April 26, 2002

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION
NRC INSPECTION REPORT 50-237/02-04(DRP); 50-249/02-04(DRP)

Dear Mr. Skolds:

On March 31, 2002, the NRC completed an inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report presents the inspection findings which were discussed with Mr. D. Bost and other members of your staff on April 3, 2002.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified one issue for which no risk significance or color was assigned. Additionally, the inspectors identified four issues of very low safety significance (Green). The four issues were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these issues as Non-Cited Violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. 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 Inspectors at the Dresden Nuclear Power Station.

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Sincerely,

/RA/

Mark Ring, Chief
Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report 50-237/02-04(DRP);
50-249/02-04(DRP)

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Dresden Nuclear Power Station Plant Manager
Regulatory Assurance Manager - Dresden
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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:	50-237/02-04(DRP); 50-249/02-04(DRP)
Licensee:	Exelon Generation Company
Facility:	Dresden Nuclear Power Station, Units 2 and 3
Location:	6500 North Dresden Road Morris, IL 60450
Dates:	February 8, 2002, through March 31, 2002
Inspectors:	D. Smith, Senior Resident Inspector B. Dickson, Resident Inspector P. Pelke, Reactor Engineer D. Pelton, Senior Operations Engineer W. Slawinski, Senior Radiation Specialist R. Zuffa, Illinois Department of Nuclear Safety
Approved by:	Mark Ring, Chief Branch 1 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000237-02-04(DRP), IR 05000249-02-04(DRP), on 3/31/2002, Exelon Generation Company, Dresden Nuclear Power Station, Units 2 and 3. Identification and Resolution of Problems.

The inspection was conducted by resident inspectors, one senior radiation specialist, one senior operations engineer, and one reactor engineer. The inspection identified four Green and one No Color findings, of which four were considered Non-Cited Violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- Green. A Non-Cited Violation was identified for the licensee's failure to have an adequate preventative maintenance procedure for the 480 volt motor control center (MCC) cubicles for ensuring lock washers were installed in the auxiliary control assemblies. As a result, the lock washers were not installed in 37 safety related assemblies, including one which led to the failure of the "B" loop recirculation pump discharge valve (NCV 50-237/02-04-03).

  The finding was of very low safety significance because the reactor was in a shutdown condition, the emergency core cooling systems were not required in this condition, core spray was available, and the 36 other affected components were operable (4AO2).

- Green. A Non-Cited Violation was identified for the licensee's failure to prepare supporting operability documentation for 36 safety related 480 volt MCC cubicles which had missing lock washers in their auxiliary contact assemblies (NCV 50-237/249/02-04-04).

  The finding was of very low safety significance because it was determined that all 36 degraded components were operable (4OA2).

- Green. A Non-Cited Violation was identified for the licensee's failure to promptly identify and correct the condition of missing reactor protection system (RPS) cable tray covers (NCV 50-249/02-04-05).

  The finding was of very low safety significance because in each case two other RPS channels are routed in a different location which are sufficient to allow the RPS system to perform its intended safety function (4OA2).

- Green. A Non-Cited Violation was identified for the licensee's failure to correct conditions adverse to quality when station personnel incorrectly connected test equipment to the emergency diesel generator (NCV 50-237/249/02-04-06).

  The finding was of very low safety significance since the incorrect connection did not have any adverse impact on the plant (4OA2).

  Cross-Cutting Issues: Corrective Actions

  No Color. The inspectors identified four instances where the licensee failed to promptly identify and correct conditions adverse to quality. In the first instance, during the licensee followup actions for missing lock washers in auxiliary contacts for safety related motor control center cubicles, the licensee failed to prepare supporting operability documentation for an additional 36 safety related components. In the second instance, the isolation condenser experienced a second water hammer after the licensee failed to initiate a condition report after a previous water hammer in August 2001. In the third instance, the licensee failed to promptly identify and correct the condition of missing reactor protection system cable tray covers on Unit 2 which had been identified on September 28, 2001. Finally, following the incorrect connection of a test recorder during undervoltage testing for the Unit 3 emergency diesel generator on September 24, 2000, the licensee failed to identify the full extent of condition and complete previously identified corrective actions (FIN 50-237/249/02-04-07).

  The individual findings were of very low significance; however, the findings could have had a credible impact on safety or could have been a precursor to a significant event by affecting the availability, reliability, operability or functionality of mitigating equipment (4OA2).

B. Licensee Identified Findings

  A violation of very low significance which was identified by the licensee has been reviewed by the inspectors. This violation is listed in Section 4OA7.

Report Details

Summary of Plant Status

Unit 2 began the inspection period at 912 MWe (95 percent thermal power and 100 percent of rated electrical capacity). On February 24, 2002, operators reduced load to approximately 750 MWe to perform feedwater testing and remained at 820 MWe due to oscillations on the electrohydraulic control system Number 2 control valve. The operators returned the Unit to 912 MWe on March 5, 2002.

Unit 3 began the inspection period at 822 MWe (100 percent thermal power). Unit 3 completed an 8 day maintenance outage primarily to replace 17 jet pump hold-down beams and perform preventive maintenance on the high pressure coolant injection system. The unit was taken off-line on March 16, 2002, and returned on-line on March 24, 2002.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors toured plant areas important to safety to assess the material condition, operating lineup, and operational effectiveness of the fire protection system and features. The review included control of transient combustibles and ignition sources, fire suppression systems, manual fire fighting equipment and capability, passive fire protection features, including fire doors, and compensatory measures. The following areas were walked down:

Unit 2 Turbine Building, 534' Elevation, Switchgear Area (Fire Zone 8.2.6.A)
Unit 3 Turbine Building, 517' Elevation, Switchgear Area (Fire Zone 8.2.5.E)
Unit 3 Turbine Building, 538' Elevation, Reactor Feedwater Switchgear, Hydrogen Seal Area (Fire Zone 8.2.6.E)

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Written Examination and Operating Test Results

a. Inspection Scope

The inspectors reviewed the pass/fail results of individual written tests, operating tests, and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calender year 2001.

b. Findings

No findings of significance were identified.

.2 Observation of Licensed Operator Simulator Training

a. Inspection Scope

The inspectors observed Crew #1 on March 27, 2002. The scenario consisted of a reactor building vent radiation monitor failure, reactor feed pump high vibration, and loss of coolant accident in the drywell and failure to scram.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors assessed the licensee's implementation of the maintenance rule by determining if systems were properly scoped within the maintenance rule. The inspectors also assessed the licensee's characterization of failed structures, systems, and components, and determined whether goal setting and performance monitoring were adequate for the main steam system, station blackout diesels, and core spray system.

b. Findings

During the review of the station blackout (SBO) diesel generator system, the inspectors identified that a recent SBO heating, ventilating and air conditioning temperature controller failure on February 6, 2002, had not been captured in a condition report. The licensee documented this issue as a work request. The maintenance rule process only routed condition reports contained in the maintenance rule database to the system engineers. Therefore, the inspectors were concerned that the licensee's maintenance rule process would not have routed this deficiency, as documented on the work request, to the system engineer for determining whether this equipment failure constituted a maintenance rule functional failure. Additional investigation into this issue by the licensee determined that the station made a change to the corrective action program in August 2001 which allowed a work request to be generated instead of a condition report for low level equipment problems. However, the change did not take into account how the system engineer would evaluate these equipment problems for maintenance rule functional failures because the work requests did not automatically input into the maintenance rule database for routing to the system engineers. As a result of this oversight, there was a backlog of 1,700 open work requests pending reviews by the system engineers to determine if any of the identified equipment deficiencies and failures resulted in maintenance rule functional failures. The backlog review is scheduled for completion on May 10, 2002. As an interim corrective action, the maintenance rule coordinator will receive all work requests and conduct an initial review

to determine if equipment deficiencies require further review by system engineers for maintenance rule functional failure determinations. Pending the completion and review of the results of this effort, this issue will be an **Unresolved Item (URI 50-237/02-04-01 and 50-249/02-04-01(DRP))**.

1R13 Maintenance Risk Assessments and Emergent Work Control (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 evaluated whether the licensee had taken the necessary steps to plan and control emergent work activities. The inspectors completed this evaluation while the licensee performed surveillance testing activities on the Unit 3 isolation condenser and during maintenance activities on the 3A standby liquid control pump, the 2C containment cooling service water pump, the 2B emergency diesel generator starting air compressor, and the Unit 2 battery charger system.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability evaluations to ensure that operability was properly justified and the component or system remained available, such that no unrecognized increase in risk occurred. The review included evaluation of the following issues: installation of non-environmentally qualified air operated valves in the drywell equipment and floor drain system, missing lock washer in the auxiliary contacts for the 480V motor control center cubicles, and ability of the Unit 2/3 reactor building crane to function under a design load.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance test results to confirm that the tests were adequate for the scope of the maintenance completed and that the test data met the acceptance criteria. The inspectors also reviewed the tests to determine if the systems were restored to the operational readiness status consistent with the design and licensing basis documents. The inspectors reviewed work activities associated with the

3B containment cooling service water pump and the Unit 3 electrohydraulic control system.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (71111.20)

a. Inspection Scope

The inspectors reviewed and evaluated several outage activities during the Unit 3 maintenance outage. The purpose of the outage, which was performed March 16-24, 2002, was to replace 17 jet pump hold-down beams and perform preventive maintenance activities on the high pressure coolant injection system. The evaluation was performed to ensure that the licensee appropriately considered risk factors during the development and execution of planned activities. The inspectors also ensured that technical specification requirements were verified to have been met for changing modes.

b. Findings

On March 23, 2002, the licensee identified that, during startup from the maintenance outage, the high pressure coolant injection system (HPCI) was not properly aligned when reactor steam dome pressure reached 150 psig. The on-shift crew decided to leave steam isolated to the system in that steam inlet valves (3-2301-4 and 5) remained closed. This decision was based on the on-shift crew's understanding that the HPCI system was inoperable due to the significant amount of maintenance that had been performed on the system during the outage. The licensee informed the resident inspectors that the on-shift crew understood the need to exceed 150 psig to obtain the appropriate plant conditions to perform the post maintenance test (low pressure test). Therefore, when steam dome pressure reached 150 psig, the on-shift crew entered technical specification limiting condition for operation action statement 3.5.1.F for HPCI being inoperable which required immediate verification that the isolation condenser was operable and restoration of HPCI within 14 days. The decision to increase steam dome pressure above 150 psig with steam isolated to the HPCI system potentially resulted in the licensee violating technical specification limiting condition for operation 3.5.1 which required the HPCI system to be operable when steam dome pressure is equal to or greater than 150 psig. The licensee properly aligned HPCI to support post-maintenance testing approximately 43 minutes after exceeding 150 psig. The licensee planned to conduct a root cause investigation for this incident. This issue was documented in CR #101056. This issue will be an Unresolved Item pending the inspectors' review of the licensee's completed root cause investigation **(URI 50-249/02-04-02 (DRP))**.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment. The inspectors assessed whether the selected plant equipment could perform its intended safety function and satisfy the requirements contained in Technical Specifications. Following the completion of the test, the inspectors determined that the test equipment was removed and the equipment returned to a condition in which it could perform its intended safety function. The review included surveillance testing activities for the calibration of the Unit 2 narrow range reactor pressure transmitter, the operational test of the Unit 2 station blackout diesel, the calibration of the reactor vessel high pressure scram pressure switches, and the Unit 2 condenser low vacuum pressure switch calibration and functional test.

b. Findings

No findings of significance were identified.

3. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspector conducted walkdowns of the radiologically protected area to verify the adequacy of radiological area boundaries and postings. Specifically, the inspector walked down numerous radiologically significant work area boundaries (high and locked high radiation areas) in the Unit 2 and 3 Reactor Buildings (including the Unit 3 drywell), the Turbine Buildings, and the Radwaste Building and performed confirmatory radiation measurements to determine if these areas and selected radiation areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and Technical Specifications. The inspector also evaluated the radiological condition of those areas walked down to assess the radiological housekeeping and contamination controls.

b. Findings

No findings of significance were identified.

.2 High Radiation Area and Very High Radiation Area Access Control

a. Inspection Scope

The inspector reviewed the licensee's procedures, practices and associated documentation for the control of access to radiologically significant areas (high, locked high, and very high radiation areas) and assessed compliance with Technical Specifications, procedures and the requirements of 10 CFR 20.1601 and 20.1602. In particular, the inspector reviewed the licensee's practices and records for the control of keys to locked high radiation areas (LHRAs) and very high radiation areas (VHRAs), the use of access control guards to control entry into such areas, and the licensee's methods for independently verifying proper closure and latching of LHRA and VHRA doors upon area egress. The inspector also observed and evaluated the adequacy of the LHRA controls implemented for access to the Unit 3 drywell and the high radiation area access controls used during reactor cavity decontamination. Additionally, radiological postings were reviewed, and access control boundaries were challenged by the inspector throughout the plant to verify that high, locked high and very high radiation areas were properly controlled.

b. Findings

No findings of significance were identified.

.3 Review of Radiologically Significant Work

a. Inspection Scope

The inspector reviewed radiation work permit (RWP) and as-low-as-is-reasonably-achievable (ALARA) plan packages, attended the pre-job ALARA brief for cavity decontamination and observed the work activities for a job that took place in a LHRA during the Unit 3 maintenance outage (D3M09). These activities were performed to verify the adequacy of surveys, access controls, and postings; to assess the exchange of work area radiological information; and to evaluate radiation worker and radiation protection technician performance. The inspector also evaluated the licensee's procedure and practices for dosimetry placement and use of multiple dosimetry in high radiation areas having significant dose gradients for compliance with the requirements of 10 CFR 20.1201 and applicable Regulatory Guides. Additionally, the licensee's dose tracking and documentation practices were reviewed for recent work that involved the issuance of multiple whole body and/or extremity dosimetry to verify that worker dose was recorded consistent with 10 CFR 20.2106.

b. Findings

No findings of significance were identified.

.4 Control of Non-Fuel Materials Stored in the Spent Fuel Pools

a. Inspection Scope

The inspector reviewed the licensee's procedures for the storage of highly activated or contaminated materials (non-fuel) within the spent fuel or other storage pools and specifically evaluated the practices implemented for spent fuel pool storage of the irradiated jet pump hold-down beams that were replaced during the maintenance outage. Radiation protection (RP) and fuel handling procedures were reviewed, RP staff were interviewed, and walkdowns of the refuel floor were conducted. The inspector assessed the adequacy of the administrative and physical controls for the underwater storage of non-fuel materials to verify consistency with the licensee's procedures and with Regulatory Guide 8.38, Information Notice 90-33, and applicable Health Physics Positions in NUREG/CR-5569. Procedure inconsistencies and differences in the radiological controls used for short versus longer term storage of irradiated material in the spent fuel pool were discussed with RP management, and plans to alter current practices were reviewed for adequacy relative to industry and NRC guidelines.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02)

.1 Radiation Dose Goals and Trending

a. Inspection Scope

The inspector reviewed job specific and cumulative exposure performance for D3M09 to assess the licensee's dose performance compared to pre-outage exposure goals and projections. The inspector also reviewed the licensee's dose forecasting practices for radiologically significant jobs completed during the outage to determine if adequate technical bases for job dose estimates existed and to determine if prior outage experiences, resource estimates and industry operating experiences were used to establish reasonable dose estimates. Additionally, the inspector reviewed the effectiveness of the RP organization's exposure tracking for the outage to verify that the licensee could identify problems with its exposure performance and take actions to address identified deficiencies.

b. Findings

No findings of significance were identified.

.2 Radiological Work Planning

a. Inspection Scope

The inspector reviewed the licensee's procedure for ALARA Plan development and evaluated D3M09 outage ALARA plans to verify consistency with the procedure and to assess the overall adequacy of the plans relative to both licensee and industry practices. Specifically, the inspector reviewed the ALARA plans developed for refuel floor work, for drywell activities and for outage radiography and assessed the adequacy of the radiological planning associated with each work activity.

The inspector reviewed the RWP and the ALARA plan completed for each job and assessed the radiological engineering controls and other dose mitigation techniques to verify that they included appropriate controls to reduce dose. These documents were also reviewed to determine if job history files, licensee lessons learned, and industry operating experiences were adequately integrated into each work package. Additionally, the inspector discussed ALARA planning with involved RP staff to verify that adequate interface between contractors, station work groups, and ALARA staff occurred during job planning.

b. Findings

No findings of significance were identified.

.3 Implementation of ALARA Controls and Radiological Oversight of Work

a. Inspection Scope

The inspector evaluated the execution of the ALARA plans for jet pump hold-down beam removal, for reactor cavity decontamination and for under-vessel work in the drywell, all which were performed during D3M09. The inspector reviewed the adequacy of radiological surveys performed for these jobs, evaluated the radiological work controls, and assessed worker performance and RP staff oversight. Total effective dose equivalent (TEDE) ALARA evaluations were also assessed for technical adequacy. The inspector evaluated the licensee's radiological engineering controls utilized at these work locations to determine if the controls were consistent with those specified in the ALARA plans. The inspector also observed and questioned both the RP staff that provided job coverage for these activities and the radiation workers (radworkers) involved in selected work to verify that they had adequate knowledge of radiological work conditions and ALARA controls.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed the licensee's condition report (CR) database and several individual CRs related to the radiological access control and ALARA programs that were generated between December 2001 and March 19, 2002. The review was conducted to assess the effectiveness of the corrective action program to identify problems and to develop corrective actions. Selected CRs were discussed with RP staff and management to determine if problem characterization was accurate and to verify that extent of condition reviews were adequately completed or were in the process of being performed. The inspector also discussed with RP management its practice of conducting both root cause and apparent cause evaluations to determine if they were initiated at appropriate thresholds. Additionally, the inspector reviewed the preliminary results of a root cause evaluation undertaken by the licensee to assess RP performance issues to verify that the licensee was proactively evaluating problems and trends.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed a sample of plant records and data against the reported performance indicators in order to determine the accuracy of the indicators.

Unit 2 and Unit 3 Safety System Unavailability, Emergency AC Power (January 2001 through December 2001)

Unit 2 and Unit 3 Unplanned Transients Per 7000 Critical Hours (October 2000 through December 2001)

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed several issues to verify that the licensee had taken effective corrective action with respect to classification and prioritization of the resolution of problems, determination of the extent of condition, evaluation and disposition of operability, and completion of corrective action in a timely manner.

b. Findings

.1 (Closed) Licensee Event Report (LER) 50-237/2001-003-00: "Failure of Recirculation Pump Discharge Valve to Close Causing Low Pressure Coolant Injection (LPCI) Inoperability."

Two Green findings involving two Non-Cited Violations were identified. The first finding involved the licensee's failure to have an adequate preventative maintenance procedure for the 480 volt motor control center (MCC) cubicles ensuring lock washers were installed in the auxiliary control assemblies. The second finding involved the licensee's failure to prepare any supporting operability documentation for missing lock washers in the auxiliary control assemblies for 36 safety related 480 volt MCC cubicles.

On September 2, 2001, the "B" loop recirculation pump discharge valve failed while the licensee was attempting to manipulate the valve with the reactor in Mode 4. The licensee performed a root cause investigation for this valve failure. The licensee's investigation revealed that the failure was due to a normally closed auxiliary contact sticking open. The contact failed due to the auxiliary contact plunger arm being off its normal plastic stop which caused the contact to bind. The mispositioned plunger arm was due to a loosened plunger post that was caused by a missing lock washer. The licensee installed a new auxiliary contact assembly and satisfactorily tested the valve.

The licensee determined that an inadequate procedure led to the valve failing. The licensee performed preventive maintenance on the valve every 6 years as specified by Dresden Electrical Surveillance procedure DES 7300-05, "Maintenance and Surveillance of Environmental Qualification and Safety Related 480 Volt MCC," Revision 13. The procedure did not specify checking for plunger post tightness or that a lock washer was installed. The licensee revised DES 7300-05 which included adding a picture which shows the configuration of all the parts. In determining the extent of condition during the root cause analysis for this valve failure, the licensee identified that numerous additional breakers required inspection including all the General Electric Series 7700, NEMA size 0, 1 and 2 MCC cubicles. The list of MCC cubicles that did not have a lock washer installed was provided to operations to determine any potential plant impact and to assist in determining the lock washer installation date. This issue was given action tracking item number 74173-17.

The licensee determined the extent of condition through a walkdown which was conducted October 6 - 8, 2001. Also, the licensee verified proper alignment of the contact operating post and plunger during the walkdown. A total of 74 MCC cubicles, of which 36 were safety related, were identified as having missing lock washers. The licensee determined that 25 had safety or production risk and were appropriately scheduled to have the lock washer installed. The licensee subsequently changed the schedule of several of these components. AR 000074173-19-00 dated December 18, 2001, was initiated to track completion of work orders for lock washer installation. The inspectors reviewed the list of components missing the required lock washers and the licensee's set schedule to install the missing lock washers. The inspectors raised a concern about the fact that the non-safety related components were scheduled for lock washer installation in 2002 and 2003 while most of the safety related

components were scheduled in 2004. The licensee identified that some of the schedule dates had been changed without the knowledge of the Operations Department.

At the time of discovering the additional components with missing lock washers, the licensee did not prepare any supporting operability documentation. Also, the inspectors were concerned that the licensee had not documented the additional safety related and non-safety related breakers that were also missing lock washers in the original recirculation pump discharge valve failure LER.

Subsequently, the licensee initiated CR #00093478 on February 5, 2002, to re-identify the priority MCC cubicles and assign individual action tracking items to complete repair of each cubicle. The licensee characterized this issue in the CR as a root cause corrective action breakdown where there was no owner/process to ensure the corrective actions were completed satisfactorily. The licensee subsequently prepared supporting operability documentation on February 8, 2002, and performed another walkdown to compare the as-found condition with the General Electric recommended inspection criteria (auxiliary contacts were properly aligned and there were no visible gaps or space between the plunger post and the plastic plunger). The licensee concluded that all components were operable because the posts were not loose.

The inadequate procedure issue, leading to the recirculation pump discharge valve failure, was considered more than minor because it had an adverse impact on safety in that, the low pressure coolant injection system would be rendered inoperable during a loss of coolant accident with the break in the “A” loop of the recirculation system because the low pressure coolant injection loop selection logic would select the “B” loop.

The inadequate procedure issue had minimal safety significance because the reactor was in a shutdown condition, the emergency core cooling systems were not required in this condition, core spray was available, and the 36 other affected components were operable (Green).

10 CFR 50, Appendix B, Criterion V, requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

Contrary to the above, DES 7300-05 was inadequate in that it did not require the installation of a lock washer or verify the tightness of the plunger post. Because of the very low safety significance, this violation is being treated as a Non-Cited Violation **(NCV 50-249/02-04-03(DRP))** consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue was entered into the licensee’s corrective action program as CR #98448 and CR #D20000-05356.

The issue of not preparing supporting operability documentation for the additional degraded components was considered more than minor because the issue could be viewed as a precursor to a significant event. Ultimately, this issue had minimal safety significance because the licensee subsequently determined that all the 36 degraded components were operable (Green).

10 CFR 50, Appendix B, Criterion XVI, requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.

Station procedure LS-AA-105, "Operability Determinations," Revision 0, requires that if there is a reasonable assurance that the structure, system and components are operable, but a more rigorous evaluation is warranted, then engineering prepare and review supporting operability documentation which should be completed within 3 full business days of its initiation.

Contrary to 10 CFR 50, Appendix B, Criterion XVI, the licensee failed to implement timely corrective actions in that supporting operability documentation for the additional MCC cubicles that were missing lock washers was not prepared in accordance with LS-AA-105 until February 8, 2002. Because of the very low safety significance, this violation is being treated as a Non-Cited Violation **(NCV 50-249/02-04-04(DRP))** consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue was entered into the licensee's corrective action program as CR #00074173 and CR #00093478.

.2 Ineffective Corrective Action for Missing Reactor Protection System (RPS) Cable Tray covers

The inspectors identified one Green finding involving a Non-Cited Violation regarding the licensee's failure to promptly identify and correct the condition of missing RPS cable tray covers.

On September 28, 2001, the inspectors identified that a number of protective covers were missing from the cable trays of the RPS instrument cable routing system. These trays were located in the Unit 2 reactor building approximately 25' off of the ground floor elevation (517'). Section 7.2.5.2 of the Dresden Updated Final Safety Analysis Report (UFSAR) states in part that, "All protection system wiring is run in rigid metallic conduit or solid trays with covers." Following the inspectors' notification, the licensee generated CR #77244. The immediate actions taken section of CR #77244 stated that the RPS system cable trays were walked down. WO #000193336 was generated to restore the cable tray covers and CR #77244 was subsequently closed on December 5, 2001.

On March 12, 2002, the inspectors conducted a follow-up plant walkdown of other RPS cable trays passing through the Unit 2 turbine building. While touring the Unit 2 turbine building elevation 538' the inspectors noticed that the uppermost RPS cable tray (approximately 18' off the ground) was missing one of its protective covers. The inspectors were also aware that the specific area was in the near vicinity of the feedwater regulating valves; this area was considered a potential high energy line-break area. The inspectors' concern was that exposed RPS cables in this area could be subject to high-energy impact from the affects of a feedwater line break. An additional concern was that the RPS cable trays located in the reactor building had their covers banded and secured from movement, and the RPS cable tray covers that were located in the high energy feedwater regulating station area were only laid over the top of the cable trays without being secured. The inspectors informed the licensee of these RPS cable tray integrity concerns. The licensee initiated CR #98992 to address and track the issue. The licensee's immediate actions were to generate WO #40357 to fabricate and

replace the missing cover. The inspectors noted that CR #98992 was marked "No" by both the originator and supervisor for the question as to whether this was a repeat condition. By marking the CR "No" the management review committee (MRC) members were unaware that this issue was a repeat condition. This key information was important because when reviewing CR #98992, the MRC members debated whether a subsequent walkdown of the RPS cable trays was necessary to determine the extent of condition. In this case, the MRC conservatively recommended a sampling walkdown without being aware of the repeat condition.

On March 21, 2002, during the Unit 3 maintenance outage, the inspectors performed a Unit 3 high pressure heater bay entry and inspection. During the inspection of this area the inspectors again noticed that a portion of the RPS cable tray was missing its cable tray cover. The inspector notified the licensee who initiated CR #100368 and WO #00421697 to resolve this issue.

10 CFR 50, Appendix B, Criterion XVI, requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, following the identification of several missing RPS cable tray covers on September 28, 2001, adequate corrective action was not taken to identify all missing RPS cable tray covers. Subsequently, missing RPS cable tray covers were identified on March 12 and 22, 2002. This finding was more than minor because it could have a credible impact on safety by affecting the availability, reliability, operability or functionality of mitigating equipment. This finding was considered to be a very low safety significance because in each case two other RPS channels are routed in a different location which are sufficient to allow the RPS system to perform its intended safety function (Green). Because of the very low safety significance, this violation is being treated as a Non-Cited Violation **(NCV 50-237/02-04-05 and 50-249/02-04-05(DRP))** consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue was entered into the licensee's corrective action program as CR #77244, CR #98992, and CR #100368.

.3 Ineffective Correction Action Taken During Connection of Test Equipment for the Emergency Diesel Generator

One Green Finding involving a Non-Cited Violation was identified regarding the licensee's failure to correct conditions adverse to quality when station personnel incorrectly connected test equipment to the emergency diesel generator.

On March 6, 2002, the instrument maintenance mechanics (IMs) incorrectly connected a test recorder to the Unit 3 emergency diesel generator during the performance of Dresden Operations Surveillance DOS 6600-12, "Endurance and Margin/Full Load Rejection/ECCS/Hot Restart," Revision 22. As a result, the test had to be rerun. Procedural Step 1.a.d, on Checklist B, specified installing the load sequence recorder by positioning the conductors between the recorder and the pair termination location identified on the diesel generator chart recorder connections. The recorder connections indicated that Pen #3 should be connected to the diesel generator output voltmeter for

monitoring the diesel generator frequency; however the IMs connected Pen #3 to the frequency meter. This issue was documented in CR #98448.

The licensee performed a search of CRs to determine if this error had previously occurred. The licensee determined that during undervoltage testing on Unit 3 for the refueling outage on September 24, 2000, IMs incorrectly connected test equipment for monitoring the emergency diesel generator frequency. The equipment had been connected to the frequency meter rather than the emergency diesel generator output voltmeter as specified by Dresden Operations Surveillance procedure DOS 6600-04, "Bus Undervoltage and ECCS Integrated Functional Test For Unit 3 Diesel Generator," Revision 15. The load reject portion of the test was re-performed and this problem was documented in CR #D2000-05356. Procedural Step 1.d of DOS 6600-04 specified that the load sequence recorder be installed by positioning conductors between the recorder and the pair termination location identified on the Unit 3 Diesel Generator Chart Recorder. The recorder specified that Pen #3 which monitors diesel generator frequency be connected to the diesel generator 3 output voltmeter; however, the IMs connected Pen #3 to the frequency meter.

The licensee performed an apparent cause evaluation to determine the cause of the September 24, 2000 event. In this apparent cause evaluation, the licensee determined that the event occurred because the IMs doing the surveillance failed to follow procedures. To correct this issue, the licensee opened an action item to revise the procedure to include the following note: "Stackable test leads are required for Pen 1 and Pen 3 connections to common points." The "extent of condition" evaluation completed during the apparent cause evaluation identified three other procedures that needed to be revised with this note. The three other procedures were DOS 6600-03, 05, and 06. This action item was listed as complete in the licensee's corrective action process.

During the investigation of the most recent event, the licensee discovered that despite this action item being listed as complete, DOS 6600-03 and 04 had not been revised. Additionally, the licensee determined that a revision of DOS 6600-12 was not identified as part of its initial extent of condition. As a result, when DOS 6600-12 was performed on March 6, 2002, the IMs again incorrectly connected the test equipment.

10 CFR 50, Appendix B, Criterion XVI, requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, following the incorrect connection of a test recorder during undervoltage testing for the Unit 3 emergency diesel generator on September 24, 2000, adequate corrective action was not taken. Subsequently, on March 6, 2002, the IMs incorrectly connected a test recorder to the Unit 3 emergency diesel generator during the performance of Dresden Operations Surveillance DOS 6600-12, "Endurance and Margin/Full Load Rejection/ECCS/Hot Restart," Revision 22. Additionally, as of March 6, 2002, the corrective actions to revise DOS 6600-03 and 04 following the September 24, 2000 event were not complete although an action item listed them as complete. This finding is more than minor because this issue can be viewed as a precursor to a significant event. Additionally, this finding was considered to be of very

low safety significance since the incorrect connection did not have any adverse impact on the plant (Green). Because of the very low safety significance, this violation is being treated as a Non-Cited Violation **(NCV 50-249/02-04-06(DRP))** consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue was entered into the licensee's corrective action program as CR#98448 and CR#D2000-05356.

.4 Corrective Action Cross-Cutting Issue

a. Inspection Scope

The inspectors reviewed the findings, as described above and Section 4OA7 below, to determine if an adverse pattern or trend was emerging in a cross-cutting area which may not be captured in individual findings.

b. Findings

The inspectors identified four instances where the licensee failed to promptly identify and correct conditions adverse to quality. In the first instance, during the licensee followup actions for missing lock washers in auxiliary contacts for safety related motor control center cubicles, the licensee failed to generate supporting operability documentation for an additional 36 safety related components. In the second instance, the isolation condenser experienced a second water hammer after the licensee failed to initiate a condition report after a previous water hammer in August 2001. This instance was considered licensee identified and is described in Section 4OA7 of this report. In the third instance, the licensee failed to promptly identify and correct the condition of missing reactor protection system cable tray covers on Unit 2 which had been identified on September 28, 2001. Finally, following the incorrect connection of a test recorder during undervoltage testing for the Unit 3 emergency diesel generator on September 24, 2000, the licensee failed to identify the full extent of condition and complete previously identified corrective actions.

The individual findings were of very low significance; however, the findings could have had a credible impact on safety or could have been a precursor to a significant event by affecting the availability, reliability, operability or functionality of mitigating equipment.

This adverse corrective actions trend is not suitable for a Significance Determination Process evaluation. However, this trend has been reviewed by NRC management and is determined to be a substantive cross-cutting issue not captured in individual issues indicating an adverse performance trend, and is a Finding characterized as "No Color" **(FIN 50-237/02-04-07 and 50-249/02-04-07(DRP))**.

4OA3 Event Follow-up (71153)

.1 Review of Open Items

a. Inspection Scope

The inspectors reviewed licensee event reports (LERs) to ensure that issues documented in these reports were adequately addressed in the licensee's corrective action program. The inspectors also interviewed plant personnel and reviewed operating and maintenance procedures to ensure that generic issues were captured appropriately.

The inspectors reviewed operator logs, the Updated Final Safety Analysis Report, and other documents to verify the statements contained in the Licensee Event Reports. Also, the inspectors reviewed an unresolved item to determine if the licensee was in violation of any regulatory requirement.

b. Findings

.1 (CLOSED) LER 50-237/2001-002-00: "Reactor Scram Due to Reactor Recirculation Pump Trip." This issue was documented in Inspection Report 50-237; 249/01-11. The inspectors verified that the licensee had implemented the corrective actions specified in the LER. The inspectors review of the implemented corrective actions did not identify any additional concerns. This LER is closed.

.2 (CLOSED) LER 50/237/2001-003-00: "Failure of Recirculation Pump Discharge Valve to Close Causing Low Pressure Coolant Injection Inoperability."

See Section 4OA2 of this report. This LER is closed.

.3 (CLOSED) URI 50-249/02-03-01: Review of the licensee's completed root cause report for the Unit 3 isolation condenser water hammer that resulted in piping support and heat exchanger pass plate damage.

See Section 4OA7 of this report. This URI is closed.

.4 (CLOSED) LER 50-249/2001-003-00: "Reactor Scram due to Increasing Drywell Pressure."

On July 5, 2001, Dresden was manually scrammed due to increasing drywell pressure. The rise in drywell pressure was caused by a loss of containment cooling when the Unit 3B reactor building closed cooling water (RBCCW) temperature control valve failed when the valve stem separated from the disc. This event was previously reviewed in NRC Special Inspection Report 50-249/01-16(DRP). Work orders have been completed on all of the RBCCW temperature control valves for installation of the correct retaining pin and verification that the stem is properly torqued to the disc. The RBCCW system operating procedure, DOP 3700-02, has been revised to state in Step F.4 that the preferred system lineup consists of two RBCCW pumps and two RBCCW heat exchangers. Additionally, the licensee is performing a single point failure vulnerability

study to identify other vulnerabilities to scrams from single point failures. This LER is closed.

.5 (CLOSED) LER 50-237/2001-005-00: "Unit 2 Scram due to Increased First Stage Turbine Pressure"

On November 7, 2001, Unit 2 scrammed from 8 percent power during startup from a refueling outage. The high pressure turbine first stage pressure had risen during shell warming to defeat the stop valve closure scram bypass. This event was previously reviewed in NRC Inspection Report 50-237/2001-20. One finding was identified involving failure of the operators to maintain Unit 2 turbine first stage pressure within procedural limits and inadequate operation staff's management and oversight of the turbine shell warming evolution. The licensee implemented a number of corrective actions as documented in the LER. The inspector verified that Procedure DOP 5600-05, "Main Turbine Startup," had been revised in Step G.3.n to have the operator establish an alarm of 100 psig for turbine first stage pressure during shell warming. The inspector also verified that Shift Manager panel monitoring expectations were incorporated into Operations Standing Order 01-07. This LER is closed.

4OA6 Exit Meetings

The senior operations engineer presented the results of licensed operator requalification testing for calender year 2001 and applicability of NRC Inspection Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination process (SDP)" to Mr. V. Castle and other members of licensee management and staff on January 9, 2002. The licensee acknowledged the findings presented. No proprietary information was identified.

The Senior Radiation Specialist presented the results of the special radiation protection inspection to Mr. P. Swafford and other members of licensee management and staff on March 22, 2002. The licensee acknowledged the findings presented. No proprietary information was identified.

The resident inspectors presented their inspection results to Mr. D. Bost and other members of licensee management at the conclusion of the inspection on April 3, 2002. The licensee acknowledged the findings presented. No proprietary information was identified.

4OA7 Licensee Identified Violation

The following finding of very low safety significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a Non-Cited Violation (NCV).

(Closed) Unresolved Item URI 50-249/02-03-01: Review of the licensee's completed root cause report for the Unit 3 isolation condenser water hammer that resulted in piping support and heat exchanger pass plate damage.

The inspectors reviewed the licensee's completed root cause report for the Unit 3 isolation condenser water hammer that resulted in piping support and heat exchanger pass plate damage (the pass plate separates the heat exchanger inlet from the outlet). The licensee's root cause report was dated March 7, 2002. The licensee determined that on January 8, 2002, while performing DOS 0010-16, "Unit 2(3) Isolation Condenser Safe Shutdown Valve Operability," a water hammer occurred while manually opening the isolation condenser inboard condensate return isolation valve 3-1301-3. Flashing of hot water trapped between the condensate return isolation valves 3-1301-3 and 3-1301-4 served as a pressure source to drive fluid into the two 12 inch isolation condenser horizontal steam headers. The water hammer occurred when the two fluid fronts collided in the steam headers. The effects of the water hammer were damage to one support, degradation and shearing of pass plate bolts internal to the isolation condenser, and bowing of the pass plates. The licensee identified two root causes for the event: (1) inadequate design in that the current design does not provide instrument indication (pressure or temperature) for the volume between the condensate return isolation valves; and (2) procedures did not provide adequate instructions to assure proper pressure equalization across valve 3-1301-3 prior to opening the valve.

Laboratory analysis showed that although some of the sheared pass plate bolts contained older cracks from earlier stress events (i.e., earlier water hammer events), the final shear on all bolts was due to the recent water hammer event. Based on the laboratory results and thermal performance testing results of the last decade including testing after the repair, the licensee concluded that the isolation condenser was always able to perform its safety function until it was taken out of service on January 8, 2002.

In performing the root cause analysis for the January 2002 event, the licensee identified that the station had failed to take corrective actions to prevent recurrence following an identical water hammer event which had previously occurred on August 21, 2001, while performing DOS 0010-16. When valve 3-1301-3 was manually opened the non-licensed operator heard a very loud bang, exited the room and notified the control room. During this event, two engineers subsequently performed a walkdown of the piping and did not identify any external visual evidence of a water hammer. The Unit Supervisor then completed the surveillance and no condition report was written contrary to Exelon Procedure LS-AA-125, Revision 0, "Corrective Action Program," which required that personnel originate a CR or inform a supervisor when an undesirable condition was recognized.

10 CFR 50, Appendix B, Criterion XVI, requires that measures shall be established to assure the conditions adverse to quality are promptly identified and corrected.

Exelon Procedure, LS-AA-125, Revision 0, Section 3.10.1 states that all Exelon Nuclear personnel are responsible for identifying conditions that have or could have an undesirable effect on performance of equipment in the power plant. Section 4.3.1.1 requires that Exelon Nuclear Personnel originate a CR or inform a supervisor when an undesirable condition is recognized. Additional guidance on when a CR should be originated can be found in Attachment 1. Attachment 1 requires a Significance Level 3 CR for inadequacy in procedures that caused or could have caused inoperability of equipment.

Contrary to the above, following a water hammer on the Unit 3 isolation condenser on August 21, 2001, neither the Unit 3 non-licensed operator nor the Unit Supervisor initiated a CR for a condition that had or could have had an undesirable effect on performance of equipment in the power plant. This violation is being treated as a Non-Cited Violation **(NCV 50-249/02-04-08(DRP))**. This issue was entered into the licensee's corrective action program as CR #00089443.

KEY POINTS OF CONTACT

Licensee

R. Bauman, ISI Coordinator
D. Bost, Station Manager
K. Bowman, Operations Manager
H. Bush, Radiation Protection Supervisor
V. Castle, Training Operations Manager
J. DeYoung, Corporate EP Specialist
J. Ellis, Performance Monitoring Group Lead
T. Fisk, Chemistry Manager
M. Friedman, Emergency Preparedness Coordinator
J. Ferguson, ALARA Analyst
V. Gengler, Security Manager
R. Geier, RV/ISI NDE Coordinator
K. Hall, NDE Level III
S. Hunsader, Corporate Maintenance Rule Owner
T. Luke, Manager, Engineering
R. May, NDE Level III
C. Melgoza, ALARA Analyst
J. Nalewajka, Acting Nuclear Oversight Manager
D. Nestle, Radiation Protection
L. Oshier, Radiation Protection Technical Support Supervisor
M. Overstreet, Radiation Protection Shift Supervisor
M. Phelan, Assistant Radiation Protection Manager
R. Ruffin, Regulatory Assurance - NRC Coordinator
R. Rybak, Acting Regulatory Assurance Manager
N. Spooner, Site Maintenance Rule Coordinator
W. Stoffels, Maintenance Manager
P. Swafford, Site Vice President
S. Taylor, Radiation Protection Manager
D. VanAken, Corporate EP Specialist
R. Whalen, System Engineering Manager

NRC

M. Ring, Chief, Division of Reactor Projects, Branch 1
D. Smith, Dresden Senior Resident Inspector
B. Dickson, Dresden Resident Inspector

IDNS

R. Zuffa, Illinois Department of Nuclear Safety

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-237/249/02-04-01	URI	Corrective Action Program Change not Factored into MR Program
50-249/02-04-02	URI	Potential Violation of Technical Specification Limiting Condition for Operation 3.5.1 Due to Improper Alignment of High Pressure Coolant Injection
50-237/02-04-03	NCV	Failure to Maintain Preventive Maintenance Procedure Adequate for Work on the Auxiliary Contact Assembly in the 480V Motor Control Center Cubicles
50-237/249/02-04-04	NCV	Failure to Prepare Supporting Operability Documentation for Additional Safety Related Components with Missing Lock Washers in the Auxiliary Contact Assembly in the Motor Control Center Cubicle
50-237/249/02-04-05	NCV	Inadequate Corrective Actions for Missing Reactor Protection System Cable Tray Covers
50-249/02-04-06	NCV	Ineffective Corrective Actions for Test Equipment
50-237/249/02-04-07	FIN	Four Instances Where the Licensee Failed to Identify and Implement Effective Corrective Actions
50-249/02-04-08	NCV	Failure to Generate a Condition Report for a Water Hammer Event on the Isolation Condenser

Closed

50-237/02-04-03	NCV	Failure to Maintain Preventive Maintenance Procedure Adequate for Work on the Auxiliary Contact Assembly in the 480V Motor Control Center Cubicles
50-237/249/02-04-04	NCV	Failure to Prepare Supporting Operability Documentation for Additional Safety Related Components with Missing Lock Washers in the Auxiliary Contact Assembly in the Motor Control Center Cubicle
50-237/249/02-04-05	NCV	Inadequate Corrective Actions for Missing Reactor Protection System Cable Tray Covers
50-249/02-004-06	NCV	Ineffective Corrective Actions for Test Equipment

50-237/249/02-04-07	FIN	Four Instances Where the Licensee Failed to Identify and Implement Effective Corrective Actions
50-249/249/02-04-08	NCV	Failure to Generate a Condition Report for a Water Hammer Event on the Isolation Condenser
50-249/2002-03-01	URI	Review of the Licensee's Completed Root Cause Report for the Unit 3 Isolation Condenser Water Hammer
50-237/2001-002-00	LER	Reactor Scram Due to Reactor Recirculation Pump Trip
50/237/2001-003-00	LER	Failure of Recirculation Pump Discharge Valve to Close Causing Low Pressure Coolant Injection Inoperability
50-237/2001-005-00	LER	Unit 2 Scram due to Increased First Stage Turbine Pressure
50-249/2001-003-00	LER	Reactor Scram due to Increasing Drywell Pressure"

LIST OF ACRONYMS USED

AC	Alternating Current
ALARA	As Low As Is Reasonably Achievable
AR	Action Request
ATI	Action Tracking Item
CFR	Code of Federal Regulations
CR	Condition Report
D3M09	Dresden Ninth Unit-3 Maintenance Outage
DES	Dresden Electrical Surveillance
DIS	Dresden Instrument Surveillance
DOS	Dresden Operating Surveillance
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
HPCI	High Pressure Coolant Injection
IDNS	Illinois Department of Nuclear Safety
IM	Instrument Mechanic
LER	Licensee Event Report
LHRA	Locked High Radiation Area
LPCI	Low Pressure Coolant Injection
MCC	Motor Control Center
MRC	Management Review Committee
MWe	Megawatts Electrical
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OA	Other Activities
Radworker	Radiation Worker
RBCCW	Reactor Building Closed Cooling Water
RP	Radiation Protection
RPS	Reactor Protection System
RWP	Radiation Work Permit
SBO	Station Blackout Diesel
SDP	Significance Determination Process
TEDE	Total Effective Dose Equivalent
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
VHRA	Very High Radiation Area
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R05 Fire Protection

CR 00099618	The Unit 2/3 Diesel Fire Pump Packing Is Smoking When Diesel Fire Pump Is Running	March 17, 2002
CR 00099262	Inadvertent Start of 2/3 Diesel Fire Pump	March 15, 2002
CR 00098793	Potential Time Delay in Moving Safe Shutdown Cart	March 13, 2002
CR 00098540	Fire Extinguisher Missing from the Outside of the Unit 3 250vdc Battery Charger Room	March 8, 2002
CR 00097716	Fire Drill Identifies Strengths and Weaknesses	March 7, 2002
CR 00096359	NRC Identifies Lack of Access to Bus 31 Area for Firefighting	February 26, 2002

1R12 Maintenance Rule Implementation

CR 00098406	Work Request/Work Order Not Being Reviewed for Maintenance Rule Functional Failure	March 8, 2002
CR 00096806	Untimely Performance of Maintenance Rule (A)(1) Evaluation - Z7800-02 (Nonsafety-Related 480V AC Distribution)	February 26, 2002
CR 00099294	Areas for Improvement Identified During Unit 2/3 Emergency Diesel Generator Limiting Condition for Operations	March 18, 2002
Action Request #96806	Untimely Performance of Maintenance Rule (A)(1) Evaluation - Z7800-02 (Nonsafety-Related 480V AC Distribution)	February 26, 2002
CR 00099096	Improperly Installed Switch Causes Delay in Unit 2/3 Emergency Diesel Generator Limiting Condition for Operations	March 14, 2002

1R13 Maintenance Risk Assessments and Emergent Work Control

CR 00098987	Diesel Generator Surge Suppressor Test Exceeds 40 Milliamps	March 13, 2002

SWR #35900	Containment Cooling Service Water Pump Out-of-Service Due to Leak at Discharge Header	
WO 385627	Unit 2B Emergency Diesel Generator Starting Air Compressor Planned Maintenance and Belt Inspection	
WO 00405596-01	Unit 2/3 Emergency Diesel Generator Starting Air Compressors, Sample and Change Oil	
WO 99161667-01	Unit 2/3 Emergency Diesel Generator, Replace Auxiliary and Position Switches, Bus 40 Feed to 4KV Bus 23-1	
WO 99178164-01	DEP 6600-10, "Unit 2/3 Emergency Diesel Generator Surge Suppressor Test"	Revision 1
WO 9913746201	Unit 2 High Pressure Coolant Injection Cooler Preventative Maintenance Work	
WO 00365536	Replacement on Unit 2 Battery Charger	
WO 99176361-01	DM6600-02, "Unit 2/3 Emergency Diesel Generator Mechanical Inspection and Preventive Maintenance"	Revision 18

1R15 Operability Evaluations

CR 00095959	ATI 90478-10 Was Not Created as Stated in Operability Evaluation 02-003 r1	February 25, 2002
CR 00095959	ATI 90478-10 Was Not Created as Stated in Operability Evaluation 02-003 r1	February 25, 2002
CR 00096237	Operability Determination Receives Quarterly Grade 3	February 25, 2002
CR 00099948	Found Broken Auxiliary Contact in Motor Control Center Bucket, 3-7838-4A3	March 19, 2002
CR 00097352	Non-environmentally Qualified Components Installed in Drywell Equipment and Floor Drain Solenoid Operated Valves	
Operability Evaluation #02-004	General Electric Cr105X Auxiliary Contacts on Size 1 Contactors	February 8, 2002

Operability Evaluation #02-007	Reactor Building Crane and Superstructure	Revision 0
Engineering Change #335894	Reactor Building Crane and Superstructure	

1R19 Post Maintenance Testing

CR 00099617	3B Containment Cooling Service Water Pump Discharge Pipe Code Class Piping Leak	March 17, 2002
CR 00100549	Missed Post Maintenance Test (VT-2) of Replaced 3-1105-B Standby Liquid Control Relief Valve	March 22, 2002
WO 00419673-05	Repair of Pinhole Leak on the Discharge Elbow of the 3B Containment Cooling Service Water Pump	
WO 00412786-01	Replacement of Control Valve #2 Pressure Control Switch	

1R20 Refueling and Outage

CR 00099754	Historical Crack on JP Number 16 Riser Brace Leaf	March 18, 2002
CR 00100225	Broke General Electric Tooling Foreign Material and Historical Foreign Material in Annulus Area	March 20, 2002
CR 00100426	Foreign Material Found on the Reactor Cavity Bulkhead Floor Post Decon	March 21, 2002
CR 00100027	Jet Pump 13 Reactor Vessel Side Set Screw Block Damage	March 18, 2002
CR 00100315	3-1601-24 Initial Timing in the Alert Range	March 21, 2002
CR 00099650	Foreign Material Found in Reactor Vessel	March 17, 2002
CR 00100545	Load Limits in Fuel Pool and Old Procedure References	March 22, 2002
CR 00100244	Refueling Interlocks Bypasses Without Configuration Control	March 21, 2002

1R22 Surveillance Test

CR 00097479	Fluke 8060A Handheld Multimeters Found to Have Loose Test Jacks	March 1, 2002
CR 00101358	Oil Sampled from Wrong Location	March 27, 2002
CR 00098721	Missed Technical Specification Surveillance	March 12, 2002
CR 00098448	Test Recorder for Unit 3 Emergency Diesel Generator Connected to Incorrect Meter	March 12, 2002
CR 00098766	Pressure Switch 2-263-55B as Founds out of Tolerance	March 12, 2002
CR 00097909	Safe Shutdown Unit 208 Failed Acceptance Criteria Quarterly Surveillance	March 6, 2002
CR 00097820	Difficulty Connecting Emergency Response Data System During Quarterly Test	March 6, 2002
CR 00097915	NRC Resident Concerns / Observations from Unit 3 Station Blackout Run	March 6, 2002
CR 00097629	Isolation Condenser Inoperable after Valve Cycling Due to High Temperatures	March 5, 2002
CR 00097265	Temperature Switch 3-0260-12 Found out of Technical Specification	March 1, 2002
CR 00096779	Hi Production Risk Surveillance Tests Needlessly Being Performed	February 27, 2002
CR 00099539	Source Range Monitor 23 Failed Dresden Operating Surveillance Procedure 700-12	March 16, 2002
WO 00393746	DIS 0500-01 “Reactor Vessel High Pressure Scram Pressure Switch Calibration”	Revision-13
WO 99268154-01	DIS 0600-17, “Unit 2 Narrow Range Reactor Pressure Transmitter Pt2-654 Calibration”	
WO 397012	DOS 0500-06, “Condenser Low Vacuum Pressure Switch and Functional Test”	
CR 0009876	Pressure Switch 2-263-55B as Found out of Tolerance	

CR 00098767	Pressure Switch 3-263-55D as Found out of Tolerance	
CR 00098721	DIS 0500-01 Changed from Monthly to Quarterly	March 11, 2002

1R23 Temporary Modifications

CR 00095930	Temporary Modification Installed Without Completing Appropriate Paperwork	February 21, 2002

2OS1 Access Control to Radiologically Significant Areas

RP-AA-460	Controls for High and Very High Radiation Areas	Revision 2
DRS 5600-01	Surveillance Record for High, Locked High and Very High Radiation Area Boundary and Posting	December 28, 2001
DFP 0800-39	Control of Material/ Equipment Hanging in Units 2 and 3 Spent Fuel Pools	Revision 11
MA-AA-716-008	Foreign Material Exclusion Program	Revision 0
RP-AA-210	Dosimetry Issue, Usage and Control	Revision 3
RP-AA-210-1001	Dosimetry Logs and Forms	Revision 0
CR 00099565	Doors Propped Open at the D3 Low Pressure Heater Bay	March 16, 2002
CR 00099578	Reactor Cavity Not Posted Consistently with Drywell	March 16, 2002
DRP 6200-08	Radiation Protection Guidelines for Work in the Reactor Cavity	Revision 05
CR 00086393	Worker Enters High Radiation Area Without Brief	December 17, 2001

2OS2 As-Low-As-Is-Reasonably-Achievable Planning and Controls

RP-AA-401	Operational ALARA Planning and Controls	Revision 2
RP-AA-400	ALARA Program	Revision 2
	D3M09 Dose Performance Reports	March 18 - 21, 2002

RWP #10001180 and RP-AA-401, Attachment 2 (Associated ALARA Plan)	D-3 Refuel Floor Forced Outage	Revision 0 (RWP) and March 12, 2002 (ALARA Plan)
	Refuel Floor Field Guide for D3M09	Undated
RWP #10001011	Unit 3 Forced Outage Drywell Small Scope Activities	Revision 2
RP-AA-401 Attachment 2	ALARA Plans for IRM/SRM Replacements and for Surveillance of 32 RPIS Probes	March 11, 2002 (IRM/SRM Work) and March 20, 2002 (RPIS Probe Work)
RWP #10001385 and RP-AA-401, Attachment A (Associated ALARA Plan)	D3M09 Radiography Activities	Revision 0 (RWP) and March 11, 2002 (ALARA Plan)
	Radiation Protection Program Related CR Trending Data	January 2001 - February 15, 2002
CR 0097655	RP Improvement Opportunities	March 4, 2002
CR 00099597	Spill from Condensate Prefilter Back Wash Causes Contamination	March 17, 2002
CR 00099729	Individual Contaminated 90K Particle on Stomach	March 19, 2002
CR 00099563	Low Level Facial Contamination	March 18, 2002
CR 00086658	Spread of Contamination to Clean Areas	December 18, 2001
CR 00097985	Hot Tool Return Area a Mess, Area Needs Attention	March 6, 2002
CR 00098941	Numerous Low Level Contaminated Individuals	March 13, 2002
CR 00099227	Radioactive Source Missing From Source Box	March 14, 2002