December 13, 2000

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: DRESDEN INSPECTION REPORT 50-237/00-16(DRP); 50-249/00-16(DRP)

Dear Mr. Kingsley:

On November 14, 2000, the NRC completed an inspection at Dresden Units 2 and 3. The enclosed report documents the inspection findings which were discussed on November 14, 2000, with Mr. Fisher and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC identified one issue involving several human performance problems for which no risk significance or color was assigned. In addition, the NRC identified three issues that were evaluated under the significance determination process and determined to be of very low safety significance (GREEN). The first issue involved the maintenance staff's failure to properly reassemble the 1B main steam isolation valve. The second issue involved errors made by instrument mechanics during calibration activities on both units. The third issue related to preparation of an incorrect out-of-service card for the 3B H_2O_2 monitor. These issues have been entered into your corrective action program and are discussed in the summary of findings and in the body of the enclosed inspection report. The inspectors determined that all three issues were violations of NRC requirements. These violations are being treated as non-cited violations (NCVs), consistent with Section VI.A.1 of the Enforcement Policy. The NCVs are described in the subject inspection report. If you deny these non-cited violations, you should provide a response, with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Dresden Nuclear Power Facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document

Room **or** from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Mark Ring, Chief
Reactor Projects Branch 1

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 50-237/00-16(DRP); 50-249/00-16(DRP)

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President, Nuclear Operations
H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
P. Swafford, Site Vice President
R. Fisher, Station Manager
D. Ambler, Regulatory Assurance Manager
M. Aguilar, Assistant Attorney General
State Liaison Officer
Chairman, Illinois Commerce Commission

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REGION III

Docket Nos:	50-237; 50-249
License Nos:	DPR-19; DPR-25
Report No:	50-237/00-16(DRP); 50-249/00-16(DRP)
Licensee:	Commonwealth Edison Company
Facility:	Dresden Nuclear Power Station, Units 2 and 3
Location:	6500 North Dresden Road Morris, IL 60450
Dates:	October 1, 2000 through November 14, 2000
Inspectors:	D. Smith, Senior Resident Inspector B. Dickson, Resident Inspector T. Ploski, Emergency Preparedness Specialist T. Madeda, Security Specialist R. Zuffa, Illinois Department of Nuclear Safety
Approved by:	Mark Ring, Chief Reactor Projects Branch 1 Division of Reactor Projects

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 05000237-00-016, IR 05000249-00-016; on 10/1 - 11/14, 2000; Commonwealth Edison Company; Dresden Nuclear Power Plant; Units 2 and 3. Refueling and Outage Activities, Surveillance and Human Performance.

The inspection covered a 6 week period of resident inspections and two plan reviews by Regional inspectors. The inspection identified three green issues which were all non-cited violations. The inspectors also identified a human performance cross-cutting issue with no color. The significance of issues is indicated by their color (GREEN, WHITE, YELLOW, RED) and was determined by the Significance Determination Process in Inspection Manual Chapter 0609.

Initiating Event

- GREEN — On October 9, 2000, instrument maintenance personnel on Unit 3 incorrectly set a calibration current for local power range monitor (LPRM) 48-25C and inappropriately manipulated LPRM 24-41A switch from bypass to operate. On October 10, 2000, instrument maintenance failed to return LPRM 24-25C from bypass to the operate position on Unit 2. Each of these errors involved a failure to follow procedures and were considered examples of a non-cited violation of Technical Specifications.

  The inspectors reviewed these issues using the significance determination process and determined that these issues were of very low risk significance because no actual loss of safety function occurred (Section 1R22.1).

Barrier Integrity

- GREEN — On October 1, 2000, mechanical maintenance personnel improperly reassembled the Unit 3 1B main steam isolation valve. There was less than full thread engagement on the packing follower nuts which subsequently required an engineering evaluation. Failure to follow the procedure while performing this work was considered a non-cited violation of Technical Specifications (Section 1R20).

  The risk significance of this issue was minimal due to the engineering evaluation concluding that the valve remained operable with the current thread engagement (Section 1R20).

- GREEN — On November 2, 2000, operators incorrectly prepared an out-of-service card for the 3B H_2O_2 monitor which resulted in the 3A H_2O_2 monitor being taken out-of-service. A failure to follow the procedure in preparing the correct out-of-service card resulted in both Unit 3 H_2O_2 monitors being inoperable. The inspectors considered this issue a non-cited violation of Technical Specifications.

Although the operators inadvertently placed Unit 3 in an unplanned 7-day Technical Specification Limiting Condition for Operation Action Statement, the inspectors considered this event to be of very low risk significance because no abnormal condition existed which required the use of the H_2O_2 monitors, the H_2O_2 system was only unavailable for five minutes, and the safety function could be achieved through the use of other sample systems (Section 1R22.2).

Cross-Cutting Issues: Human Performance

- NO COLOR The inspectors identified three human performance errors that affected plant operations during this period. A declining trend in human performance was noted involving errors made by different station departments. Instrument maintenance made several errors during calibration activities on Units 2 and 3. Operators incorrectly generated an out-of-service card for the 3B H_2O_2 monitor. Maintenance mechanics failed to properly reassemble the 1B main steam isolation valve.

  Although each individual issue was low in risk significance, the incidents indicated a performance trend of problems with control, review, and performance of maintenance related activities (Section 4OA4).

Report Details

Summary of Plant Status

Unit 2 began the period at full power operations. On October 21, 2000, the operators decreased power to approximately 680 MWe to replace the solenoid to the 2B feedwater regulating valve. On October 22, 2000, the operators returned the unit to full power operations.

Unit 3 began the period in a refueling outage. On October 11, 2000, the operators decreased power to 690 MWe to support control rod adjustments and to swap the ‘A’ reactor feed pump, which had been repaired, with the operating ‘C’ reactor feed pump. Several hours later, the operators returned the unit to full power operations. On October 21, 2000, the operators decreased power to approximately 667 MWe to replace the solenoid for the 3A feedwater regulating valve. The operators returned the unit to full power operations on October 22, 2000.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors selected a redundant or backup system (listed below) to an out-of-service or degraded train, reviewed documents to determine correct system lineup, and verified critical portions of the system configuration. Instrumentation valve configurations and appropriate meter indications were also observed. Operational status of support systems was verified by direct observation of various parameters. Control room switch positions for the systems were observed. Other conditions such as adequacy of housekeeping, the absence of ignition sources, and proper labeling, were also evaluated.

Mitigating System Cornerstone

Unit 2 and 3 Emergency Core Cooling System Pump Rooms
Unit 2 and 3 Shutdown Cooling Pump Rooms
Unit 2 and 3 125 Vdc Battery Rooms
Unit 2 and 3 250 Vdc Battery Rooms

b. Issues and Findings

There were no findings identified.

1R07A Heat Sink(71111.07A)

a. Inspection Scope

The inspectors assessed several heat exchanger performance tests prior to and during the Unit 3 outage. The inspectors verified that the heat removal capability of heat exchangers was maintained, heat exchanger deficiencies were identified and corrected, and appropriate heat exchanger performance testing acceptance criteria were specified and acceptable.

Mitigating System Cornerstone

3A Low Pressure Coolant Injection System Heat Exchanger
3B Low Pressure Coolant Injection System Heat Exchanger
3A Reactor Building Closed Cooling Water Heat Exchanger
3B Reactor Building Closed Cooling Water Heat Exchanger

b. Issues and Findings

There were no findings identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors independently verified the licensee's implementation of the maintenance rule by verifying that systems were properly scoped within the maintenance rule. The inspectors also assessed the licensee's Maintenance Rule characterization of the failed structures, systems, and components. The inspectors verified that issues were identified at an appropriate threshold and entered into the corrective action program.

The following systems were reviewed during the inspection period:

Mitigating System Cornerstone

Unit 2 125 Vdc System
Unit 2 Isolation Condenser System

b. Issues and Findings

There were no findings identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors evaluated the effectiveness of the risk assessments performed before maintenance activities were conducted on structures, systems, and components and verified how the licensee managed the risk. The inspectors also verified that, upon identification of an unforeseen situation, the licensee had taken the necessary steps to plan and control the resulting emergent work activities. The inspectors also verified that the licensee adequately identified and resolved maintenance risk assessments and emergent work problems.

The following risk significant activities were evaluated:

Initiating Events

WR#99025923-01	Unit 2 Feedwater Regulating Valve Packing Adjustment
WR#990112141	Troubleshoot and Repair 3A Reactor Feed Pump Auxiliary Oil Pump
WR#990201107	Repair/Replace 2B Condensate Pump Inboard Seal

Mitigating Systems Cornerstone:

WR#990042952	Unit 3 HFA Relay Inspection
WR#990220300	Adjust Drywell to Torus Nitrogen Purge Valve
WR#990112105	Repair Unit 3 Battery Charger
WR#990019166	Deluge Unit 3 Suppression Pool
WR#990112845	Hydrolaze East Scram Discharge Volume Headers
WR #90199276	2D Containment Cooling Service Water Pump Inboard/Outboard Packing Leaking
WR 990218949	3B Reactor Building Closed Cooling Water Service Water Outlet Valve Temperature Control Valve 3-3904-B Adjustment

b. Issues and Findings

There were no findings identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the below listed operability evaluations to ensure that operability was properly justified and the component or system remained available, such that no unrecognized increase in risk had occurred.

Mitigating System Cornerstone:

Operability Evaluation (OE) 00-46	Unit 2/3A Screen Refuse Pit Pump Impact on Plant Safety with Dresden Dam Failure

b. Issues and Findings

There were no findings identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed two permanent plant modifications during the Unit 3 outage to verify the design adequacy of the modifications, verify post-modification testing appropriateness, ensure licensing bases and design bases documents were maintained, and ensure functionality of interfacing structures, systems, and components.

Mitigating System Cornerstone:

Design Change Package (DCP) #9900158	Torus to Reactor Building Vacuum Breakers Replacement
DCP#9900107	Scram Instrument Volume Level Transmitter Replacement

b. Issues and Findings

There were no findings identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed and/or observed the following post maintenance test.

Mitigating Systems Cornerstone

WR#99176723-01	3A Low Pressure Coolant Injection System Pump Switch Replacement

b. Issues and Findings

There were no findings identified.

1R20 Refueling and Outage Activities (71111.20)

a. Inspection Scope

The inspectors reviewed and evaluated several outage activities during the ongoing refueling outage for Unit 3 to ensure that the licensee appropriately considered risk factors during the development and execution of planned activities. In addition, Technical Specifications requirements were verified to have been met for changing modes.

The following is a list of the activities the inspectors reviewed:

Unit 3 Startup
Turbine Overspeed Testing
Torus Walkdown
Drywell Closure

b. Issues and Findings

.1 Inadequate Thread Engagement on the 1B main steam isolation valve (MSIV)

Barrier integrity

On October 2, 2000, while performing a Unit 3 drywell closure inspection, the inspectors identified that the 1B inboard MSIV packing followers did not have full stud/nut thread engagement. Specifically, the inspectors noted that the thread engagement was only approximately 50 percent on both packing gland bolts instead of 100 percent. The inspectors questioned the licensee on this condition and the licensee's valve specialist and mechanical maintenance superintendent replied that the station did not have any thread engagement requirements for packing gland bolts.

Subsequently, engineering department personnel initiated a condition report on the MSIV's partial thread engagement. The condition report documented that engineering standards as specified in Dresden Engineering Memorandum, Doc. ID # 0005768038, dated September 17, 1998, required a minimum of 80 percent thread engagement for all threaded connections. The generation of a condition report and an engineering evaluation was required for any condition less than 80 percent. The condition report documented that an engineering evaluation would be performed for the 50 percent thread engagement on the 1B MSIV. The inspectors reviewed the completed evaluation #9906209 and determined that the valve was still operable with the current thread engagement because the packing gland area of the MSIV was not considered the pressure retaining portion of the valve.

As a result of this as-left condition, the maintenance department initiated a significant 14-day apparent cause evaluation (ACE). The inspectors reviewed the ACE and determined that the ACE was inadequate for the following reasons:

1) The cause was determined to be conflicting procedure requirements. The ACE stated that the mechanic did not use Dresden Maintenance Procedure (DMP) 0040-40 (valve packing procedure) which was the procedure routinely used by the mechanic and specified the thread engagement requirement. Instead, the mechanic used DMP 0200-15 (MSIV overhaul) which did not specify full thread engagement requirements. The inspectors determined that both procedures specified full thread engagement requirements. The DMP 0200-15 had the requirement in the precaution section; while DMP 0040-40 had a procedural step requiring engineering resolution when full thread engagement was not met.

2) The preparer of the ACE incorrectly documented that the full thread engagement requirement in DMP 0200-15 did not apply to packing gland bolts.

3) The mechanic did not think the as-left condition of the valve was unusual because DMP 0040-40 specified contacting the component specialist to evaluate the thread engagement on the valve. The inspectors concluded that this step did not imply that less than full thread engagement was acceptable, but instead required engineering assistance for proper resolution.

Although engineering requirements were issued in September 1998 for ensuring all thread engagement that was less than 80% required an evaluation, and both DMPs specified full thread engagement requirements, four different levels of maintenance department personnel demonstrated a knowledge deficiency in the understanding of full thread engagement requirements for packing. As a result, the inspectors concluded that there was a potential training deficiency in the maintenance department with regards to thread engagement requirements for packing. The licensee stated a training request (TR) would be written to evaluate this area. As a result of the inspector's issues with the ACE, the licensee stated the ACE would be re-opened.

Dresden Technical Specification 6.8.A.1, states that procedures shall be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, states, in part, that procedures for maintenance activities are typical safety-related activities that should be covered by procedures. Dresden Maintenance Procedure DMP 0200-15, "Main Steam Isolation Valve Maintenance," Revision 20, Precaution Step 4, specified that full nut engagement must be established when installing bolting. A minimum of one thread showing outside of the nut constitutes full nut engagement.

The failure to ensure that full stud/nut engagement was achieved on the 1B MSIV as required by DMP 0200-15 is a violation of Technical Specification 6.8. This violation is being treated as a non-cited violation (NCV), consistent with Section VI.A.1, of the NRC Enforcement Policy **(NCV 50-249/00-16-01(DRP))**. The issue was captured in the licensee's corrective action program in condition reports #D2000-05539 and D2000-05585.

SDP

The inspectors assessed this issue using the NRC Significance Determination Process. The inspectors review of the licensee's engineering evaluation determined that the MSIV remained operable with the as-found thread engagement. Therefore, the issue screened out as very low safety significance (GREEN) during the Phase 1 evaluation.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment. The inspectors verified that the selected plant equipment could perform its intended safety functions and satisfied the requirements contained in Technical Specifications (TS), the Updated Final Safety Analysis Report, and licensee procedures. The inspectors verified the test data sheets were complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the tests, the inspectors verified that the test equipment was removed, and that the equipment was properly restored to standby conditions. The review included the following surveillance testing activities:

Mitigating System Cornerstone

WR#990195489	Unit 3 Diesel Generator Monthly Operability Surveillance per DOS 6600-01
WR#990208483	Unit 3B Low Pressure Coolant Injection System Pump In Service Test per DOS 1500-10
WR#990214230	Unit 2 Diesel Generator Monthly Operability Surveillance per DOS 6600-01
WR#990187140	Unit 2A LPCI Pump In Service Test per DOS 1500-10
WR#990198647	Unit 3 High Pressure Coolant Injection System Low Reactor Pressure Isolation Channel Functional Test per DIS 2300-03
WR#990207892	Unit 3 Local Power Range Monitor Amplifier Gain Calibration
WR#990210030	Unit 2 Local Power Range Monitor Amplifier Gain Calibration

Barrier Integrity Cornerstone

WR#990214223	Operator Oil Sampling for Offsite Laboratory Analysis per DOS 0040-02

b. Issues and Findings

.1 Local Power Range Monitor (LPRM) Calibration Errors

On October 9 and 10, 2000, instrument maintenance (IM) worker calibration activities on LPRMs resulted in errors on both units. The workers made one error on Unit 2 and two errors on Unit 3.

On October 9, 2000, IM workers calibrated the Unit 3 LPRMs using Dresden Instrument Procedure (DIP) 0700-16, “Local Power Range Monitor Amplifier Gain Calibration,” Revision 10, and Dresden Technical Surveillance DTS 8236, “Whole Core LPRM Calibration,” Revision 14. The IM workers incorrectly removed LPRM 24-41A switch out of the bypass position to the operate position. LPRM 24-41A had been placed in bypass on August 30, 2000, for spiking high multiple times and was considered inoperable. This LPRM fed into channel #3 average power range monitor (APRM). As a result of this error, an inoperable LPRM was again feeding the APRM. Also, the workers inserted incorrect calibration constants for LPRM 48-25C. LPRM 48-25C fed channel #4 APRM. The workers set the current to 573 milliamps instead of the 773 milliamps required per DTS 8236 which resulted in the APRM reading higher than expected. A qualified nuclear engineer (QNE) discovered these errors during an update of the LPRM calibrations on the station’s process computer.

As a result of these errors, the same calibration activity planned for Unit 2 was placed on hold. After the licensee initiated corrective action, Unit 2 calibration activities were resumed. Within 24 hours of the Unit 3 error, two different IM workers, along with the QNE assigned to the Unit 2 calibration activity, made a similar error. The IM workers had placed LPRM 24-25C in bypass during calibration and mistakenly left the LPRM in that position after the calibration process was completed. The LPRM fed the channel 3 APRM. Later that day, a nuclear station operator identified that LPRM 24-25C was bypassed but was not logged in the control rod sequence pattern LPRM bypass log. The LPRM had been in bypass for approximately 6 hours. The licensee verified that with this LPRM bypassed, the APRM channel was still operable because the required number of operable LPRMs on each level was maintained and 50% of the normal LPRM inputs were still available as required by Dresden Technical Specifications.

Due to the Unit 2 errors, the licensee performed an ACE and implemented enhanced supervisory oversight for all IM activities. The inspectors' review of the ACE indicated that the licensee had not fully addressed the ineffectiveness of the corrective actions following the errors on Unit 3. The licensee agreed to re-examine the ACE in this area.

Dresden Technical Specification 6.8.A.1, states that procedures shall be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, states, in part, that procedures for surveillance and calibration tests are typical safety-related activities that should be covered by procedures. Procedural Step I.11.a, of DIP 0700-16, specified adjusting the LPRM card for the new calibration current values by positioning the calibrator current thumbwheel switches to the new calibration current value. However, an incorrect calibration current value of 573 milliamps was selected instead of 773 milliamps as required by procedure. The use of an incorrect calibration current for LPRM 48-25C is an example of a violation. This violation is being treated as an example of a non-cited violation (NCV), consistent with Section VI.A.1, of the NRC Enforcement Policy **(NCV 50-249/00-16-02a(DRP))**. Procedural Step I.12.b, specified returning the LPRM amplifier card to service by positioning the LPRM amplifier mode switch to operate. Failure to return LPRM 24-25C to service by placing the mode switch to operate is an example of a violation. This violation is being treated as an example of a NCV, consistent with Section VI.A.1, of the NRC Enforcement Policy **(NCV 50-237/00-16-02b(DRP))**.

The inspectors used the significance determination process to determine the safety significance of these issues, and concluded that the finding did not represent an actual loss of safety function. These issues were considered to be of very low safety significance (GREEN). The licensee documented these issues in condition reports #D2000-05648 and 05663.

.2 Out-of-Service Error

On November 2, 2000, the licensee made an unplanned entry into Technical Specification 3.2.F-1, Action 62.b, which required restoration of one of the H_2O_2 monitors within 7 days, due to both Unit 3 H_2O_2 monitors being inoperable. On October 30, 2000, the licensee had previously placed the 3B H_2O_2 monitor out-of-service (OOS) (#99025187) in order to conduct a periodic (every 5 years) preventive maintenance activity. Additional OOS cards were required to be hung to complete the work. Therefore, using procedure OP-AA-101-201, "Station Equipment Out of Service," the OOS preparer generated checklist #4 with card 3-2253-81A-PB1 on

November 2, 2000, and the Unit 3 supervisor reviewed and accepted the OOS card. The OOS was intended for the 3B H_2O_2 power supply breaker, was prepared on November 2, and independently verified the same day. Prior to hanging the OOS card, the OOS preparer conducted a briefing for hanging the additional OOS card. However, the non-licensed operator hung the card on the 3A H_2O_2 monitor. This action rendered the 3A H_2O_2 monitor inoperable. The preparer and reviewer should have specified the card as 3-2253-81B-PB1. An investigation by the licensee determined that the preparer and reviewer incorrectly interpreted the PB1 portion of the 'A' monitor's electronic part number (EPN) #3-2253-81A-PB1 as the 'B' monitor. Procedure OP-AA-101-201, Section 4.3.2, "Placing An OOS," specified that the preparer, reviewer, and authorizer were to ensure the zone of protection, revise the OOS if discrepancies were identified, and review the OOS for plant impact. These activities were not properly performed. Other contributing factors to this event included: 1) both H_2O_2 monitors having the same electronic part number; 2) a deficient briefing for hanging the additional OOS card; and 3) a lack of questioning attitude by the non-licensed operator in hanging the card.

Dresden Technical Specification 6.8.A.1, states that procedures shall be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, states, in part, that procedures for equipment out-of-services are typical safety-related activities that should be covered by procedures. The failure of the OOS to ensure the proper generation, review, and authorization of placement of the OOS card for the 3B H_2O_2 monitor as specified by OP-AA-101-201 is a violation. This violation of Technical Specification 6.8 is being treated as a non-cited violation (NCV) consistent with Section VI.A.1, of the NRC Enforcement Policy **(NCV 50-249/00-16-03(DRP))**.

The inspectors used the significance determination process to determine the safety significance of this event. The inspectors concluded that despite placing Unit 3 in an unplanned 7 day Technical Specification Limiting Condition for Operation Action Statement, this event was of very low safety significance (GREEN) because the intended safety function of the H_2O_2 monitor could have been achieved through other sample systems and the system was only inoperable for 5 minutes. This issue was captured in the licensee's corrective action program in condition report #D2000-06022.

1EP4 Emergency Action Level and Emergency Plan Change (71114.04)

a. Inspection Scope

The inspector reviewed Revision 9 to Section 5 of the Dresden Station's Annex to the Generating Stations Emergency Plan, which was submitted by letter dated June 19, 2000, in order to determine whether the changes in Revision 9 might decrease the plan's effectiveness. This emergency plan revision was submitted in accordance with 10 CFR 50.54(q).

b. Issues and Findings

There were no findings identified.

3. SAFEGUARDS

Cornerstone: Physical Protection (PP)

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspector reviewed Revision 62 of the Dresden Nuclear Power Station Security Plan, Security Personnel Training and Qualification Plan, and Safeguards Contingency Plan to verify that the changes did not decrease the effectiveness of the submitted plans. Revision 62 was submitted by licensee letter dated August 4, 2000.

b. Issues and Findings

The document noted above was submitted in a timely manner and the changes did not appear to reduce the effectiveness of the previous plans. During inspector review, two issues were identified regarding changes in the security plan. In Section 1.7 a new requirement was added regarding a height limitation to define bullet-resisting. This change was made by the licensee to all their nuclear station security plans. During NRC's review of the Quad Cities Security Plan, Revision 47, (NRC Inspection Report 50-254; 265/00-14), NRC identified that this new limitation was not included in NRC guidance documents. This issue was discussed with the licensee on September 27, 2000, and the licensee agreed to resubmit a plan change that will eliminate the bullet-resisting height limitation for all of their security plans. This issue is being tracked as an unresolved item until the removal of the height limitation from the security plans under the Quad Cities docket number 50-254; 265/00-14-03.

In Section 7.2.1 language was deleted that required managers to update the access list every 31 days and to re-approve those lists at least quarterly. This issue was discussed with the licensee on October 2, 2000. The licensee determined that the deletion of the access requirements occurred because of an administrative error, and that the deletion was not identified during their review process. The licensee agreed to resubmit a plan change that will return the removed language to the plan. This issue will be tracked as an unresolved item **(URI 50-237; 249/00-16-04 (DRS))** until that change is reviewed by a Region III Safeguards inspector.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

To perform a periodic review of performance indicator data to determine their accuracy and completeness, the inspectors reviewed a sample of plant records and data against the reported performance indicators. The review included records in the maintenance rule database, the control room logs, and the corrective action process. The review included the following indicators:

Mitigating Systems Cornerstone

Unit 3 High Pressure Coolant Injection System Unavailability

Barrier Integrity Cornerstone

Unit 2 Reactor Coolant System Leakage
Unit 3 Reactor Coolant System Leakage

b. Issues and Findings

There were no findings identified.

4OA4 Human Performance Issues

a. Inspection Scope

The inspectors reviewed human performance errors associated with several events that were caused by deficient human performance.

b. Issues and Findings

The inspectors identified three human performance errors during this period that affected plant operations and safety-related equipment. Maintenance mechanics failed to ensure proper thread engagement on the 1B main steam isolation valve resulting in the necessity of an engineering evaluation (See Section 1R20). Instrument mechanics made numerous errors during calibration activities on both units (See Section 1R22.1). The generation of an inadequate out-of-service card resulted in rendering both Unit 3 H_2O_2 monitors inoperable and the subsequent unplanned entry into a Technical Specification Limiting Condition for Operations Action Statement for approximately 5 minutes (See Section 1R22.2).

Although each individual issue was low in risk significance, the incidents indicated a performance trend of problems with control, review, and performance of maintenance related activities

4OA6 Meetings, including Exit

The inspectors presented the inspection results to Mr. Fisher and other members of licensee management at the conclusion of the inspection on November 14, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Ambler, Regulatory Assurance Manager
K. Bowman, Work Management Manager
R. Brown, Dresden Site Security Specialist
S. Butterfield, NRC Coordinator
P. Chabot, Site Engineering Manager
L. Coyle, Mechanical Maintenance Superintendent
C. Dieckmann, Nuclear Oversight manager
R. Fisher, Dresden Station Manager
T. Fisk, Chemistry
B. Hanson, Shift Operations Supervisor
J. Moser, RP Manager
M. Pacilio, Operations Manager
B. Rybak, Regulatory Assurance
B. Stoffels, Maintenance Manager
P. Swafford, Dresden Site Vice President
D. Walker, Corporate Security Analyst,

NRC

B. Dickson, Dresden Resident Inspector
M. Ring, Branch Chief
D. Smith, Dresden Senior Resident Inspector
T. Ploski, Emergency Preparedness Specialist
T. Madeda, Security Specialist

IDNS

R. Zuffa, Illinois Department of Nuclear Safety

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-249/00-16-01	NCV	main steam isolation valve incorrectly reassembled
50-237; 249/00-16-02a	NCV	incorrect calibration on local power range monitor on Unit 3
50-237; 249/00-16-02b	NCV	Unit 2 local power range monitor not properly returned to service
50-249/00-16-03	NCV	licensed operator failed to generate the correct out-of-service card for H_2O_2 monitor
50-237; 249/00-16-04	URI	inadvertent deletion of access list update requirements

Closed

50-249/00-16-01	NCV	main steam isolation valve incorrectly reassembled
50-237; 249/00-16-02a	NCV	incorrect calibration on local power range monitor on Unit 2
50-237; 249/00-16-02b	NCV	Unit 3 local power range monitor not properly returned to service
50-249/00-16-03	NCV	licensed operator failed to generate the correct out-of-service card for H_2O_2 monitor

Discussed

50-237; 249/00-16-04	URI	inadvertent deletion of access list update requirements

LIST OF BASELINE INSPECTIONS PERFORMED

The following inspectable-area procedures were used to perform inspections during the report period. Documented findings are contained in the body of the report.

Inspection Procedure		Report
Number	Title	Section
71111-04	Equipment Alignment	1R04
71111-07A	Heat Sink	1R07A
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessments and Emergent Work Evaluation	1R13
71111-15	Operability Evaluations	1R15
71111-17	Permanent Mods	1R17
71111-19	Post Maintenance Testing	1R19
71111-20	Refueling and Outage Activities	1R20
71111-22	Surveillance Testing	1R22
71114-04	Emergency Action Level and Emergency Plan Change	1EP4
71130-04	Security Plan Changes	3PP4
(none)	Other	4OA4
(none)	Management Meetings	4OA6

UPDATE LIST OF ACRONYMS AND INITIALISMS USED

ACE	Apparent Cause Evaluation
APRM	Average Power Range Monitor
CA	Corrective Actions
CCSW	Containment cooling service water
DCP	Design Change Package
DTS	Dresden Technical Surveillance
DMP	Main Steam Isolation Valve
ENS	Emergency Notification System
EPN	Electronic Part Number
FWCV	Feedwater Check Valves
IDNS	Illinois Department of Nuclear Safety
IM	Instrument Maintenance
LLRT	Local Leak Rate Test
LPRM	Local Power Range Monitor
MSIV	Main Steam Isolation Valve
NCV	Non Cited Violation
OE	Operability Evaluation
QNE	Qualified Nuclear Engineer
SDP	Significance Determination Process
SOS	Shift Operations Supervisor
TS	Technical Specification
URI	Unresolved Item
VIO	Violation
WR	Work Request