

February 13, 2001

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 50-237/01-04(DRP); 50-249/01-04(DRP)

Dear Mr. Kingsley:

On January 18, 2001, the NRC completed the baseline problem identification and resolution inspection at Dresden Units 2 and 3. The enclosed report documents the inspection findings which were discussed on January 18, 2001, with Mr. Fisher and other members of your staff.

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

The inspectors concluded that the corrective action program was functional and typically identified and corrected conditions adverse to quality. In general, the inspectors found that station personnel effectively identified and entered problems into the corrective action program using condition reports. The significance threshold for entering issues into the program appeared appropriate. However, there were some examples of weak performance with the corrective action process. All the examples identified were of very low significance. In several evaluations of deficiencies, the scope of the review was too narrow, and failed to pursue performance deficiencies beyond the specific issue documented although broader implications were identifiable. Also, while corrective actions were generally effective, there were some long-term equipment issues involving age-related problems or difficult technical issues which had not been fully resolved.

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Sincerely,

Original signed by  
Mark Ring, Chief

Mark Ring, Chief  
Reactor Projects Branch 1

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

Enclosure: Inspection Report 50-237/01-04(DRP);  
50-249/01-04(DRP)

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services  
C. Crane, Senior Vice President, Nuclear Operations  
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-237; 50-249  
License Nos: DRP-19; DRP-25

Report No: 50-237/01-04(DRP); 50-249/01-04(DRP)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: 6500 North Dresden Road  
Morris, IL 60450

Dates: January 4, 2000, through January 18, 2001

Inspectors: R. Lerch, Lead Inspector  
B. Dickson, Resident Inspector  
A. Walker, Reactor Inspector

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:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

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 05000237-01-04, IR 05000249-01-04; on 01/04 - 01/18/2001; Commonwealth Edison Company; Dresden Nuclear Power Plant; Units 2 and 3. Problem Identification and Resolution.

The inspection was conducted by regional and resident inspectors.

### **Miscellaneous**

NO COLOR. The inspectors concluded that the corrective action program was functional and typically identified and corrected conditions adverse to quality. In general, the inspectors found that station personnel effectively identified and entered problems into the corrective action program using condition reports. The significance threshold for entering issues into the program appeared appropriate. Planned actions were tracked by computer or were closed to other document systems such as engineering requests or work requests. There were some examples of performance weakness with the corrective action process. All the examples identified were of very low significance. These included deficiencies which were not documented or for which corrective actions were not completed. Also, in several evaluations of deficiencies, the scope of the review was too narrow, and failed to pursue performance deficiencies beyond the specific issue documented although broader implications were identifiable. Lastly, while corrective actions were generally effective, there were some long-term equipment issues involving age-related problems or difficult technical issues which had not been fully resolved.

## Report Details

### **4. OTHER ACTIVITIES (OA)**

#### 4OA2 Identification and Resolution of Problems (71152)

##### .1 Corrective Action Program (CAP) Review

###### a. Inspection Scope

The inspectors conducted a review of the Dresden process for identifying and correcting problems at the plant. The inspectors inspected items associated with the cornerstones of safety. The problem identification program and its effectiveness was evaluated by reviewing issues identified in previous NRC inspections, selected corrective action program documents and records, and discussing the program with licensee personnel, which included management and supervision as well as engineers and craftsmen. The inspection also included a review of applicable procedures and records for indication of corrective action effectiveness. The reviews evaluated the effectiveness of the program at each stage in the process for identifying issues, documenting and evaluating the issues, and assigning appropriate corrective actions and tracking them to completion.

###### b. Issues and Findings

The inspectors concluded that the corrective action program was functional and typically identified and corrected conditions adverse to quality. In general, the inspectors found that station personnel effectively identified and entered problems into the corrective action program using condition reports (CRs). The significance threshold for entering issues into the program appeared appropriate. The CRs were used for problem identification and were closed after the problem was screened and corrective actions were assigned. Planned actions were tracked by computer or were closed to other document systems such as engineering requests or work requests. There were some examples of performance weakness with the corrective action program (CAP). All the examples identified were of very low significance. These included deficiencies which were not documented or for which corrective actions were not completed. Also, in several evaluations of deficiencies, the scope of the review was too narrow, and failed to pursue performance deficiencies beyond the specific issue documented although broader implications were identifiable. Lastly, while corrective actions were generally effective, there were some long-term equipment issues, of very low safety significance, which had not been fully resolved due to age-related problems or difficult technical issues.

##### .2 Problem Identification

###### a. Inspection Scope

Inspectors reviewed inspection reports and corrective action documents to verify that when issues were identified, they were appropriately characterized and entered into the

licensee's problem identification and resolution program. The inspectors also reviewed a sample of items in the engineering request backlog to determine if timeliness of the actions was commensurate with safety.

b. Issues and Findings

A search for condition reports on corrective action problems found approximately 150 CRs. Examples were identified by Nuclear Oversight, the Corrective Action Program (CAP) self-assessment and plant staff which documented inadequate closure or transfer of issues such that tracking of item closure was lost or not completed. The CAP manager indicated that the Nuclear Oversight organization identified approximately 20 percent of these issues. This indicated that the line organization was missing many opportunities to find problems with action item tracking.

NRC inspectors also identified examples of deficiencies in the plant which were not identified by plant staff such as painted over temperature sensors, and missing radiological boundaries. Other issues identified in inspection reports included in-service inspection deficiencies which had not been evaluated, and flood barrier surveillance which was not performed.

.3 Evaluation of Issues

a. Inspection Scope

The inspectors assessed the assigned significance level (category) for a selected sample of CRs. The significance level determined the type and timing of the cause evaluation to be performed. Other attributes reviewed by the inspectors included the adequacy of the root cause analyses, or apparent cause evaluations and the corresponding corrective actions. Licensee evaluations of Non-Cited Violations (NCVs) were also assessed. The inspectors also reviewed the methods used by review committees to verify the adequacy of compliance with regulatory requirements. These committees were the Condition Review Group (CRG) and the Management Review Board. The review included the controlling procedures, selected records of activities, and attendance of meetings. In addition, the functions, activities, and findings of the groups were discussed with cognizant licensee personnel.

b. Issues and Findings

There were no findings with the prioritization of issues. However, there were concerns with the adequacy of evaluations of issues. There were items of very low safety significance identified by the licensee staff and NRC inspectors where the evaluation result was weak. Examples identified by licensee staff included inadequate corrective actions for an emergency preparedness drill, which were identified by Nuclear Oversight, and a condition report which was evaluated without performing an approximate cause evaluation as assigned by CRG (this was due to a clerical error). NRC inspectors identified issues with evaluating missing radiological boundaries, temporary shielding/scaffolding that was not in accordance with seismic design, and fire drill inadequacies which were not adequately addressed. The inspectors also had several

observations where evaluations were narrow in scope and therefore did not fully address the issues. The examples are listed below:

#### Air-Operated Valve Post-Maintenance Testing

The licensee generated a common cause analysis to evaluate the cause of several post-maintenance test failures of air-operated valves in the containment suppression system. These failures occurred during the Unit 3 refueling outage (D3R16) in October 2000. The common cause analysis documented that several air-operated valves had been returned to service by maintenance personnel to allow operators to conduct post-maintenance testing (valve timing). During valve timing, the operators noted that several valves showed dual indication in the closed position and valve timing could not be achieved. Therefore, the post-maintenance tests failed.

The common cause analysis concluded that inappropriate actions by a single first line supervisor caused each failure. Specifically, the first line supervisor marked steps to adjust the limit switches on the air operated valves as “N/A” because adjustments were not possible while the valve was out-of-service. According to the common cause analysis, the first line supervisor had discussed not doing these steps with the unit supervisor. These steps were subsequently not transferred to the post-maintenance testing package. When the operator cycled the valves to perform valve timing, the limit switches were not adjusted and dual indication was received in the main control room. The conclusion of the common cause analysis was documented in Condition Report D2000-06213.

The inspectors agreed that not performing these steps was the apparent cause of the post-maintenance failures. However, the inspectors noted that other pertinent issues (causal factors) were not discussed in the common cause analysis or addressed in the follow-up actions of the condition report. During the review of the issue, the inspectors noted that the procedure adherence procedure (AD-AA-104-101) did not discuss or address the process of transferring procedural requirements that cannot be performed to other documents. The inspectors also noted that this issue was not addressed in the licensee’s work execution and closeout procedure. Additionally, the licensee’s work package did not contain specific procedural guidance for carrying over deleted critical steps into another process.

The inspectors concluded that this common cause analysis was narrowly focused on the human performance issues and not programmatic deficiencies.

#### 125 VDC Molded Case Circuit Breaker Cycling

On October 27, 2000, the licensee discovered that steps that were essential to complete preventive maintenance activities for 125 VDC molded case circuit breakers were marked as “N/A” in work packages by electrical maintenance department personnel. These steps were not performed based on directions from station operators. The preventive maintenance activities, including cycling breakers were part of the 12-week scheduling process. However, operators would not perform the activities because the plant configuration was not appropriate. The “N/A” steps directed multiple cycling of 125 VDC breakers.

The licensee's performance centered maintenance (PCM) program recommended cycling of the 125 VDC breakers to forecast and prevent equipment failures. Cycling the breakers was intended to address an industry issue of hardening grease in molded case breakers.

The work packages had instructions that if the cycling activity could not be performed, then the step could be marked "N/A". The licensee initiated CR D2000-059 because these instructions should not have been included in the work packages. The inspectors noted that the licensee's evaluation of the CR did not address whether the practice of marking steps "N/A" allowed past preventive maintenance activities to be credited as complete without the breaker being cycled. The licensee was unable to conclude if preventive maintenance activities had passed the dates established by the PCM templates. The licensee wrote a condition report (D2001-00287) documenting this concern. The inspectors concluded that this was an example where the licensee's initial response and follow-up corrective actions were too narrow in scope.

#### Motor-Operated Valve Predefine Discrepancies

An apparent cause evaluation was written to address two issues discussed in Condition Report D2000-05788. The first issue documented that some environmental qualification (EQ) predefines (the term used for planned or "predefined" activities such as surveillances or tests) for safety-related motor-operated valves (MOVs) had exceeded the critical dates. The second issue documented that if the schedule for performing MOV EQ predefines remained the same, several other critical dates would have also been exceeded.

The apparent cause evaluation identified a lack of involvement in the predefine program by the MOV program engineer as the apparent cause. It also identified program weaknesses that contributed to these missed predefines. One of these weaknesses included a lack of procedural guidance governing process ownership. Specifically, the engineering EQ coordinator reviews were not integrated into the predefine programs. Despite the identification of this additional causal factor, the licensee failed to address the implications for maintenance on other equipment groups under the predefine program. The inspectors concluded that the evaluation for this issue was too narrow in scope.

The inspectors did not identify any valve failures due to EQ issues. Therefore, this issue was of minor safety significance. The licensee completed preventive maintenance activities for the valves identified as past the EQ predefine critical dates and revised the predefine schedule such that EQ inspections would fall within the critical dates.

#### .4 Implementation of Corrective Actions

##### a. Inspection Scope

During review of a sample of corrective action documents, the inspectors assessed the adequacy of corrective actions to properly address the identified cause(s) of the issue or event. The inspectors also verified the implementation of a sample of corrective actions. The samples were selected based on their importance in reducing operational risks.

b. Issues and Findings

No findings of significance were identified. Actions taken were effective and the program included effectiveness reviews for corrective actions, at the discretion of management. However as an older plant, material condition was an issue, and there were several areas where long term issues existed. The licensee had identified issues indicating repetitive problems which included that the goal for unplanned entry into limiting conditions for operation was exceeded for December. This was attributed to material condition deficiencies. The Unit 3 isolation condenser temperature had experienced increases which operators must control. There had been frequent temperature control valve issues, and some systems were not performing at desired levels in accordance with the maintenance rule. These issues were identified in tracking systems to be addressed.

.5 Assessment of Safety Conscious Work Environment

a. Inspection Scope

During the conduct of interviews, document reviews and observations of activities, the inspectors looked for evidence that suggested plant employees may be reluctant to raise safety concerns.

b. Issues and Findings

For the limited review performed in this area, there were no issues or findings identified.

.6 Effectiveness of Audits and Assessments

a. Inspection Scope

The inspectors reviewed records of an audit conducted by the Nuclear Oversight organization and a self-assessment completed by the Dresden corrective action program organization. Seven CRs, written by licensee personnel on audit and assessment findings, were reviewed to verify that adequate corrective action had been or was to be taken.

b. Issues and Findings

There were no significant issues or findings identified in this area. The audit and the self assessment both were considered to be very good. Significant issues were identified by licensee personnel during both activities and many findings were documented on CRs during the activities. Corrective actions were adequate for the seven findings reviewed. The licensee assessments of the corrective action program were consistent with inspector observations.

#### 4OA3 Event Follow-up (71153)

##### a. Inspection Scope

The inspectors reviewed Licensee Event Reports (LER) and other items using Inspection Procedure 71153. The inspectors reviewed the licensee's root cause reports and corrective actions for these events.

##### b. Issues and Findings

- .1 (Closed) Licensee Event Report 50-237/99001: Unit 2 Loss of Drywell to Torus dP during Quarterly Valve Timing due to Poorly Structured Technical Procedure Step. This LER was reviewed in inspection report 50-237/99003, paragraph O4.4 and a non-cited violation, 50-237/249/99003-01, was documented. No further review of this issue was warranted. This LER is closed.
- .2 (Closed) Licensee Event Report 50-237/2000-001: Main Steam Low Pressure and Insolation Condenser High Pressure Time Relays Technical Specification Calibration Frequency Intervals Exceeded due to Inadequate Management Oversight. This problem originated during the upgrade to improved Technical Specifications and resulted from an interpretation that time delays were not part of a channel calibration. Subsequent calibrations were found within tolerances; and other corrective actions were adequate. This LER is closed.
- .3 (Closed) Licensee Event Report 50-249/2000-002: Reactor SCRAM caused by Failure to Use Correct Procedural Acceptance Criteria. The "3B" MG Set Drive Motor breaker tripped on thermal overloads because overloads were set too low due to the wrong acceptance criteria utilized by the electrician during preventive maintenance. The responsible individual was counseled regarding the error and the importance of self checking. The Maintenance Department Human Performance Coordinator is scheduled to work with maintenance supervisors on human error prevention and human error prevention will be discussed in pre-job briefings. This LER is closed.
- .4 (Closed) Licensee Event Report 50-249/2000-003: Manual Reactor SCRAM on Loss of Vacuum due to Off Gas Recombiner Train Failure. Plant equipment response to the scram was as expected. Initial indications were that causes included the separation of the Steam Seal Bypass Valve yoke and the unavailability of the steam jet air ejector (SJAE). Corrective actions included the repair of the Steam Seal Bypass Valve. A redesigned instrument, recently installed to measure SJAE flow indication, was not functioning properly due to a manufacturing defect. The Steam Seal Bypass Valve was repaired and alternate indications to replace the deficiency instrument were put in place to monitor condenser performance during unit startup. Although some investigation and actions are still necessary, the actions taken will allow the control and operation of the unit. After final root cause determinations have been made with additional corrective actions completed as required, a supplemental LER will be issued. This LER is closed.

#### 4OA4 Management Meetings

The inspectors presented the inspection results to Mr. Fisher and other members of licensee management at the conclusion of the inspection on January 18, 2001. 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 Control Director  
P. Chabot, Site Engineering Manager  
R. Fisher, Station Manager  
B. Hanson, Shift Operations Superintendent  
T. Heisterman, Regulatory Assurance  
J. Kotowski, Operations Staff Manager  
R. Kelly, NRC Coordinator  
L. Licata, Engineering  
W. Liscomb, Training Manager  
B. Norris, Radiation Protection  
P. Murray, CAP Coordinator  
W. Stoffels, Maintenance Manager  
G. Waldrep, Corp Corrective Actions Manager

### NRC

B. Dickson, Dresden Resident Inspector  
S. Reynolds, Deputy Director, Division of Reactor Projects  
M. Ring, Branch Chief  
D. Smith, Dresden Senior Resident Inspector  
R. Lerch, Project Engineer

### IDNS

R. Zuffa, Illinois Department of Nuclear Safety

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Closed

50-237/99-001	LER	Unit 2 Loss of Drywell to Torus dP during Quarterly Valve Timing due to Poorly Structured Technical Procedure Step
50-237/2000-001	LER	Main Steam Low Pressure and Insolation Condenser High Pressure Time Relays Technical Specification Calibration Frequency Intervals Exceeded due to Inadequate Management Oversight
50-249/2000-002	LER	Reactor SCRAM caused by Failure to Use Correct Procedural Acceptance Criteria
50-249/2000-003	LER	Manual Reactor SCRAM on Loss of Vacuum due to Off Gas Recombiner Train Failure

## LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection. Inclusion of a document on this list does not imply that NRC inspectors reviewed the entire documents, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. In addition, inclusion of a document on this list does not imply NRC acceptance of the document, unless specifically stated in the body of the inspection report.

### **Corrective Action Program Description**

CAP-1, "Problem Identification Form Threshold Information Handbook," Revision 3  
CAP-2, "Significant Apparent Cause Evaluation (SACE) Handbook," Revision 1  
CAP-3, "Root Cause Investigation and Report Handbook," Revision 2  
CAP-4, "Trend Investigation and Report Handbook," Revision 0  
CAP-5, "Effectiveness Review Handbook," Revision 0  
CAP-6, "Coding and Trending Handbook," Revision 1  
CAP-8, "Apparent Cause Evaluation Handbook," Revision 1

### **Condition Reports**

D2000-02598 - Unit 3 scram from 100 percent power  
D2000-05612 - NRC Identifies Potential Violation of 10 CFR 50 Appendix B Criterion III  
D2000-04106 - N.O. identified CCSW check vlv operability issue was not rigorously  
dispositioned  
D2000-04437 - N.O. Identifies Weaknesses in Operation's Implementation of Operability  
Determination Process  
D2000-04570 - N.O. identified operability concern  
D2000-04617 - N.O. Identifies CAs Closed to EWCS ARs, WRs, and ERs are not Properly  
Documented  
D2000-04775 - N.O. Identifies Improper Evaluation Class Assigned to CR D2000-03954  
D2000-04886 - N.O. Identifies an Ops Procedure Deficiency and An Enhancement to two Other  
Ops Procedures  
D2000-04850 - Two Root Causes performed without required qualifications; Missing  
documentation on a third  
D2000-06032 - Timely crediting of predefines  
D2000-05628 - Ops start of 3A RFP identifies associated Aux Oil Pump problem  
D2000-05789 - Backup Keepfill to CCSW from U3 DGCWP did not pass required flow  
D2001-00057 - 2/3-1599-103 fails PMT following repairs  
D2001-00008 - 3A Rx Bldg Exh Fan Chronic Tripping Problems  
D2000-06943 - 480V Breaker failure results in rework  
D2000-06915 - Failed PMT on Radwaste Reboiler  
D2000-06836 - Failed PMT -2A Turbine Building Exhaust Fan Trip Following Maintenance  
D2000-06811 - failed PMT for WR 990205194  
D2000-06810 - Recoding of PMT's after the E-2 signing of daily online schedule  
D2000-06776 - D3 LPRM 56-33B Failed PMT under WR 990196984  
D2000-06751 - Failed PMT on 3-8941-101, classify as rework

D2000-06713 - Maintenance not performed as required on RFP ventilation system - No follow up work identified  
 D2000-06703 - 3B CCSW pump vault cooler vent lines plugged  
 D2000-06674 - N.O. Identifies Operations Organization and Staffing Issues  
 D2000-06561 - 2A Instrument Air Compressor  
 D2000-06370 - Can not perform a step/check in 3 Surveillance's because of one OOS  
 D2000-06234 - 2A CRD Gear Box  
 D2000-06222 - Modifications are not requiring operations department training before RTS  
 D2000-06221 - Unable to Op authorize completed mod  
 D2000-06213 - CCA determines Common Cause to be Human Performance  
 D2000-06160 - CR TGA fails PMT  
 D2000-06080 - 2A TBCCW Hx SW Outlet Vlv MO 2-3903-A will not open electrically.  
 D2000-05960 - N.O. identified concern with review of IST related PMT surveillances  
 D2000-05955 - N.O. identified concerns with core spray test procedure  
 D2000-05768 - PMT Process under WC-AA-105 requires additional training for System Engineering  
 D2000-05766 - PMT failed - 3B Recirc Pump Seal  
 D2000-05750 - 2A LPCI ROOM COOLER  
 D2000-05711 - Information Technology Assets Memo is incorrect  
 D2000-05601 - Potential rework issue and failure to persue adequate repair methodology  
 D2000-05571 - PMT Failure - Offgas System Suction Valve  
 D2000-05551 - DCP 9900621 testing requirements were not met prior to OP Auth  
 D2000-05524 - Potential Trend - failed PMT of valve limits  
 D2000-05480 - Failed PMT on the 3-1601-62  
 D2000-05479 - Failed PMT on the 3-1601-58  
 D2000-05478 - Failed PMT on the 3-1601-55  
 D2000-05473 - Failed PMT for 3-1601-61  
 D2000-05435 - Iprms out of tolerance during dis 0700-21  
 D2000-05414 - PMT failure for Bus 33 to Bus 35 breaker at Bus 35  
 D2000-05407 - PMT Failure for 3-4799-1780  
 D2000-05405 - Failed PMT on 3-1601-24  
 D2000-05251 - PMT failed for MCC 38-2 energized light  
 D2000-05206 - Failed PMT WR 990073100 HCU 3-0305-50-43-116 vlv leaking inst air  
 D2000-04923 - 3A RPS MG Set Tripped During Start Attempt  
 D2000-06650 - Deficiencies in Common Cause Analysis (CCA) process  
 D2000-04705 - Breaker at bus 20 (2/3-7820-4) tripped immediately after being closed  
 D2000-04631 - 3-1501-5A valve fails PMT  
 D2000-04555 - Control Room AFU Airflow >2000 scfm after WR PMT closed with < 2000 cfm  
 D2000-04035 - PMT failed for 3-1201-120A Reach Rod - Position Indication failed  
 D2000-03792 - PMT identified in work procedure added to Tech Spec LCO fragnet after work completed  
 D2000-03777 - PMT failed for 3-5600-MOVS1  
 D2000-03674 - Two 3C IAC Air Dryer Tasks have failed PMTs  
 D2000-03533 - Failed PMT - Security UPS inverter  
 D2000-03531 - PMT fails for WR 990079611  
 D2000-03395 - Vibration on 3D LPCI  
 D2000-03387 - 3D LPCI pump LCO closure delayed for package closeout by working groups  
 D2000-03335 - Failed PMT on 2/3A lift station lube water strainer  
 D2000-03279 - Could not complete PMT due to equipment failure

D2000-03210 - Scheduling of PM's causes increase in Station PMT Backlog  
 D2000-03206 - 2A Isolated Phase Bus Duct  
 D2000-03166 - Failed PMT on U2 CRD F-1 Accumulator trouble alarm  
 D2000-02904 - PMT failed for U3 RBV Rollomatic Filter  
 D2000-02888 - Visitor left in the protected area without an escort  
 D2000-02806 - PMT Failed on South Turbine Bldg Vent Rollomatic Filter  
 D2000-02706 - Failed PMT on 2-5783-12  
 D2000-02678 - Failed PMT on 3A Recirc MG Set Cuno Filter  
 D2000-02641 - Failed PMT on CRD K-6 120 Valve  
 D2000-02566 - Braided hose leaking on 2/3 Diesel Fire Pump, REWORK  
 D2000-05789 - Backup Keepfill to CCSW from U3 DGCWP did not pass required flow  
 D2000-05523 - Incorrect Spring Pack Causes Damage to MOV 3-0220-2  
 D2000-06250 - Common Cause Was determined on ATI 36161 to be Human Performance  
 D2000-05788 - MOV EQ Predefine Discrepancies  
 D2000-05710 - N.O. Identified Op Evals Not Completely Reviewed and Justified Prior to D3R16 Startup  
 D2000-05611 - CAP trending identifies numerous CRs written to document failures of electrical components  
 D2000-04859 - Fire Protection Self Assessment identifies Deficiencies and Weaknesses  
 D2000-05585 - 3-203-1B MSIV packing nut not fully engaged  
 D2000-05801 - Unit 3 Isolation Condenser High Temps  
 D2000-06003 - CAP Trending identifies potential adverse trend in MMD performance  
 D2000-06020 - Power supply tripped isolating RWCU  
 D2000-06038 - Instrument Air Packing & Bonnet valves found out of position during DOP 5400-M2  
 D2000-06055 - Operations identifies numerous config control issues  
 D2000-06237 - N.O. identified concern with root cause report CAPR action tracking item closure  
 D2000-06266 - Engineering Human Performance 3Q00 Trend Analysis  
 D2000-06070 - Software change review per NSP CC-3021 not performed  
 D2000-06257 - Self Assessment identified multiple deficiencies  
 D2000-06584 - 2 'B' CCSW Pump fails normal surveillance  
 D2000-06708 - N.O. identified corrective actions not documented to resolve a surveillance deficiency  
 D2000-04891 - Failure of ATI to fully address scope of issue  
 D2000-04793 - NSRB identifies 5 Root Cause investigations which need technical enhancements  
 D2000-05524 - Potential Trend - failed PMT of valve limits  
 D2000-05478 - Failed PMT on the 3-1601-55  
 D2000-05479 - Failed PMT on the 3-1601-58  
 D2000-05473 - Failed PMT for 3-1601-61  
 D2000-01817 - No clear cut method for configuration control of spectacle flanges  
 D1999-04633 - wiring discrepancies in U-2 interlock relay panel  
 D2000-05774 - instrument line supports  
 D2000-00700 - Discrepancies Identified in EQ Assessment for LOCA/LORC Event  
 D2000-00736 - Marginal Stock Radwaste DP  
 D2000-06849 - 125VDC Self Assessment - Battery Lead Conduit Material  
 D2000-06846 - 125VDC Self Assessment - Drawing 12E-3322 (Rev. AF) Discrepancies  
 D2000-06845 - 125VDC Self Assessment - Drawing 12E-2322 S3 (Rev. AC) Discrepancies

D2000-06844 - 125VDC Self Assessment - Drawing 12E-3322A (Rev. T) Discrepancies  
 D2000-06793 - D2 125 ALT BATTERY TEMP LOW  
 D2000-06677 - 125VDC Self Assessment - Bus 2A-1 Breaker Sizing  
 D2000-06671 - 125 VDC Self Assessment - DES 8300-33  
 D2000-06670 - 125VDC - Alternate Battery Service Test  
 D2000-06639 - 125VDC Self Assessment - Battery Terminal Voltage Limits  
 D2000-06564 - DCP 9900646 Functional testing Requirement Deficiency  
 D2000-06386 - Action Request Worked/Closed Last Year, AR Tag Still Hanging on Equipment  
 D2000-06379 - Negative Trend in SHIP Colors  
 D2000-06275 - WR# 990012571-01 did not have the required impact statement.  
 D2000-06131 - D3 125 SBO battery low specific gravity  
 D2000-06073 - U1 125 VDC battery performance test  
 D2000-06033 - Timely crediting of predefines  
 D2000-05961 - Failure to Cycle 125 VDC Breakers During Breaker PM Inspection  
 D2000-05915 - Valves found out of position and piping detached with no control in place  
 D2000-05906 - Placards on battery room fire doors reference a superceded procedure  
 D2000-05727 - Discrepancies found in 3-0203-4E, 4G & 4H MSSV Work Requests  
 D2000-05710 - N.O. Identified Op Evals Not Completely Reviewed and Justified Prior to D3R16 Startup  
 D2000-05672 - Preheat for weld on 3-1601-31A valve appears to be recorded incorrectly  
 D2000-05650 - N.O. identified concerns with MSIV troubleshooting evolution  
 D2000-05611 - CAP trending identifies numerous CRs written to document failures of electrical components  
 D2000-05597 - Supplemental RPT Qualification Documentation Discrepancy  
 D2000-05500 - N.O. observed violation of low voltage electrical safety glove requirements  
 D2000-05434 - 50.59 Safety Evaluation Screening Potentially Inadequate  
 D2000-05393 - Problems Encountered During Unit 3 SDV Leak Tests (DOS 0300-12)  
 D2000-05355 - Snubber as found reading could not be obtained, snubber 3-3201-04  
 D2000-05352 - Did not receive expected alarm on 903-8 D-6 during 125 VDC ground checking.  
 D2000-05335 - 125 vdc ground  
 D2000-05323 - Multiple issues identified during battery performance tests  
 D2000-05317 - 125vdc Ground  
 D2000-05199 - Drywell Penetration LPRM Cable Discrepancies  
 D2000-05160 - Incorrect Unit 3 125V Battery Load Test Current Specified  
 D2000-05005 - Administrative Discrepancies with New MOV Thrust Calculations  
 D2000-04859 - Fire Protection Self Assessment identifies Deficiencies and Weaknesses  
 D2000-04857 - Section XI Class MC Repair/Replacement Plan Requirements Missed  
 D2000-04650 - Discrepancy identified between AR Alert Group and Station Policy #12  
 D2000-04480 - D3 TS 125 ALT. Battery Failed Quarterly Surveillance  
 D2000-04469 - 4 hr panel walkdown inconsistencies for 125VDC voltage limits  
 D2000-04423 - nrc concern  
 D2000-04398 - Failed Circuit Card Causes Charger Trip  
 D2000-04297 - Unexpected response when swapping battery chargers  
 D2000-04270 - Replacement part from vendor did not match configuration of installed part  
 D2000-03875 - New Battery Cells Require Unplanned Conditioning  
 D2000-03815 - U3 125VDC alt. Batt surv. Failed  
 D2000-03550 - 125VDC battery ground  
 D2000-03510 - Ground alarm received while running 2/3 EDG monthly PM  
 D2000-03154 - Incorrect starting coil installed without engineering eval or documents

D2000-02827 - Repeated Low Voltage Alarm on U-3 125vDC System  
D2000-00736 - Marginal Stock Radwaste DP  
D2000-05400 - Bus 34 Undervoltage Relay Failure during D3R16 Div II Undervoltage Testing  
D2000-01789 - 3-1554C-HV was found closed  
D2000-00436 - N.O. identifies discrepancy in Procurement Evaluation #3936  
D2000-01363 - guide wire broke during crane evolution causing arc across 12kv line - safety issue  
D2000-00483 - U3 LPCI Heat Exchangers unable to maintain 20 psid  
D2000-00514 - Tube Leak in 3A LPCI Heat Exchanger (Related to PIF D2000-00483)  
D2000-01922 - HPCI stop valve repair  
D2000-00810 - PIFs not written for failed Diesel Fuel Oil Samples

### **Action Tracking Items**

ATI 00042031 - D2ATI 000-06650 Deficiencies in Common Cause Analysis (CCA)  
ATI 00040685 - Alternate Battery Service Test  
ATI 00038784 - D2ATI 000-06156: Negative Trend in IMD Human Performance  
ATI 00037606 - D2ATI 000-05950 'B' CCSW Loop Inoperable  
ATI 00037566 - N.O. concern with review of IST related PMT surv  
ATI 00037167 - D2ATI 000-05788: MOV EQ Predefine Discrepancies  
ATI 00037014 - Backup Keepfill to CCSW from U3 DGCWP Did Not  
ATI 00036624 - N.O. ID's Op Evals Not Completely Reviewed  
ATI 00036161 - MOV Rework Causes Outage Delays During D3R16  
ATI 00036082 - DCP 9900621 Testing Requirements Were Not Met  
ATI 00036068 - Unplanned LCOAR and 4 Hr ENS Notification  
ATI 00035889 - Potential Trend - failed PMT of valve limits  
ATI 00035721 - Bus 34 UV relay failure during D3R16 UV testing  
ATI 00035604 - Multiple issues identified during battery test  
ATI 00034758 - ATI fails to address scope of issue  
ATI 00034569 - 2/3 Diesel Fire Pump Auto-Start CCA  
ATI 00034297 - NSRB identifies issues with 5 Root Cause investigations  
ATI 00033425 - N.O. ID's potential trend due to elec failures  
ATI 00033056 - Replacement part from vendor did not match  
ATI 00031778 - PMT Identified in Work Procedure (see below)  
ATI 00031712 - PMT Failed for 3-5600-MOVS1  
ATI 00030479 - CRs identify problem with pkg closure  
ATI 00026591 - no clear cut method for configuration control  
ATI 00026161 - Peak- Internal Action Tracking List  
ATI 00025675 - Safety-Related MOV EQ Inspections Exceeded PM Frequencies  
ATI 00025588 - D2ATI 000-01534 3-2301-5 test frequency change requested  
ATI 00024593 - SVP action tracking  
ATI 00024088 - LER 2ATI 000-001-00 main steam low pressure isolation  
ATI 00023839 - (RCR) power cable struck while excavating coolant  
ATI 00023525 - discrepancies identified in EQ assessment for  
ATI 00021024 - root cause fails to achieve correction of station  
ATI 00019413 - N.O. identifies historical operability concern

## **Procedures**

Procedure NEP-04-00 - Roadmap to Configuration Changes  
Procedure MS-AA-300 Procurement Engineering Support Activities  
Procedure CC-AA-103 Design Change Package

Procedure CC-AA-102 Design Impact Screening  
Procedure AD-AA-106 Corrective Action Program (CAP) Process Procedure

## **Miscellaneous**

Op eval 2000-007 Discrepancies Identified in EQ Assessment for LOCA/LORC Event  
Work Request 990195473-01 U3 CCSW Keep Fill From D/G Cooling Water  
Work Request 990051823-01 Actuator AO Valve Drywell Vent #58  
LER 3-2000-003 Manual Scram on Loss of Vacuum from Air Binding of Condenser Tubes Due to Off Gas Recombiner Train Failure  
LER 3-2000-002 Reactor SCRAM Caused by Failure to Use Correct Procedural Acceptance Criteria  
LER 2-1998-013 Historical Testing of 250 VDC Systems Did Not Meet Technical Specification Surveillance Requirements Due To A Design Error in Establishing The Worst Case Battery Load Profile  
Engineering Request 9906333 Three Instrument Lines Above Rack 2202-19B Have No Supporting Brackets  
Engineering Request 9906331 Evaluate 2A LPCI Pump Motor Oil Cooling Lines for Support  
Engineering Request 9903607 Modify 125 VDC System to Add Level of Safety  
Engineering Request 9902460 Review ISO Cond Low Level Alarm Setpoint  
Action Request 990113953 U3 CCSW Keep Fill From D\G Cooling Water

## LIST OF ACRONYMS USED

CAP	Corrective Action Program
CR	Condition Report
CRG	Condition Review Group
DP	Differential Pressure
EQ	Environmental Qualification
IDNS	Illinois Department of Nuclear Safety
LER	Licensee Event Report
MG	Motor Generator
MOV	Motor-Operated Valve
NCV	Non-Cited Violation
PCM	Performance Centered Maintenance
WR	Work Request