UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

April 9, 2010

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 & 3
NRC PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000237/2010006; 05000249/2010006

Dear Mr. Pardee:

On March 19, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the inspection findings, which were discussed on March 19, 2010, with Mr. Tim Hanley and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. Based on the results of this inspection, the team concluded that in general, problems were properly identified, evaluated, and corrected. However, the team observed that some issues should have been recognized and addressed more aggressively.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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 Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Mark A. Ring, Chief
Branch 1
Division of Reactor Projects

Docket Nos. 50-237; 50-249; 72-037
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 05000237/2010006; 05000249/2010006
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-237; 50-249
License Nos:	DPR-19; DPR-25
Report No:	05000237/2010006; 05000249/2010006
Licensee:	Exelon Generation Company
Facility:	Dresden Nuclear Power Station, Units 2 and 3
Location:	Morris, IL
Dates:	March 1, 2010 – March 19, 2010
Inspectors:	Stuart Sheldon, Senior Reactor Engineer (Team Lead) Andrew Dunlop, Senior Reactor Engineer Charles Phillips, Senior Resident Inspector Robert Winter, Reactor Inspector Robert Schultz, IEMA Resident Inspector
Approved by:	Mark A. Ring, Chief Branch 1 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000237/2010006, 05000249/2010006; 3/1/2010 – 3/19/2010; Dresden Nuclear Power Station, Units 2 & 3; Routine Biennial Problem Identification and Resolution Inspection.

The inspection was conducted by regional and resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Problem Identification and Resolution

On the basis of the sample selected for review, the team concluded that implementation of the corrective action program (CAP) at Dresden Nuclear Power Station was generally good. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria, were properly evaluated commensurate with their safety significance, and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. Two observations were identified where the licensee needed to more aggressively recognize and address issues. The team noted that the licensee reviewed operating experience for applicability to station activities. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies. On the basis of review of the employee concerns program, safety culture survey results, and interviews conducted during the inspection, workers at the site are willing to enter safety concerns into the CAP.

No findings of significance were identified.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (71152B)

The activities documented in Sections .1 through .4 constituted one biennial sample of problem identification and resolution (PI&R) as defined in Inspection Procedure (IP) 71152.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The inspectors reviewed the licensee's corrective action program (CAP) implementing procedures and attended CAP meetings to assess the implementation of the CAP by station staff. The inspectors reviewed risk and safety significant issues in the licensee's CAP since the last NRC problem identification and resolution inspection conducted in March 2008. The selection of issues ensured an adequate review of issues across NRC cornerstones.

The inspectors reviewed issues identified through NRC generic communications, self-assessments, licensee audits, operating experience reports, and NRC documented findings as sources to select issues. In addition, the inspectors reviewed Action Requests (ARs) and a selection of completed CAP documents from the licensee's investigative methods, such as, root cause analyses, common cause analyses, and equipment apparent cause evaluations. Specifically, the inspectors determined if the station staff was identifying plant issues at the proper threshold, entering the plant issues into the station's CAP in a timely manner, and assigning the appropriate prioritization for resolution of the issues. The inspectors also reviewed the effectiveness of corrective action for selected issue reports, completed investigations, and NRC findings, including non-cited violations (NCVs).

The inspectors selected the Unit 2 station blackout (SBO) diesel generator and the Unit 3 isolation condenser as samples for a five year review. The inspectors' review was to determine whether the station staff was properly monitoring and evaluating the performance of the systems through effective implementation of station monitoring programs.

The inspectors attended the daily Management Review Committee (MRC) and Station Ownership Committee (SOC) meetings to observe how the station processed items entered into the CAP during the inspection. Specific documents reviewed are listed in the Attachment to this report.

b. Assessment

(1) Identification of Issues

The inspectors concluded, in general, that the station identified issues and entered them into the CAP at the appropriate level. The inspectors' review of operating experience reports identified that the licensee was appropriately including the issues in the CAP.

The licensee also used the CAP to document instances where previous corrective action was ineffective or inappropriately closed. Licensee audits and assessments were of good depth and identified issues similar to those that were self-revealed or raised during previous NRC inspections. Also, during this inspection, there were no instances identified where conditions adverse to quality were being handled outside the corrective action program.

(2) Prioritization and Evaluation of Issues

The team determined that the licensee was generally effective at prioritizing and evaluating issues. The inspectors identified a few instances where the significance level was either inconsistent or did not meet procedural guidance. Given the large number of issues in the CAP, this was not seen as significant. Evaluations reviewed were generally technically adequate and of appropriate depth. There were no instances in which the licensee did not adequately consider operability and reportability requirements. The inspectors noted that the station had recently taken steps to monitor and increase the number and quality of CAP evaluations.

The inspectors' observations of the SOC concluded that the committee consistently reviewed the initial screening of the issue by the department CAP coordinator. The SOC directed member follow-up of issues that required additional information so the committee could perform its function. The inspectors concluded that none of the issues that were assigned the additional follow-up resulted in an inappropriate prioritization of the issue based on significance. However, the inspectors observed that better documentation of the issues and actions taken would help the documents meet the procedural requirement of "stand-alone documentation."

Examples of SOC action taken were to assign work requests, evaluations, and/or corrective action to specific departmental groups. The inspectors also observed the MRC function in an oversight role of the SOC. For example, the MRC changed the SOC recommended action of some issues based on committee dialogue and additional station awareness of the issue. The MRC member dialogue in the review of several CAP investigative documents was informative, and provided feedback to the staff on the appropriate implementation of the CAP. MRC members periodically observed SOC meetings and provided generally constructive feedback. The inspectors considered this to be a beneficial activity. Also, the MRC performed grading of investigative CAP products to provide feedback on product quality to the sponsoring manager.

The inspectors concluded that in general, issues were properly prioritized and evaluated well. However, the inspectors developed two observations regarding inadequate evaluation.

1. Evaluation of Operations Human Performance Issues

The team identified a weakness in the evaluation of operations human performance issues. The team reviewed Root Cause Report (RCR) 893376, Assignment 2, concerning the causes of cyclic operations performance from 2005 to 2009. The RCR identified several examples of Nuclear Oversight (NOS) assessments between 2005 and 2009 which identified poor operations performance. They are listed below:

- AR 290395 (January 12, 2005) Documented the equivalent of a yellow NOS rating (yellow ratings did not exist then). No corrective actions were specified.
- AR 543697 (October 13, 2006) NOS rated operations performance 3Q06 Yellow – significant self-revealed events due to Ops human performance were noted in 3 of the last 4 quarters. No corrective actions were specified.
- AR 578558 (January 12, 2007) NOS identified Ops performance as Yellow in 4Q06. Analysis associated with this Common Cause Analysis (CCA) was limited.
- AR 767685 (April 25, 2008) NOS identified Ops performance as Yellow for 1Q08. RCR 893376 stated "Ops was rated yellow by NOS and did nothing in response."
- AR 813920 (September 3, 2008) NOS identified Ops as Yellow for 2T08. Second reporting period in a row with a Yellow rating. No corrective actions were specified.
- AR 844505 (November 13, 2008) "NOS provided clear evidence, citing additional examples where operations department personnel were not meeting basic fundamental expectations." RCR 893376 stated "Ops appeared to have under-reacted to the identified issues."
- AR 881736 (February 17, 2009) NOS Trimester Report identifies Operations Cyclic Performance. This AR resulted in RCR 893376.

The RCR did not ask the question, "why were so many valid NOS observations and assessments made without any sustained change to operations department performance?" The fact that the station lacked an adequate response to valid NOS observations and assessments over four years should have been identified as a cause and led to additional corrective action in RCR 893376.

2. Addressing Atypical Indications During Surveillances

AR 602959 was initiated on March 13, 2007, due to 2-0302-50B, 2B control rod drive (CRD) pump suction pressure indicator reading higher than expected during a surveillance. Instead of evaluating, (e.g., measuring pressure to see if the condition was real), Work Order (WO) 1010528 was generated to replace the indicator. This WO was closed on July 18, 2007, when the indicator was replaced. Subsequently, AR 758798 was initiated on April 3, 2008, which led to WO 1125513 to address a degraded check valve, which was the underlying cause of the higher than normal pressure. This WO was still open as of March 19, 2010, three years after the initial problem identification.

AR 825148 was initiated in October, 2008 due to a pressure indicator reading higher than expected during a diesel generator cooling water (DGCW) pump quarterly surveillance. This pressure indicator reading was used as an acceptance criterion for check valve 3-3999-640 in surveillance procedure DOS-6600-08. A WO written to calibrate the gauge was subsequently cancelled in error. AR 879473 was initiated in February 2009 to identify the issue again. In response to questions from an inspector, AR 914138 was initiated in April 2009 to address the actual condition, which resulted in a change to DGCW pump quarterly surveillance procedure DOS-6600-08. This pressure indicator in question was originally assumed to be inaccurate when, in fact, the condition was real and the surveillance was therefore inadequate. By not investigating the unusual reading, the licensee violated 10 CFR 50 Appendix B, Criterion XI, "Test Control". This violation was determined to be minor as the check valve was subsequently verified to be operable.

(3) Effectiveness of Corrective Action

The licensee had been issued four findings since the last PI&R inspection with cross cutting aspects in corrective action. However, corrective actions for the samples reviewed were, in general, appropriate, and appeared to have been effective. The inspectors determined that the licensee generated assignment reports when corrective actions were identified as either inadequate or inappropriate. The inspectors identified one example of untimely corrective action. The inspectors also reviewed selected NRC findings for the past two years and observed two examples of ineffective corrective action.

1. Untimely Corrective Action for Wall Thinning

Engineering evaluation (EC) 371759 evaluated a degraded condition on condensate storage tank piping line 2/3-3350A-6. The evaluation determined that the condition would be acceptable through May 2009. The inspectors identified that the work order to correct the condition was scheduled for March 2011. In response, the licensee initiated AR 1042146 to reevaluate the wall thickness of line 2/3-3350A-6. By not correcting the condition or reevaluating the condition within the specified time, the licensee violated 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action". This violation was determined to be minor due to the actual values of wall thickness with the EC and the reasonable assurance of current operability.

2. Ineffective Response to NRC Violations

The team identified that the response to NRC Violation 2008004-02 in AR 806945, "Water on Floor While Filling 2B Core Spray Evaluation," was ineffective. In 2008, the licensee spilled water onto the floor of the Unit 2 reactor building several times by overflowing floor drains. The licensee only addressed the human performance aspect of the issue in one event where operators overfilled a system causing water to enter the floor drain system. The human performance aspect of the issue was a barrier. The actual problem was an equipment issue with the floor drain system. If the floor drain system had not been plugged the water would not have spilled onto the floor. The failure to address equipment issues with the floor drain system resulted in repeat occurrences on U3 one year later during the U3 refueling outage.

The team identified that two of the corrective actions from Violation 2009004-05 were inappropriately delayed or closed. AR 950488 was assigned to address this violation. In AR 950488 assignment 14, changes to corporate procedure WC-AA-106, "Work Screening and Processing," were closed out to another action tracking item 745177. That assignment went to Peach Bottom (owner of the corporate procedure), but there was neither guidance on what the procedural changes needed to be nor was there a contact listed from Dresden to find out what the procedure changes were expected to be. In addition, the due date was moved out to December 31, 2010. This was not timely. In AR 950488 assignment 15, the action specified in the apparent cause evaluation (ACE) was closed inappropriately. The expected action was to make additional changes to WC-AA-106, "Work Screening and Processing," to verify leak reduction program work orders were given a high priority and excluded from the condition based monitoring program. The basis for the exclusion was that there are no acceptable leak conditions within the boundary of the leak reduction program, while leaks assigned to the condition based monitoring program are considered acceptable

and are not repaired unless the condition gets worse. AR 950488 assignment 15 was worded slightly different from what was described as needed in the ACE and therefore was closed inappropriately.

Both of these issues were considered to be minor.

.2 Assessment of the Use of Operating Experience (OE)

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the facility's OE program. Specifically, the inspectors reviewed implementing OE program procedures, completed evaluations of OE issues and events, and use of OE as part of root cause analyses, apparent cause evaluations, common cause analyses, and maintenance rule functional failure evaluations. The inspectors also attended SOC and MRC meetings to observe the use of OE information. The inspectors' review was to determine whether the licensee was effectively integrating OE experience into the performance of daily activities, whether evaluations of issues were proper and conducted by qualified personnel, whether the licensee's program was sufficient to prevent future occurrences of previous industry events, and whether the licensee effectively used the information in developing departmental assessments and facility audits. The inspectors also assessed if corrective actions, as a result of OE experience, were effective and timely implemented.

b. Assessment

In general, the inspectors concluded that the station appropriately considered industry and NRC OE information for applicability, and used the information for corrective and preventative actions to identify and prevent similar issues. The inspectors assessed that OE was appropriately applied and lessons learned were communicated and incorporated into plant operations. Within the last two years, there were two findings that had been identified where OE was not adequately taken into account. These included the inadvertent control rod movement event while shutdown and a General Electric SIL recommending replacement of relays. The only additional item identified during this inspection concerned the review of Information Notice (IN) 2008-11, "Service Water System Degradation at Brunswick 1," which identified an issue with degraded rubber lining material that caused fouling of heat exchangers. The licensee's review focused on the type of valve (butterfly) identified in the OE and not the material that caused the fouling, such that it was concluded that this was not applicable to Dresden since there were no butterfly valves upstream of heat exchangers. However, in the component cooling service water system there were wafer style check valves with soft seats. These valves had previously been identified with degraded soft seats and required replacement. Although the valve types in the IN were not identical to those at Dresden, the purpose of the IN was to inform licensees about the degradation to a material that could potentially foul heat exchangers, which appeared to be applicable to the soft seat material in the check valves and should have been evaluated under the OE. In response to inspector questions, the licensee initiated AR1044831.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors reviewed selected focused area self-assessments (FASA), check-in self-assessments, and NOS audits of the corrective action program, materials management and procurement engineering, and the functional areas of operations and maintenance. The inspectors evaluated whether these audits and self-assessments were being effectively managed, were adequately covering the subject areas, and were properly capturing identified issues in the CAP. In addition, the inspectors also interviewed licensee staff regarding the implementation of the audit and self-assessment programs.

b. Assessment

No findings of significance were identified.

The inspectors concluded that the self-assessments and NOS audits were generally critical and probing. Multi-discipline teams were utilized, when appropriate, to gain a broad perspective. There were a number of deficiencies and recommendations identified across the spectrum of performance, including issues of improper CAP implementation. As appropriate, the self-assessment and NOS audit deficiencies were documented in the CAP.

However, there appeared to be a lack of operations department performed self-assessments. The team only identified one such assessment, “2008 Dresden Clearance and Tagging Check-in Assessment.” Almost all assessments were as a result of NOS, NRC, or self-revealed event-related issues.

.4 Assessment of Safety Conscious Work Environment

a. Inspection Scope

The inspectors interviewed members of the Dresden station staff to determine if there were any impediments to the establishment of a safety conscious work environment. In addition, the inspectors discussed the implementation of the Employee Concerns Program (ECP) with the ECP Coordinator, and reviewed their 2009 activities to identify any emergent issues or potential trends. Licensee activities to publicize the CAP and ECP programs were also reviewed.

b. Assessment

No findings of significance were identified.

The inspectors determined that the conditions at the Dresden station were conducive to identifying issues. The staff was aware of and generally familiar with the CAP and other station processes, including the ECP, through which concerns could be raised. Staff interviews identified that issues could be freely communicated to supervision, and that several of the individuals interviewed had previously initiated issue reports. In addition, a review of the types of issues in the ECP indicated that site personnel were appropriately using the corrective action and employee concerns programs to identify

issues. The inspectors interviewed the ECP Coordinator and concluded that the coordinator was focused on ensuring all site individuals were aware of the program, comprehensive in the review of individual concerns, and used the corrective action and employee concerns programs to appropriately resolve issues.

4OA6 Management Meetings

.1 Exit Meeting Summary

On March 19, 2010, the inspectors presented the inspection results to Mr. Tim Hanley, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary and no proprietary material was reviewed during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

T. Hanley	Site Vice President
S. Marik	Plant Manager
M. Marchionda-Palmer	Regulatory Assurance Manager
S. Vercelli	Work Control Director
P. O'Brien	Site CAP Manager
S. Clark	ECP Coordinator
J. Griffin	NRC Coordinator
B. Rybak	Principle Regulatory Engineer
R. Ruffin	Regulatory Assurance

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

None

LIST OF DOCUMENTS REVIEWED

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

Condition Reports
- AR 246778; Inadequate Action Tracking for SDC Item; August 24, 2004
- AR 357995; MOV Program Margin Performance Indicator is 'Unacceptable'; July 29, 2005
- AR 369839; U3 Isolation Condenser Tech Spec Entry; September 3, 2005
- AR 377304; Unit 2 SBO Bus 23/24 Tie Breaker Trouble; September 23, 2005
- AR 554356; MO 3-1301-1 Motor Failed Boroscope Inspection; November 6, 2006
- AR 560434; 3-1301-3 Stroke Found at 1.5", Expected was 1.75"; November 20, 2006
- AR 577267; U2 & U3 SBO DGs Maint Rule Unavailability Time Review Needed; January 9, 2007
- AR 602959; 2B CRD Pump Suction PI Inaccurate; April 12, 2007
- AR 623454; Broken Flame Arrestor on Unit 2 SBO Battery Cells 56, 58; April 30, 2007
- AR 655135; Security Negative Trend in Human Performance; July 30, 2007
- AR 696567; Incorrect Methodology in Overthrust Calc for MOV 3-1301-4; November 11, 2007
- AR 698426; Remove and Replace Disc in MOV 3-1301-4; November 13, 2007
- AR 729862; NOS IDs Multiple Issues in Unit 2 SBO HVAC; January 31, 2008
- AR 743682; Operations Crew 1 Clock Reset; January 28, 2008
- AR 747143; Ops Crew 6 Clock Reset; March 4, 2008
- AR 748637; FASA 714156 Identified ED Investigation Deficiency; March 12, 2008
- AR 750656; NRC PI & R Question On Fire Pre-Plans; March 14, 2008
- AR 750656; NRC PI & R Question on Fire Pre-Plans; March 17, 2008
- AR 750861; Adverse Trend HPCI Pump Suction Pressure Switch; March 17, 2008
- AR 752588; Degraded U3 FPF Results in 132 Mrem in 80 Days; March 21, 2008
- AR 754538; Improper Radworker Practices By Chemistry Technician; March 25, 2008
- AR 754896; MOV Testing Development of COF Acceptance Criteria; March 26, 2008
- AR 758590; Operator Fails to Log Oil Sample Prior To His Relief; March 26, 2008
- AR 758798, Potential 2B CRD Pump Discharge MOV Leak-By, April 03, 2008
- AR 759355; NRC Violation from Triennial Fire Protection Inspection; April 4, 2008
- AR 760445; IN 2008-04 Counterfeit Parts Supplied to Nuclear Power Plant; April 8, 2008
- AR 773396; Level 1 PCE 613' – 16K Particle On Jeans; May 7, 2008
- AR 775237; 2/3 CR HVAC WTR PP Disch Flow Switch Paddle Broke; May 13, 2008
- AR 782562; Security Near Miss Event at Sally Port Barriers; June 3, 2008
- AR 785224, Yokokawa Flow Controllers, June 10, 2008
- AR 790270; Individual Received 140K DPM DRP To Left Shoe; June 25, 2008
- AR 792767; IN 2008-11 Service Water System Degradation at Brunswick 1; July 2, 2008
- AR 793092; Ineffective Security Perimeter Zone 24; July 2, 2008
- AR 794311; Found Plug in 2/3-3901-A, Solenoid Discharge Elbow; July 8, 2008
- AR 794514; Perform UTs of U2 Core Spray Sys for NRC GL 2008-01 Effort; July 8, 2008
- AR 795466; Config Control Precursor; July 11, 2008
- AR 798172, A CST Inspection Results, July 18, 2008
- AR 799190; OE27168 – Preliminary – Rx SCRAM While Swapping EHC Pumps; July 4, 2008
- AR 799737; Engineering to Determine Damper OOS Position; July 24, 2008
- AR 804983; Security Work Hours Rules Violation; August 7, 2008
- AR 806945; Water On Floor While Filling 2B Core Spray System; August 12, 2008

- AR 807354; DOP 1400-03 ECCS Fill System Needs Caution Statement; August 14, 2008
- AR 811219; NRC GL 2008-01 Tech Evals - Fleet Wide Gaps; July 8, 2008
- AR 814864; 2A FWRV not Controlling in Auto; September 7, 2008
- AR 820864; TRNG – Failed LORT OBE; September 22, 2008
- AR 822117; Security Allergic Reaction to gas mask; September 24, 2008
- AR 823287; Foreign Material Found in AOVs, Cause of Stuck Open; September 27, 2008
- AR 824403; TRNG-Failed LORT OBE; September 30, 2008
- AR 825148, Calibration Verification Required On Gauge, October 01, 2008
- AR 826395, U2 CCSW Piping To Division 1 LPCI Heat Exchanger Leak, October 03, 2008
- AR 826528, CRD MOV Not Stopping Flow, October 03, 2008
- AR 828891; ISCO Venting Procedure Enhancements for NER NC-06-009; October 9, 2008
- AR 829039; U2 RX Build Vent Isol Dampers 2-5741A and 2-5742B Failed; October 9, 2008
- AR 841231, Unplanned TS Entry Due To Interlock Door Failure, November 06, 20088
- AR 841453, IEMA Inspector Questions Regarding Cap On Reactor Vent Line, November 03, 2008
- AR 842538, No Flow Indication On 3A Core Spray Pump Run
- AR 845778; FME Problem, Metal Filings Found in Airline; November 16, 2008
- AR 850204, LPCI Heat Exchanger Not Sampled, Equipment Reliability, November 26, 2008
- AR 852004; Operations Audit; October 21, 2009
- AR 852276, Result Of Reportability Review For Loose Wire Found On Relay, December 04, 2008
- AR 852859, Site Action Taken For Aging ACIT Assignments, December 05, 2008
- AR 855568; Inspect U3 Isolation Condenser Exhaust Piping for Corrosion; December 12, 2008
- AR 857514, 2A SBLC Pump Leaking During IST Run, December 17, 2008
- AR 857514; 2A SBLC PP Leaking During 1st Run; December 17, 2008
- AR 861294; Part 21-EPRI MOV PPM Software Notices; December 30, 2008
- AR 866417, RB Vent Damper 2-5741B Slow To Close, January 13, 2009
- AR 873977; Fire Pre-Plan Lists Incorrect Smoke Detector And Alarm Bell; January 29, 2009
- AR 875688; NRC Identified Fire Pre-Plan Error; February 2, 2009
- AR 879473, Calibration Verification Required On Gauge 3-1501-61A, February 11, 2009
- AR 883056, No EMD Support To Complete Scheduled Surveillance, February 20, 2009
- AR 883180, PM For Annual Cathodic Protection Past late Date, February 20, 2009
- AR 886467; LPCI CST Suction Isolation Valve Seat Leaking; March 29, 2009
- AR 886710, Entry Into DOA 6500-12, Low Switchyard Voltage Entry, March 28, 2009, EC 371844-Unit 2 CW and SW Pump Load Shed on LOCA, Revision 000
- AR 889707; Security OPEX Review for OE 2009-018, March 6, 2009
- AR 894162; TOL Not Evaluated for MOV Stroke Time Change; March 17, 2009
- AR 898594, Code Class III Piping On CCSW Vault Cooler, March 27, 2009
- AR 904242, EMD Available Resources Reduced, April 04, 2009
- AR 912765; Leak Detection and Reduction Program; April 28, 2009
- AR 912840; Work Scheduled Due To Lack Of Personnel To Support, April 28, 20009
- AR 912874; RIS 2007-21 Rev. 1 Adherence to Licensed Power Limits; April 28, 2009
- AR 914138, DOS 6600-08 May Not Adequately Test CCSW Keep Fill From D/G Cooling Water, April 30, 2009
- AR 917232; Oil Leak Found on U-2 SBO Diesel; May 8, 2009
- AR 922238; Actuator Fails to Open Valve During Troubleshooting; May 20, 2009
- AR 922581; NRC Identified U1 DFP Discharge Valve Closed; May 5; 2009
- AR 923428; 2/3 7902-SBO-1 Out Building Emerg Light Failed 1.5 hour test; May 24, 2009
- AR 927320, Panel 923-5 Annunciator Procedure Correction, June 03, 2009
- AR 927777, Bonnet To Body Leak 2/3-3350-A-500, June 04, 2009
- AR 928051, Core Spray Flow Indication Needs Calibration, June 04, 2009

- AR 933298; NRC Resident Inspector Concerns With Leak Detection Program; June 19, 2009
- AR 941856; Need CCA To Analyze Recent Ops CC Events; July 14, 2009
- AR 944098, Secondary Containment Performance Criteria Exceeded, July 20, 2009
- AR 945022, EMD Resources Changed Inside Of E-10, July 23, 2009
- AR 945406, Resources Not Available For PMT, July 23, 2009
- AR 950488; Missed NRC Commitments In Site Leak Reduction Program; August 6, 2009
- AR 951069; 3A SBLC Failed Qtrly IST Surveillance; August 8, 2009
- AR 955709; U3 SBO DG Voltage Regular Operation Experienced Drift; August 20, 2009
- AR 960042; 2B SBO Eng Start RB Supply PRV Air Pressure Low; August 31, 2009
- AR 961570, MOV 2-1301-3 Stroke Length Lower Than Expected, September 03, 2009
- AR 966949, DOP 1500-12, CCSW Loop Flow Verification Enhancement, September 17, 2009
- AR 968755; Personal Contamination For Operator Removing OOS Tag; September 19, 2009
- AR 969314; Procedure Enhancements Identified During JIT; September 21, 2009
- AR 970616, DOS 6600-08 Need Enhancement, September 25, 2009
- AR 971098, 3A FWRV Pulse Positioner, September 27, 2009
- AR 971153; Ops Review of OE29664, DC Cook Config Control Event; September 27, 2009
- AR 973460, DAN 902(3)-4 B-15 Enhancement Identified, October 01, 2009
- AR 976817; Identification of LPCI/CCSW Valves with 2000 Cycles; October 8, 2009
- AR 977060; IN 2009-16 Spurious Relay Actuations Cause Loss of Power; October 9, 2009
- AR 978666; Unexpected Isolation Condenser Level Low During Draining; October 13, 2009
- AR 979275, 2A CCSW Pump Discharge Elbow Wall Thinning, October 14, 2009
- AR 981166; Replace Flex Couplings on Unit 2 SBO Jacket Water System; October 16, 2009
- AR 983042; Potential Ingestion Identified by New IPM-12; October 22, 2009
- AR 983196; RP Informal Benchmarking; October 23, 2009
- AR 985013; Unable to Torque Cylinder Test valve on unit 2 SBO DG; October 27, 2009
- AR 985957; Level 2 PCE to Shaw Iron Worker. 150K Particle Right Shoe; October 29, 2009
- AR 988019, Thru Weld Leak On 3/4 Inch Line To 2-0202-5B, November 03, 2009,
- AR 988470; Drywell Vent Damper 2-57565 has Degraded Pin; November 3, 2009
- AR 989367, IEMA Inspector Questions Regarding DGCW, October 19, 2009
- AR 990620, U2 Iso Condenser Shell Side Inspection Results- FME, November 08, 2009,
- AR 990626; Thermals Tripped on 2-1001-2A, SDC @A PP Suction Vlv; November 9, 2009
- AR 990739; D2R1LL: OPEX Covered During RP Management Meeting; November 8, 2009
- AR 990878, License Renewal Inspection – Isolation Condenser, November 09, 2009
- AR 992803; U2 EDG Largest Load Reject (TSR 3.8.1.10); November 13, 2009
- AR 993244; Reverse Slope Identified 2B Core Spray Line in DW; November 13, 2009
- AR 994875; TRNG-Observation Reveals Immediate CA Not Implemented; November 17, 2009
- AR 996233; Simulator Missing Replacement Recorder for EC 369131; November 20, 2009
- AR 996573; Problems with Fire Prot. Piping and Supports in LPHB; November 20, 2009
- AR 996891; U3 Rx Bldg 570 Elevation Area Floor Drains Plugged; November 22, 2009
- AR 996964; HPCI Area Temp Switch As Found OOT; November 22, 2009
- AR 997905; 2-3103 MOV Seal-Tight is Degraded; November 24, 2009
- AR 997905; 3-3103-C MOV Seal-Tight is Degraded; November 24, 2009
- AR 998103; EC 377728 (U2 SDC Logic) Wiring Discrepancy; November 25, 2009
- AR 998488, Valve Fails DOS 1600-3, November 25, 2009
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- AR 998817; 2B LPCI Pump Motor Heaters not Working; November 27, 2009
- AR 999008; Air Leak on the Regulator for the 2-5420-B; November 28, 2009
- AR 999093; Incorrect Servo Valve Installed on D2 CV #2; November 29, 2009
- AR 999090; Incorrect Servo Valve Installed on D2 CV #1; November 29, 2009
- AR 999302; 2C CCSW IST Pump High Vibes; November 30, 2009
- AR 1001891; DOA 5700-01 Needs Enhancement; December 5, 2009

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- AR 1003797; TSC HVAC Surveillances Failed; December 10, 2009
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- AR 1008366, 3-2040-1 Not Recording Proper Flow, December 21, 2009
- AR 1009957, Feedwater Reg. Valve Oscillations, December 28, 2009
- AR 1013739; Add Lead Shielding to Permanent Load Calc; January 7, 2010
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- AR 1022498, 3A Feedwater Regulating Valve Solenoid Degradation, January 28, 2010
- AR 1026173; 2B SBO DG #10 Cylinder Kiene Valve Packing Leak; February 4; 2010
- AR 1029165; U3 SBO EDG Surv Out of Tolerance readings; February 11; 2010
- AR 1031751; NOS ID Finding Inadequate Comp Measure For Degraded EP Equipment; February 17, 2010
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- EC 345696, Reactor Recirculation Valve 2-0202-5B Leak-Off Drain Line As Built Configuration Evaluation, Revision 0
- EC 371759; Acceptance of As-Found Wall Thickness on Line 2/3-3350A-6;
- EC 372346, Cut / Cap The Vent Line Downstream Of The 2-0220-46 AOV, Revision 000
- EC 377959, Lost Parts Analysis Of Foreign Material In U2 Isolation Condenser Shell, Revision 000

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- AR 1043371; Weaknesses in Work Order Cancellation Notes; March 9, 2010
- AR 1043463; Shift Managers Comments in AR 998817 Not Addressed; March 16, 2010
- AR 1044548; Inaccurate Closure on ATI #860946; March 18, 2010
- AR 1044831; NRC Questions Op Ex Closure; March 19, 2010
- AR 1040662; IEMA Concerns With 2B CRD Pump; March 09, 2010
- AR 1042146; PI&R Re-evaluate Wall Thickness For Line 2/3-3350A-6; March 12, 2010

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- AR 766037; Training Requires Rescheduling; April 22, 2008
- AR 776598; 3B LPCI HX Inspection Results; May 16, 2008
- AR 808373; NOS ID 1st Level Escalation issued for Security Performance; August 18, 2008
- AR 814892; U2 Isolation Condenser Failed DOS 1300-01; September 7, 2008
- AR 877591; Potential 10CFR50 Part 21 Notification of Versa Air Solenoid; February 6, 2009
- AR 891940; Dresden Gaps to Excellence within the Corrective Action Program; March 9, 2009
- AR 893211, MOV 2-2301-6 Did Not Fully Close, March 15, 2009
- AR 893376; Root Cause Investigation Requested; March 16, 2009
- AR 967008; 2A LPCI Hx Degraded Thermal Performance, September 18, 2009

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- AR 707003; Increasing Trend in Equip Failures due to Aging/Mat'l Degr.; December 4, 2007
- AR 764505; G&O: Security Loggable Events; April 17, 2008
- AR 843640; Oil Spilled on Top of Rx Recirc Pump Seal; November 11, 2008
- AR 851494; Security Results of the EFR Security Equipment Failures; December 2, 2008
- AR 860946; NRC Identifies a Potential Adverse Trend; December 29, 2008

- AR 943016; Summary of Task Performance Evaluation Failures for Dresden Class of 2008, 'B' Technician Qualifications; July 17, 2009
- AR 1022265; Training Department Exam Administration and Security Weaknesses; February 11, 2010
- AR 783637, Request A CCA For Maintenance People Cause IRs, June 6, 2008
- AR 925540, Dresden Indicator For Unplanned LCOS In Variance, May 29, 2009

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- AR 766627; Excessive Vibrations B Train CREVS RCU; April 23, 2008
- AR 804635; 3B SBLC Accumulator Schrader Valve Broken; August 7, 2008
- AR 807914; Failure of Unit 3 DWFDS; August 16, 2008
- AR 839009; Unexpected Tech Spec Entry: RBCCW PCIV INOP; November 1, 2008
- AR 922035; Drywell Floor Drain Sump Failed to Operate; May 20, 2009
- AR 1027925; 3A Isolation Phase Bus Duct Blower Tripped When Started; March 18, 2010
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- CC-AA-401; Maintenance Specification: Installation and Control of Temporary Shielding And Shielding Components; Revision 8
- DOP 1000-01; Fill and Vent of Shutdown Cooling System; Revision 32
- DOP 1000-03; Shutdown Cooling Mode of Operation; Revision 69
- DOP 1200-01; RWCU System Operation During Reactor Startup and Shutdown; Revision 52
- DOP 1200-03; RWCU System Operation With The Reactor At Pressure; Revision 57
- DOP 1300-01; Standby Operation of the Isolation Condenser System; Revision 48
- DOP-0300-01, Control Rod Drive System Start Up And Operation, Revision 43
- DOS 0040-04; Monthly Check of Motor-Operated Valves Position Indicating Lights; Revision 13
- DOS 1400-05; Core Spray System Pump Operability and Quarterly IST Test With Torus Available; Revision 41
- DOS 1400-09; Core Spray System IST Comprehensive/Preservice Pump Test With Torus Available; Revision 7
- DOS 1500-10; LPCI System Pump Operability and Quarterly Test With Torus Available and Inservice Testing (IST) Program; Revision 62
- DOS 1500-11; LPCI System Pump Operability and Quarterly Test With Torus Available CCSW Unavailable and In-Service Testing (IST) Program; Revision 11
- DOS 2300-03; High Pressure Coolant Injection System Operability and Quarterly IST Verification Test; Revision 91
- DOS 2300-10; High Pressure Coolant Injection System IST Comprehensive/Preservice Pump Test; Revision 9
- DOS 6600-08; DGCW Pump Quarterly Surveillance and In-service Test; Revision 47, 48 & 51
- DTP 09; Leak Detection and Reduction Program; Revision 12
- ER-AA-430, Conduct Of Flow Accelerated Corrosion Activities, Revision 5
- ER-AA-550, Equipment Obsolescence Process, Revision 0
- LS-AA-115; Operating Experience Program; Revision 14
- LS-AA-120; Issue Identification and Screening Process; Revision 10
- LS-AA-125; Corrective Action Program (CAP) Procedure; Revision 13
- LS-AA-1012; Safety Culture Monitoring; Revision 0
- MA-AA-716-210, Performance Centered Maintenance Process, Revision 9
- MA-AA-716-210-1001, Performance Centered Maintenance Templates, Revision 8

- NES-MS-03.1, Piping Minimum Wall Thickness Calculation, Revision 4
- OP-AA-201-009; Control of Transient Combustible Material; Revision 10
- RP-AA-350; Personnel Contamination Monitoring Decontamination and Reporting; Revision 8
- WC-AA-106, Work Screening And Processing, Revision 10

Miscellaneous Documents
- Dresden Pre-Fire Plan Layout; SBO U2 MER Room; Revision 1
- Dresden Pre-Fire Plan Layout; SBO U3 SWG EER Room; Revision 1
- Dresden Pre-Fire Plan Layout; SBO General Area; Revision 1
- Dresden Pre-Fire Plan Layout; SBO DG 2; Revision 1
- Dresden Pre-Fire Plan Layout; SBO DG 3; Revision 1
- Dresden Pre-Fire Plan Layout; U2 125V ALT Battery Room; Revision 0
- Dresden Pre-Fire Plan Layout; SBO U2 6A 125V Battery Room; Revision 0
- Dresden Pre-Fire Plan Layout; SBO U3 7A 125V Battery Room; Revision 1
- Maintenance Rule Unavailability Evaluation; October 15, 2008
- Isolation Condenser System Health Reports, Unit 2 and 3; January 1 – March 31, 2010

Operability Evaluations
- 07-006; U3 Isolation Condenser System and Inboard Condensate Return MOV; Revision 0
- 09-005; Shutdown Cooling Pump 2A Suction Isolation Valve MOV 2-1001-2A; Revision 1

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- AR 719524, On-line Backlog Maintenance, April 04, 2008
- AR 720246; Procurement Engineering Inclusion into ESPT; September 25, 2008
- AR 759369, Dresden Station Obsolescence Process, May 28, 2008
- AR 867809; Instructor Effectiveness FASA; March 13, 2009
- AR 883008; Operating Experience Program FASA; September 4, 2009
- AR 955573; FASA Preparation for NRC PI&R Inspection; February 23, 2010
- Audit NOSA-DRE-08-03, AR706480; Emergency Preparedness; May 2, 2008
- Audit NOSA-DRE-09-04, AR852001; Emergency Preparedness; April 24, 2009
- Audit NOSA-DRE-09-09, AR852006; Fire Protection Audit Report; October 29, 2009
- Check-In Self-Assessment Dresden Security Procedure Adherence/HU Events; August 11, 2009
- Dresden Station – Operating Experience Program FASA; September 15, 2009

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- WO 00883042; D2 2RFL PM Replace Valve Diaphragm And Overhaul Air Op, November 25, 2009
- WO 00985825; D2 24M TS Rx Bldg Vent Isol Damper Air Pressure SW Cal, April 20, 2009
- WO 01002303; D2 24M TS Recirc Loop Break DP Switch Calibration, April 23, 2009
- WO 01085429; Paint Isolation Condenser Shell Side Repairs, November 20, 2009
- WO 01165906; Repair / Replace Line 2/3 -3350A-6 From The A CST, February 24, 2010
- WO 01188076; D3 9M 3A FW Reg. Valve Solenoid Replacement, September 28, 2009
- WO 01202521; D3 Qtr TS CS Pump Test With Torus Avail For IST Data Surv, April 10, 2009
- WO 01209297; Troubleshoot / Replace Pressure Switch 2-5741A, February 13, 2009
- WO 01219350; EM Perform Votes Testing Of The HPCI 2-2301-6 Valve, March 18, 2009
- WO 01227150; D3 Qtr TS CS Pump Test With Torus Avail For IST Data Surv, July 09, 2009

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agencywide Document Access Management System
AR	Action Request
CAP	Corrective Action Program
CCA	Common Cause Analysis
CFR	Code of Federal Regulations
CRD	Control Rod Drive
DGCW	Diesel Generator Cooling Water
EC	Engineering Evaluation
ECP	Employee Concerns Program
FASA	Focused Area Self-Assessment
IE	Illinois Emergency Management Agency
IN	Information Notice
IP	Inspection Procedure
IST	Inservice Test
MRC	Management Review Committee
NCV	Non-Cited Violation
NOS	Nuclear Oversight
NRC	U.S. Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records
RCA	Root Cause Analysis
RCR	Root Cause Report
SBO	Station Blackout
SOC	Station Ownership Committee
WO	Work Order

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Sincerely,

/RA/

Mark A. Ring, Chief
Branch 1
Division of Reactor Projects

Docket Nos. 50-237; 50-249; 72-037
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SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 & 3
NRC PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000237/2010006; 05000249/2010006

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