI) discharge piping temperature due to reactor feedwater system back-leakage. One outstanding corrective action is the installation of a permanent temperature monitor on the HPCI discharge piping. The modification will be implemented during a non-outage period in 1994. This item is closed.



<u>(Closed) Inspector Followup Item (50-237/92036-04(DRP))</u>: Reactor automatic shutdown following condensate/condensate booster pump failure and subsequent loss of offsite power. The significant corrective actions were completed. This item is closed.

<u>(Closed) Inspector Followup Item (50-237/92036-05(DRP))</u>: Manual reactor shutdown due to feedwater oscillations during surveillance testing. The licensee implemented a modification which moved Unit 2 reactor vessel level reference piping outside containment. The Unit 3 modification is scheduled for the next refuel outage. This item is closed.

(Open) Inspector Followup Item (237/93017-03(DRP)): Incorrect positions for Unit 2 drywell cooler dampers. During the Unit 2 forced outage, the licensee determined the 2D drywell fan was running backward. The discrepancy was not identified during the drywell ventilation walkdown in May 1993. The licensee's investigation into the root cause will be evaluated with this inspector followup item. This item remains open.

<u>(Closed) Inspector Followup Item (50-237/93020-04(DRP))</u>: 10 CFR 21 applicability for failed check valves. The licensee submitted a 10 CFR 21 report on October 22, 1993. The licensee identified ten C&S dual disk check valves with viton seats. One has been replaced and the remaining will be replaced when suitable valves are available. This item is closed.

No deviations or violations were identified.

9. <u>Licensee Event Reports (LERs) Followup (92700)</u>

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.

<u>(Closed) LER 237/89027, Revision 1</u>: Postulated LPCI Swing Bus Loss Resulting From Diesel Generator Voltage Regulator Failure Due to Design Deficiency. The licensee installed under/over voltage and frequency protective relays. This LER is closed.

<u>(Closed) LER 237/89029, Revision 4</u>: Elevated HPCI Discharge Piping Temperature. This event was discussed in Inspector Followup Item (50-237/92036-03(DRP)). This LER is closed.

<u>(Closed) LER 237/91005, Revision 1</u>: Orderly Shutdown Due to Leakage Through Primary Containment Isolation Valves AO 2-220-44 and AO 2-220-45. This LER is closed.



<u>(Closed) LER 237/91029</u>: Main Steam Line Radiation Monitor Setpoints Found Non-Conservative. The remaining open action item involved a possible technical specification change. The licensee determined the change was not necessary. This item is closed.

<u>(Closed) LER 237/91-042, Revisions 0 and 1</u>: Cable Separation Not Met. This LER addresses the same topic as Unresolved Item 50-237/91031-03(DRP), which was discussed earlier in this report. This LER is closed.

<u>(Closed) LER 237/92019</u>: Containment Spray Interlock Momentarily Inoperable Due to Surveillance Testing With the Unit 2/3 Diesel Generator Inoperable. The inspectors reviewed the procedure revisions and the licensed operator training. This LER is closed.

<u>(Closed) LER 237/92020</u>: Unit 2 Reactor Vessel Exceeded Design Basis Due to Non-Conservative Pressure/Temperature Curves. This event was the subject of a previous violation (50-237/92033-01(DRP)). This LER is closed.

<u>(Closed) LER 237/92032</u>: Control Room HVAC Booster Fan Available Voltage Less Than Required Minimum at Second Level Degraded Voltage Setting. The licensee replaced the existing 100 volt-ampere (VA) control power transformer with a 300 VA control power transformer and continued to perform DOS 5750-1, "Control Room Standby HVAC Air Filtration Unit Surveillance," to verify operability. This LER is closed.

<u>(Closed) LER 237/92037</u>: Unit Emergency Bus Undervoltage Relay Susceptible to Setpoint Drift Due to Design Deficiency. Immediate corrective action by the licensee was to modify the Asea Brown Boveri Type 27N relays by removing the components susceptible to setpoint drift and loss of time delay function due to elevated radiation dose during a postulated loss of coolant accident and significant fuel failure. The time delay function was transferred to an agastat relay within the system logic. Corrective actions to permanently resolve this issue will be completed during the upcoming Unit 2 (D2R14) and Unit 3 (D3R13) refuel outages. This LER is closed.

<u>(Closed) LER 237/93007</u>: ESF Actuation (ADS) Due to Simultaneous Performance of LPCI and ADS Surveillance. The licensee revised the necessary procedures to preclude running LPCI and/or Core Spray pumps and testing ADS logic simultaneously. This LER is closed.

<u>(Closed) LER 237/93011, Revision 00 and 01</u>: Emergency Source of Water to Containment Cooling Service Water (CCSW) Keep Fill Valved Out. The licensee added additional piping from the unit emergency diesel generators to the respective CCSW systems during the spring of 1993. This LER is closed.



<u>(Closed) LER 237/93021</u>: Defective Check Valves Due to Improper Bonding of the Viton Seat. The licensee determined the viton seat adhesive was applied improperly. The licensee completed an operability evaluation and implemented contingency actions until the valves are replaced. a 10 CFR 21 report was submitted on October 22, 1993. This LER is closed.

<u>(Closed) LER 249/91013</u>: 250 Vdc Battery Discharge Voltage Decreased Below Design Basis Limit Due to Inaccurate Vendor Data. A Part 21 notification concerning the deviation was made in accordance with the requirement of 10 CFR, Part 21, Sections 21.1.(B), 21.3.a(3), and 21.3.b(4). This LER is closed.

(Closed) LER 249/92012, Revisions 00, 01 and LER 249/92015, Revisions 00, 01, 02, and 03: Low Pressure Coolant Injection (LPCI) Minimum Flow Valve Automatic Closure During Valve Operability Test. Certain volumes of LPCI piping were de-pressurized during valve manipulation. When these volumes were re-pressurized, an instantaneous high flow was sensed by the flow transmitter resulting in the closure of the LPCI minimum flow valve. The licensee revised Dresden Operating Surveillance (DOP) 1500-1, 1600-3, and 1600-5 to caution operation personnel. This LER is closed.

<u>(Closed) LER 249/93007</u>: Reactor Scram on Reactor High Pressure, Possible High Pressure Turbine Damage. This LER is closed.

<u>(Closed) LER 249/93014</u>: Reactor Scram Due to Main Condenser Low Vacuum. DOP 4400-8, "Circulating Water Flow Reversal," was revised which established a minimum condenser vacuum on the low hood of 26 inches of mercury and 27 inches of mercury on the high hood. Additionally, a caution was added to warn the operators that reversing condenser flow a second time when no equipment problems are present should not be attempted. This LER is closed.

No violations or deviations were identified.

10. Management Meetings (30703)

SALP 12 Meeting

On October 19, a public meeting was held in the Training Center at the Dresden Station to discuss the Systematic Assessment of Licensee Performance (SALP) 12 report for the Dresden Station. The list of attendees is included in Attachment A. Mr. John B. Martin presented each section and encouraged discussion with the Commonwealth Edison staff. Mr. Martin concluded the meeting by challenging management to continue efforts to improve plant material condition, further develop partnership between management and union personnel, focus on the 1994 goals, develop teamwork between departments, and improve leadership behaviors.



The licensee provided a response to the SALP 12 report dated November 10. The NRC will continue to discuss planned improvements at future management meetings.

No violations or deviations were identified.

11. <u>Inspector Followup Items</u>

Inspector followup 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. Inspector followup item disclosed during this inspection is discussed in paragraph 3.b.

12. 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. Two unresolved items disclosed during this inspection are discussed in paragraphs 3.e and 4.a.

13. Exit Interview (30703)

The inspectors met with licensee representatives (denoted in paragraph 1) throughout the inspection period and at the conclusion of the inspection on November 29, 1993, to summarize the scope and findings of the inspection activities. The licensee acknowledged the inspectors' comments. 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 or processes as proprietary.

Attachment: Dresden SALP Meeting Attendees

OCTOBER 19, 1993 DRESDEN STATION SALP MEETING ATTENDEES

NRC ATTENDEES

- J. Martin, Regional Administrator, Region III
- W. Axelson, Director, Division of Radiation Safety and Safeguards
- D. Chyu, Reactor Engineer, DRP
- P. Hiland, Chief, Reactor Projects Section 1B, RIII
- C. Holden, SALP Program Manager, NRR
- M. Kunowski, Senior Radiation Specialist
- M. Leach, Senior Resident Inspector, Dresden
- T. Martin, Deputy Director, Division of Reactor Projects, RIII
- M. Peck, Resident Inspector, Dresden
- J. Stang, Project Manager, NRR
- A. Stone, Resident Inspector, Dresden
- J. Zwolinski, Assistant Director for Region III, NRR

ILLINOIS DEPARTMENT OF NUCLEAR SAFETY

- R. Schultz, Section Chief
- C. Settles, Resident Engineer Trainee
- R. Zuffa, Dresden Resident Engineer, IDNS

LICENSEE ATTENDEES

- C. Reed, Senior Vice President of Energy Facilities
- M. Wallace, Vice President and Chief Nuclear Officer
- A. D'Antonio. Site Quality Verification Supervisor
- L. DelGeorge, Vice President, Nuclear Operations Support
- R. Flahive, Technical Services Superintendent
- L. Jordan, Health Physics Supervisor
- J. Kotowski, Operations Manager
- M. Lyster, Site Vice President
- H. Massin, Site Engineering and Construction Manager
- T. O'Connor, Maintenance Superintendent
- R. Radtke, Director, Support Services
- R. Robey, Director, Site Quality Verification
- J. Shields, Regulatory Assurance Supervisor
- G. Spedl, Manager, Dresden Station

MEMBER OF THE PUBLIC

D. Kaufman, Chairman, Grundy County Board