July 28, 2004

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
NRC INTEGRATED INSPECTION REPORT 05000237/2004006;
05000249/2004006

Dear Mr. Crane:

On June 30, 2004, the U. S. Nuclear Regulatory Commission 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 July 14, 2004.

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, two NRC-identified findings and two self-revealing findings of very low safety significance (Green) were identified. Two of these four findings involved 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, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspectors at the Dresden Nuclear Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

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 05000237/2004006; 05000249/2004006
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Dresden Nuclear Power Station
Dresden Nuclear Power Station Plant Manager
Regulatory Assurance Manager - Dresden
Chief Operating Officer
Senior Vice President - Nuclear Services
Senior Vice President - Mid-West Regional Operating Group
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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:	05000237/2004006; 05000249/2004006
Licensee:	Exelon Generation Company
Facility:	Dresden Nuclear Power Station, Units 2 and 3
Location:	6500 North Dresden Road Morris, IL 60450
Dates:	April 1 through June 30, 2004
Inspectors:	C. Phillips, Senior Resident Inspector D. Smith, Senior Resident Inspector M. Sheikh, Resident Inspector P. Pelke, Reactor Engineer M. Bielby, Senior Operations Engineer (Lead Inspector) H. Walker, Reactor Engineer D. Jones, Reactor Engineer W. Slawinski, Senior Radiation Specialist P. Higgins, Resident Inspector, Kewanee Nuclear Power Station R. Schulz, Illinois Emergency Management Agency
Approved by:	M. Ring, Chief Branch 1 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000237/2004006, IR 05000249/2004006, 04/01/2004 - 06/30/2004; Exelon Generation Company, Dresden Nuclear Power Station, Units 2 and 3; routine integrated report, routine baseline radiation protection inspection, Access Control to Radiologically Significant Areas, Licensed Operator Requalification Program, and Event Follow-Up.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections on licensed operator requalification and radiation protection. The inspection was conducted by Region III inspectors and the resident inspectors. Four Green findings and two associated Non-Cited Violations were identified. 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 may be 'Green' or be assigned severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance was identified. The finding was associated with unsatisfactory operating crew performance on the simulator during facility-administered licensed operator requalification examinations. Of the 12 crews evaluated, three did not pass their annual operating tests. The finding is of very low safety significance because the failures occurred during annual testing of the operators on the simulator, because there were no actual consequences to the failures, and because the crews were removed from watch-standing duties, retrained, and re-evaluated before they were authorized to return to control room watches. (Section 1R11.9)

- Green. A finding of very low safety significance was identified. The finding was associated with unsatisfactory performance of individual operators on the annual licensed operator requalification operating test. Of the 62 licensed operators examined, unsatisfactory performance was identified for two operators during job performance measures (JPMs) and 14 operators in the dynamic scenario portion. The finding is of very low safety significance because the failures occurred during annual testing of the operators on the simulator and simulated performance of tasks in the plant, because there were no actual consequences to the failures, and because the individuals were removed from watch-standing duties, re-trained, and re-evaluated before they were authorized to return to control room watches. (Section 1R11.9)

- Green. A self-revealed finding was identified involving a violation of Technical Specification 3.5.1, when the Unit 2 high pressure coolant injection system (HPCI) suction swap-over leads were lifted on March 9, 2004, and not re-landed until discovery on April 12, 2004.

This finding was more than minor because if left uncorrected, the deficiency would become a more significant safety concern. The finding is of very low safety significance because, although they would not have automatically swapped from the condensate storage tanks to the suppression pool, the HPCI suction valves were capable of manual realignment. The station associated alarm procedure requires operator actions to manually perform the swap if automatic realignment does not occur upon a receipt of an alarm of condensate storage tanks level low or torus level hi. To address this issue, the licensee re-landed the leads, reinforced conduct of maintenance expectations, and required increased tracking of work requests. (Section 4OA3)

Cornerstone: Occupational Radiation Safety

- Green. A self-revealed finding of very low safety significance and an associated Non-Cited Violation (NCV) were identified because a work crew was exposed to high radiation levels from the accumulation of contaminants in a vacuum cleaner used to clean debris in the Unit 2 condenser false bottom.

  The finding was more than minor because deficiencies with radiological work planning coupled with radiation protection technician work coverage were associated with the "Program and Process" and "Human Performance" attributes of the Occupational Radiation Safety Cornerstone. The finding affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was of very low safety significance because work crew radiation exposures were low relative to regulatory limits, there was not a substantial potential for a worker overexposure, and because the licensee's ability to assess worker dose was not compromised. To address this issue, the licensee developed guidance for the use of vacuums in highly contaminated areas, workers were counseled, and the work planning problems were captured in the outage lessons learned database. (Section 2OS1.7)

B. <u>Licensee-Identified Violations</u>

A violation of very low safety significance, which was identified by the licensee, was reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking number is listed in Section 4OA7 of this report.

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).

- April 24, 2004, the unit was taken offline to replace the electro-hydraulic control master trip solenoid valve, and subsequently scrammed due to a Group I isolation. The unit returned online on April 28, 2004.

- April 28, 2004, the unit was manually scrammed due to a trip of the 2A reactor recirculation pump. The unit returned to full power on May 13, 2004.

Unit 3 began the inspection period at 822 MWe (100 percent thermal power).

- May 5, 2004, the unit scrammed due to a loss of offsite power and an Unusual Event was declared. The unit was returned to full power on May 12, 2004.

- May 20, 2004, the unit was reduced to 698 MWe to comply with operating procedures due to a low voltage condition in the 345 kV switchyard, and was returned to full operation on May 21, 2004.

- May 21, 2004, the unit was reduced to 732 MWe due to equipment problems with the scram discharge volume vent and drain valves, and returned to full power May 22, 2004.

- May 29, 2004, the unit was reduced to 491 MWe to perform control rod pattern adjustments and other maintenance testing. The unit returned to full power May 31, 2004.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather (71111.01)

a. Inspection Scope

On April 20, 2004, the inspectors assessed the licensee's implementation of the station's actions for tornado/severe wind due to the potential for severe weather.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

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

The inspectors performed equipment alignment walk-downs of the:

- Unit 2/3 Standby Gas Treatment System;
- Unit 2/3 Emergency Diesel Generator;
- Unit 3 High Pressure Coolant Injection System;
- Unit 2 High Pressure Coolant Injection System;
- Unit 2A Core Spray System; and
- Unit 2B Core Spray System.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q and A)

.1 Routine Inspection (Quarterly)

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 reactor building, elevation 589' stand-by liquid control area, (Fire Zone 1.1.2.5.D);
- Unit 2 reactor building, elevation 476'-6" high pressure coolant injection room, (Fire Zone 11.2.3);
- Unit 3 reactor building, elevation 589' stand-by liquid control area, (Fire Zone 1.1.1.5.D);
- Unit 2 reactor building, elevation 476' west low pressure coolant injection corner room, (Fire Zone 11.2.1);

- Unit 2 turbine building, elevation 517' reactor feed pumps, (Fire Zone 8.2.5.A); and,
- Unit 2/3 emergency diesel generator, elevation 517', (Fire Zone 9.0C).

b. Findings

No findings of significance were identified.

.2 Fire Drill (Annual)

a. Inspection Scope

On June 23, 2004, the inspectors observed the fire brigade response to a simulated fire on the Unit 2 protective clothing storage area, located at the 517' level in the turbine building at the north end of the trackway. The inspectors reviewed the licensee's drill procedure and assessed the licencee's critique of the fire brigade's performance.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Facility Operating History

a. Inspection Scope

The inspectors reviewed documentation of the plant's operating history since the last requalification program inspection to assess whether the Licensed Operator Requalification Training (LORT) program had identified and addressed operator performance deficiencies at the plant.

b. Findings

No findings of significance were identified.

.2 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed a biennial inspection of the licensee's Licensed Operator Requalification Training (LORT) program. The inspectors reviewed the 2004 annual requalification operating test and 2003 biennial written examination material to evaluate general quality, construction, and difficulty level. The operating examination material reviewed consisted of two operating tests, each containing two dynamic simulator scenarios and six job performance measures. The 2003 biennial written examination was a two part, open reference, multiple choice examination, including a static simulator examination. The biennial written examination reviewed consisted of 35 open reference, multiple choice questions. The inspectors reviewed the methodology for developing the

examinations, including the LORT program 2-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors reviewed the licensee's program and assessed the level of examination material duplication during the current year annual examinations as compared to the previous year's annual examinations. Additionally, the inspectors interviewed members of the licensee's management, operations, and training staff and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.3 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed the administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated the performance of two simulator crews in parallel with the facility evaluators during four dynamic simulator scenarios. In addition, the inspectors observed licensee evaluators administer job performance measures (JPMs) to various licensed crew members. The inspectors observed the training staff personnel administer the operating test, including pre-examination briefings, observations of operator performance, and individual and crew evaluations after performance of dynamic scenarios and JPMs. The inspectors evaluated the ability of the simulator to support the examinations. A specific evaluation of simulator performance was conducted and documented under Section 1R11.8, "Conformance With Simulator Requirements Specified in 10 CFR 55.46," of this report. The inspectors observed actual control room operations and shift turnover activities for one operating crew to assess overall performance compared to performance observed on the simulator during the requalification examinations.

b. Findings

No findings of significance were identified.

.4 Examination Security

a. Scope

The inspectors observed and reviewed the licensee's overall licensed operator requalification examination security program related to examination physical security (e.g., access restrictions and simulator considerations) and integrity (e.g., predictability and bias). The inspectors also reviewed the facility licensee's examination security procedure, TQ-AA-201, "Examination Security and Administration," the corrective actions related to any past and present examination security problems at the facility, and the implementation of security and integrity measures (e.g., security agreements,

sampling criteria, bank use, and test item repetition) throughout the examination process.

b. Findings

The following finding documents one example of a licensee identified violation of NRC examination security requirements:

During administration of one annual licensed operator requalification operating test scenario, the licensee found a tab left in the Technical Specifications manual located at the Unit Supervisor's desk. An investigation by the licensee and inspectors determined that the tab identified one technical specification that was applicable to the second scenario to be run by one crew as part of their operating test. Observation of the crew actions during the first scenario indicated that the crew did not reference the tabbed Technical Specification and the licensee evaluators removed the tab prior to the second scenario and no actual examination compromise occurred. The licensee entered the issue into their corrective action program (CAP) as Condition Report (CR) 224557.

This violation was considered minor in nature; therefore, it is not subject to enforcement action.

.5 Licensee Training Feedback System

a. Inspection Scope

The inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT program up to date, including the use of feedback from plant events and industry experience information. The inspectors reviewed the licensee's quality assurance oversight activities, including licensee training department self-assessment reports. The inspectors evaluated the licensee's ability to assess the effectiveness of its LORT program and their ability to implement appropriate corrective actions.

b. Findings

No findings of significance were identified.

.6 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous annual requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans. The inspectors observed administration of a set of two scenarios to one crew, and a set of five job performance measures to one individual that had previously demonstrated unsatisfactory performance during the 2004 annual operating test.

b. Findings

No findings of significance were identified.

.7 Conformance With Operator License Conditions

a. Inspection Scope

The inspectors reviewed the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53 (e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators and which control room positions were granted credit for maintaining active operator licenses. The inspectors also reviewed 10 licensed operators' medical records maintained by the facility's nurse and assessed compliance with the medical standards delineated in ANSI/ANS-3.4, "American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," and with 10 CFR 55.21 and 10 CFR 55.25. The inspectors reviewed the facility licensee's LORT program to assess compliance with the requalification program requirements as described by 10 CFR 55.59 (c).

b. Findings

No findings of significance were identified.

.8 Conformance With Simulator Requirements Specified in 10 CFR 55.46

a. Inspection Scope

The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation Facilities." The inspectors also reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, and reactor core performance tests), simulator work order records, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy process to ensure that simulator fidelity was maintained. This was accomplished by a review of discrepancies noted during the inspection to ensure that they were entered into the licensee's corrective action system and by an evaluation to verify that the licensee adequately captured simulator problems and that corrective actions were performed and completed in a timely fashion commensurate with the safety significance of the item (prioritization scheme). Open simulator discrepancies were reviewed for importance relative to impact on 10 CFR 55.45 and 59 operator actions as well as nuclear and thermal hydraulic operating characteristics. Simulator discrepancies closed during the last 12 months were reviewed for timeliness of resolution. The inspectors also reviewed the licensee's recent simulator core modeling performance testing to assess the adequacy of the simulator to replicate the actual reactor plant core's performance characteristics. Furthermore, the inspectors conducted interviews with members of

the licensee's simulator configuration control group and completed the NRC Inspection Procedure (IP) 71111.11, Appendix C, checklist to evaluate whether or not the licensee's plant referenced simulator was operating adequately as required by 10 CFR 55.46 (c) and (d).

b. Findings

No findings of significance were identified.

.9 Annual Operating Test Results

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the annual operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calender year 2004. The inspectors also reviewed the biennial comprehensive written examination results from calendar year 2003 which completed the second year of the previous 2 year training program. Year 2004 was the first year of the current 2 year training program; therefore, no biennial comprehensive written examination was administered. The overall written examination and operating test results were compared with the significance determination process in accordance with NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process."

b. Findings

1. Crew Performance on the Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test

Introduction: The inspectors identified a (Green) finding of very low safety significance, based on 3 of 12 crews not passing the facility-administered dynamic scenario portion of their annual operating test.

Description: During facility-administered annual operating testing of the licensed operators, licensee training staff evaluated crew performance on dynamic scenarios using performance standards derived from NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Facility results of crew performance showed that 3 of the 12 crews evaluated (25.0 percent) did not pass their simulator exams. The licensee initiated CR 229557 and planned to conduct a formal root cause evaluation in accordance with LS-AA-125, "Corrective Action Program Procedure," and LS-AA-125-1001, "Root Cause Analysis Manual." During the requalification program inspection, the NRC observed 2 of 12 operating crew evaluations on their operator test dynamic scenarios, and the remediation retest of one crew on dynamic scenarios that failed during the previous annual operating test week.

Analysis: A performance deficiency (PD) was identified in that 3 of 12 licensed operator crews operated the plant with knowledge and ability performance weaknesses resulting in performance that did not pass an NRC required annual

operating test administered by the licensee. Traditional enforcement does not apply because the issue did not have any actual safety consequence or potential for affecting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or licensee procedures. The finding is greater than minor because the performance deficiency affected the mitigating systems cornerstone (and potentially initiating events and barrier integrity) objective to ensure mitigating system reliability and availability, and its related attribute on human performance (Human Error [Pre-Event and Post-Event]). Specifically, the finding reflected potential shortcomings responding to actual abnormal or emergency conditions. The risk associated with the number of crews not passing the annual operating test is provided in the Simulator Operational Evaluation Matrix of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The Matrix was entered using the number of crews that took the simulator test, 12, and 3 crews that demonstrated unsatisfactory performance and did not pass. Based on these numbers, the finding was characterized by the SDP as having very low safety significance (20 - 34 percent failure rate), or Green.

Enforcement: NRC regulations require that licensed operators pass an annual operating test; the regulations do not specify pass/fail rates. When a failure occurs, requirements are met by restricting the operator from licensed duties until the operator has been retrained and successfully retested, steps which the licensee staff completed. Therefore, no violation of regulatory requirements occurred. Crew performance on the 2004 annual operating exams has been entered into the corrective action program as CR 229557 and Exelon is performing a full root cause evaluation of the crew failures.
(FIN 05000237/2004006-01)

2. Individual Operator Performance on the Job Performance Measure or Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test

Introduction: The inspectors identified a (Green) finding of very low safety significance, based on 14 of 62 licensed operators not passing the facility-administered annual operating test.

Description: During facility-administered annual operating testing of the licensed operators, licensee training staff evaluated crew performance on job performance measures (JPMs) and dynamic simulator scenarios using performance standards derived from NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Facility results of crew performance showed that two individual operators did not pass their JPM exams, and 12 did not pass their scenarios, both portions of which must be satisfactorily completed to pass the operating test. As a result, 14 of 62 operators evaluated (22.6 percent) did not pass their operating test. The licensee initiated CR 229557 and planned to conduct a formal root cause evaluation in accordance with LS-AA-125, "Corrective Action Program Procedure," and LS-AA-125-1001, "Root Cause Analysis Manual." During the requalification

program inspection, the NRC observed 10 of 62 individual operator evaluations on the dynamic scenario and JPM portions of the operating test.

Analysis: A performance deficiency (PD) was identified in that 14 of 62 operators operated the plant with knowledge and ability performance weaknesses resulting in performance that did not pass an NRC required annual operating test administered by the licensee. Traditional enforcement does not apply because the issue did not have any actual safety consequence or potential for affecting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or licensee procedures. The finding is greater than minor because the PD affected the mitigating systems cornerstone (and potentially initiating events and barrier integrity) objective to ensure mitigating system reliability and availability, and its related attribute on human performance (Human Error [Pre-Event and Post-Event]). Specifically, the finding reflected potential shortcomings responding to actual abnormal or emergency conditions. The risk associated with the number of individual licensed operators not passing their annual operating tests is provided on the flowchart of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The flowchart was traced to Block 9 using the number of individual licensed operators that took the operating test, 62, and 14 individual operators that demonstrated unsatisfactory performance and did not pass. Based on these numbers, the finding was characterized by the SDP as having very low safety significance (greater than 20 percent failure rate), or Green.

Enforcement: NRC regulations require that licensed operators pass an annual operating test; the regulations do not specify pass/fail rates. When a failure occurs, requirements are met by restricting the operator from licensed duties until the operator has been re-trained and successfully re-tested, steps which the licensee staff completed. Therefore, no violation of regulatory requirements occurred. Crew performance on the 2004 annual operating exams has been entered into the corrective action program as CR 229557 and Exelon is performing a full root cause of the individual operator failures.
(FIN 05000237/2004006-02)

3. No findings of significance were identified for individual operator performance on the biennial comprehensive written examination portion of the 2003 facility-administered annual requalification examination.

.10 Quarterly Resident Inspector Observation of Operator Requalification (Routine)

a. Inspection Scope

The inspectors observed four members of Operating Crew #5 on June 17, 2004, perform three job performance measures (JPMs) in the simulator:

JPM S-1200-01, "Reject Primary Water via RWCU System," Revision 02

JPM S-1600-05, “Vent the Torus with Level less than 30 feet (2" Vent Valve does NOT Open),” Revision 02

JPM S-EP-10, “Determine Emergency Classification (HS1),” Revision 03

The inspectors verified that the operators were able to complete the tasks in accordance with applicable plant procedures and that the success criteria as established in the job performance measures were satisfied.

The inspectors observed the licensee’s evaluators to ensure that no inappropriate cues were provided by the evaluators while assessing the operators' performance.

In addition, the inspectors verified that any issues regarding licensed operator requalification training were entered into the licensee’s corrective action program with the appropriate significance characterization.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee’s overall maintenance effectiveness for risk-significant mitigating systems. The inspectors also reviewed whether the licensee properly implemented the Maintenance Rule, 10 CFR 50.65, for the systems. Specifically, the inspectors determined whether:

- the systems were scoped in accordance with 10 CFR 50.65;
- performance problems constituted maintenance rule functional failures;
- the systems have been assigned the proper safety significance classification;
- the systems were properly classified as (a)(1) or (a)(2); and
- the goals and corrective actions for the systems were appropriate.

The above aspects were evaluated using the maintenance rule program. The inspectors also verified that the licensee was appropriately tracking reliability and/or unavailability for the systems.

The inspectors reviewed the following systems:

- Reactor Building Heating, Ventilation, and Air-Conditioning;
- Standby Gas Treatment System; and
- Secondary Containment.

b. Findings

No findings of significance were identified.

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 also verified that equipment necessary to complete planned contingency actions was staged and available. The inspectors completed evaluations of maintenance activities on the:

- reactor building/torus building vacuum breaker;
- Unit 3 Division I low pressure coolant injection/containment cooling service water planned maintenance;
- Unit 3 Division II low pressure coolant injection/containment cooling service water planned maintenance;
- 3A containment cooling service water planned maintenance;
- fuel pool cooling secured due to elbow replacement in the piping system; and
- assessment of emergent work and planned surveillance tests for the Unit 3 emergency diesel generator day tank oil hi level, the Unit 2 high pressure coolant injection system stop valve post-maintenance test, and the Unit 2 low pressure coolant injection system surveillance testing all performed on the same shift.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance Related to Non-routine Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed personnel performance during planned and unplanned plant evolutions and selected licensee event reports focusing on those involving personnel response to non-routine conditions. The review was performed to ascertain that operators' responses were in accordance with the required procedures. The documents listed in the Attachment to this report were used by the inspectors to evaluate this area.

The inspectors completed five samples by reviewing personnel performance during the following plant events:

- Unit 2 pressure spike in drain line piping;
- Unit 2 scram due to 2A reactor recirculation pump motor failure;
- Unit 2 scram due to electro hydraulic control master solenoid trip; and
- Unit 3 scram and Unusual Event due to loss of offsite power.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Routine Operability Evaluation (OE) Reviews

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 issues involving the operability of:

- Unit 2 & 3 “Steam Dryer Potential Vulnerabilities Due to Flaws Found During Quad Cities Q2R17 Dryer Inspection” (OE 04-003);
- Unit 2 & 3 “Offsite Power Supply Potentially Does Not Conform to GDC [General Design Criteria] 17" (OE 04-005);
- Unit 2 & 3 “Emergency Diesel Generator Inlet Air Turning Box” (OE 04-007);
- Unit 2 & 3 “Main Condenser Hood/Bay” (OE 04-008, Revision 0);
- Unit 2 & 3 “2A and 3C Condenser Bay Vacuum Indication/Switch Sometimes Indicates a Non-conservative Value after a Flow Reversal to East-to-West Flow” (OE 04-008, Revision 1);
- Unit 2 & 3 “No Documentation Exists for Seismic Capability of the Containment Cooling Service Water Vault Drain Lines; Nonconforming Condition Associated with the Safety Classification of Level Switches 2(3)-4941-8" (OE 04-009);
- Unit 0 “Secondary Containment Degraded While Drywell -Torus Purge is in Operation” (OE 04-010, Revision 0);
- Unit 0 “Secondary Containment and Reactor Building HVAC” (OE 04-010, Revision 1);
- 4 KV Merlin Gerin electrical breaker failures;
- Isolation condenser 2-1301-3 valve (CRs 226150, 205678, and OE 00-052); and
- Unexpected Technical Specification Entry Due to Unit 3 Emergency Diesel Generator Day Tank Oil Level High (CR 230908).

b. Findings

No findings of significance were identified.

.2 4 KV Merlin Gerin Electrical Breaker Failures (CR 227093)

a. Inspection Scope

The inspectors reviewed condition reports and interviewed several engineers regarding the operability of safety related 4KV Merlin Gerin electrical breakers. The licensee identified a potential common mode failure mechanism within the closing mechanism of these breakers.

b. Findings

Introduction: The inspector noted that several condition reports (CRs) had been written on the failure of 4 KV Merlin Gerin (MG) electrical breakers. The nine CRs written on these breaker failures during the past year were requested and reviewed. Since the failures appeared to be repetitive with a possible common cause failure, the inspectors asked for an operability evaluation to justify the continued use of the breakers with a possible common cause failure. Licensee records documented on the 4 KV breaker failures identified so far had been on non-safety related breakers primarily in the condensate system. Licensee personnel stated that since the breaker failures were all non-safety related no operability evaluations were necessary.

The inspector questioned this approach and discussed the possible impact on safety, should two of the key safety related breakers fail at the one time. With a common cause failure, this could occur. Licensee personnel used their online risk model to determine the possible increase in core damage due to this type failure. The possible increase in core damage was determined to be low. Region III Safety Analysts agreed that this did not represent a significant increase in core damage frequency.

Description: A number of failures of 4 KV MG breakers had been noted at both the Dresden and Quad Cities plants during the past year. A number of these failures had been attributed to dried lubricant in the breaker. Three of the breakers that failed to close, two at Dresden and one at Quad Cities had been removed and were being evaluated for failure analysis and cause determination. The three breakers that were being analyzed for cause were used in non-safety related applications, these breakers are the same as the safety related 4 KV breakers in use at the two plants. Dresden has 68 of the MG type breakers used in safety related applications and 20 more used in non-safety related applications. Quad Cities has more of this type breaker with106 of the breakers located in the plant and 16 additional breakers located in the station black-out building. Ninety five of the Quad Cities breakers were used in safety related applications.

On May 26, 2003, the 2C condensate pump breaker tripped as an attempt was made to start the pump. As a result, CR 160504 was written on the failure. Since that time, nine other CRs have been written at Dresden on failures of this type breaker.

Analysis: Discussions with licensee personnel indicated that the investigation for the cause of the three breaker failures was being actively pursued. Two different CRs, 227093 and 228807, had been written on the failure analysis of the 4KV MG breaker failures. Both Dresden and Quad Cities engineering, operations and maintenance personnel appeared to be actively involved.

Enforcement: No violations of NRC requirements occurred because the identified failures involved non-safety related equipment. Licensee personnel had entered this issue into the station's corrective action program by documenting the issues on multiple CRs which included CRs 227093 and 228807. These two CRs were written for failure analysis and cause identification and correction. Some corrective actions had already been taken and a contractor was in the process of performing cause identification and

repair of the three failed breakers. This issue will be unresolved (URI) pending further review of cause identification and correction **(URI 05000237/2004006-03)**.

1R16 Operator Work-Arounds (71111.16)

Semi-annual Review of the Cumulative Effects of Operator Workarounds

a. Inspection Scope

The inspectors reviewed all operator workarounds to assess any cumulative effect on the:

- reliability, availability, and potential for misoperation of a system;
- multiple mitigating systems; and
- ability of operators to respond in a correct and timely manner to plant transients and accidents.

The inspectors reviewed one plant designated operator workaround in detail. The operator workaround reviewed was the U2 degraded Control Rod Select Matrix push buttons. In addition, nine plant designated operator challenges were reviewed to determine if any of these reached the threshold of an operator workaround, and if they were properly categorized in accordance with plant procedures.

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 post-maintenance testing activities associated with the following:

- replaced/regreased CR 105X contacts on Unit 3 low pressure coolant injection loop I coolant injection inboard isolation valves;
- replaced/regreased CR 105X contacts in breaker for Unit 3 low pressure coolant injection loop I and II crosstie valve 3-1501-32B;
- replaced/regreased CR 105X contacts in breaker for Unit 3 low pressure coolant injection loop I coolant injection outboard isolation valve, MOV 3-1501-21A;
- performed 4 year preventive maintenance inspection on 4KV breaker UTC 0000874024; and
- replaced 3C containment cooling service water pump casing suction and discharge drain/instrument piping.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (71111.20)

.1 Unit 2 Forced Outage

a. Inspection Scope

On April 23, 2004, the licensee commenced a 16-hour forced maintenance outage. The priority work for the forced outage was to reinstall the original master trip solenoid valves due to the valves being faulty. On April 24, 2004, with Unit 2 at approximately 20 percent power, the reactor automatically scrammed from a main steam isolation valve (MSIV) Group 1 isolation while taking the turbine offline (Licensee Event Report 50-237/2004-02-00).

The inspectors verified that the licensee effectively conducted the shutdown, managed elements of risk pertaining to reactivity control during and after the shutdown, and implemented decay heat removal system procedure requirements as applicable. The licensee replaced the master trip solenoid valves, replaced the essential service system static switch, and replaced the turbine thrust bearing.

The inspectors performed the following activities daily:

- attended control room operator and outage management turnover meetings to verify that the current shutdown risk status was well understood and communicated;
- performed walkdowns of the main control room to observe the alignment of systems important to shutdown risk;
- reviewed selected issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance;
- ensured that the licensee appropriately considered risk factors during the development and execution of planned activities;
- monitored licensee's troubleshooting efforts for emergent plant equipment issues, specifically the isolation condenser condensate return valve, 3-1300-3 failure (Licensee Event Report (LER) 50-237/2004-02-00);
- monitored licensee's troubleshooting efforts for emergent plant equipment issues, specifically 2-203-3B main steam isolation valve slow closure;
- performed plant walkdowns to observe ongoing work activities;
- conducted in-office reviews of selected issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance;
- observed control rod withdrawals and initial transition to criticality; and
- monitored Mode switch changes and observed portions of power ascension.

b. Findings

No findings of significance were identified.

.2 Unit 2 Forced Outage

On April 28, 2004, with Unit 2 at approximately 600 MWe during initial startup following the forced outage, the 2A Reactor Recirculation pump motor tripped. The licensee initiated a manual scram to prevent entering the prohibited region of the power to flow map (LER 50-237/2004-02-00). The inspectors reviewed and evaluated several activities during the forced outage. The evaluation was performed to ensure that the licensee appropriately considered risk factors during the development and execution of outage activities. The licensee replaced the 2 A Reactor Recirculation pump motor.

The inspectors performed the following activities daily:

- observed control room staff performing the manual scram and initial cooldown;
- attended control room operator and outage management turnover meetings to verify that the current shutdown risk status was well understood and communicated;
- performed walkdowns of the main control room to observe the alignment of systems important to safe/shutdown risk condition;
- monitored licensee's troubleshooting efforts for emergent plant equipment issues, specifically when the control room heating, ventilation, and air conditioning system dampers failed to reposition on April 28, 2004 (LER 50-237/2004-03-00);
- performed a drywell walkdown to observe motor replacement activities;
- observed portions of power ascension; and
- ensured that Technical Specification requirements were verified to have been met for changing modes.

b. Finding

No findings of significance were identified.

.3 Unit 3 Forced Outage

On May 5, 2004, Unit 3 was operating at full power when the reactor automatically scrammed as a result of a loss of offsite power (LER 50-249/2004-03-00). Switchyard work was in progress at the time. The licensee declared an Unusual Event due to the unplanned loss of all off-site AC power to the unit emergency core cooling system (ECCS) buses. The inspectors verified that the licensee effectively conducted the shutdown, managed elements of risk pertaining to reactivity control during and after the shutdown, and implemented decay heat removal system procedure requirements as applicable. A special inspection team was on site to investigate the event from May 10 through May 14, 2004 (Inspection Report 05000249/2004009).

The inspectors performed in-plant observations, interviewed licensee personnel, and reviewed documentation of the following specific activities:

- control room staff performing shutdown and initial cooldown;
- that cooldown rates were within technical specification limits;
- control room staff operations during reactor pressure and level control activities;
- status of the emergency diesel generators, safety related buses, station blackout diesels, transformers, and emergency core cooling systems;
- termination of the Unusual Event;
- post-event inspection of the 2/3 emergency diesel generator;
- attended control room operator and outage management turnover meetings to verify that the current shutdown risk status was well understood and communicated;
- performed walkdowns of the main control room to observe the alignment of systems important to safe/shutdown risk condition; and verify Unit 3 safety-related electrical alignments following switchyard breakers maintenance activities;
- performed plant walkdowns to observe ongoing work activities;
- performed plant switchyard walkdown;
- conducted in-office reviews of selected issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance;
- licensee's troubleshooting efforts for emergent plant equipment issues, specifically when licensee was required by technical specifications to shutdown during power ascension due to having two inoperable source range monitors; and
- observed portions of power ascension and ensured that Technical Specification requirements and administrative procedure prerequisites for mode changes were met prior to changing modes or plant configurations.

b. Finding

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment and reviewed test results. 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 each 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 inspectors observed surveillance testing activities and/or reviewed completed packages for the tests, listed below, related to systems in the Initiating Event, Mitigating Systems, and Barrier Integrity Cornerstones:

- DES 8300-56, "125V DC Battery Charger Capacity Test For Charger 3-83125-3;
- DIS 0500-21, "Reactor Mode Switch (Run Position) Logic System Functional Test," Revision 6;

- DOS 1400-02, “Unit 3 Core Spray System Valve Operability and Timing,” Revision 24;
- DIS 0520-01, “Unit 2 Main Steam Line High Flow Isolation,” Revision 23;
- DIS 1100-02, “Unit 3 Standby Liquid Control Pump Discharge Pressure Instrumentation Calibration,” Revision 10;
- DIS 2400-01, “Post-Loss of Cooling Accident Containment Hydrogen and Oxygen Analyzer Functional/Calibration Test,” Revision 27;
- DIS 0020-01, “Seismic recorder functional testing, data retrieval, and initialization,” Revision 12; and
- DOS 8300-16, “Unit 2 Monthly Station Battery Inspection,” Revision 0.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Review of Licensee Performance Indicators for the Occupational Exposure Cornerstone

a. Inspection Scope

The inspectors reviewed licensee event reports, corrective action documents, electronic dosimetry transaction data for radiologically controlled area egress, and data reported on the NRC’s website relative to the licensee’s occupational exposure control performance indicator to determine whether or not the conditions surrounding any actual or potential performance indicator (PI) occurrences had been evaluated, and identified problems had been entered into the corrective action program for resolution. Performance indicator data collection and analysis methods were evaluated by the inspectors as described in Section 4OA1.

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Plant Walkdowns/Boundary Verifications and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors identified work areas that existed during the inspection within high and locked high radiation areas of the plant and selectively reviewed radiation work permit (RWP) packages and radiation surveys for these areas. The inspectors evaluated the

radiological controls to determine if these controls including postings and access control barriers were adequate.

The inspectors reviewed active and recently closed RWPs and work packages which governed activities in radiologically significant areas to identify the work control instructions and control barriers that had been specified. Electronic dosimeter alarm set points for both integrated dose and dose rate were evaluated for conformity with survey indications and plant procedures. Workers were questioned by the inspectors to verify that they were aware of the actions required when their electronic dosimeters malfunctioned or alarmed.

The inspectors walked down and surveyed (using an NRC survey meter) radiologically significant area boundaries and other radiological areas in the Unit 2/3 Reactor, Turbine, and Radwaste Buildings to verify that the prescribed radiological access controls were in place, that licensee postings were complete and accurate, and that physical barricades/barriers were adequate. During the walkdowns, the inspectors challenged access control boundaries to verify that high radiation area (HRA), locked high radiation area (LHRA) and very high radiation area (VHRA) access was controlled in compliance with the licensee's procedures, Technical Specifications, the requirements of 10 CFR 20.1601, and were consistent with Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants."

The inspectors selectively reviewed RWP and post job review documents for selected activities completed during approximately the 6-month period that preceded the inspection to verify barrier integrity and engineering controls performance (e.g., filtered ventilation system operation) and to determine if there was a potential for individual worker internal exposures of >50 millirem committed effective dose equivalent. The inspectors reviewed the licensee's procedures and its methods for the assessment of internal dose as required by 10 CFR 20.1204, to ensure methodologies were technically sound and included assessment of the impact of hard to detect radionuclides such as pure beta and alpha emitters, as applicable. No worker intakes occurred since this area was last reviewed by the inspectors as described in Inspection Report 05000237/2004002; 05000249/2004002.

The inspectors reviewed the licensee's physical and programmatic controls for highly activated and/or contaminated materials (non-fuel) stored within spent fuel or other storage pools. Specifically, radiation protection (RP) and fuel handling procedures were reviewed, RP staff were interviewed, and a walkdown of the refuel floor was conducted. In particular, the radiological controls for non-fuel materials stored in the spent fuel pools were evaluated to ensure adequate barriers were in-place to reduce the potential for the inadvertent movement of these materials, and to assess compliance with the licensee's procedures and for consistency with NRC regulatory guidance. The inspectors discussed with the radiation protection manager options to address the deficiencies with the fuel handling procedures.

These reviews represented six inspection samples.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed the results of radiation protection (RP) department self-assessments related to the radiological access control program, nuclear oversight department field observations of various radiological activities, and the condition report (CR) database along with individual CRs related to the radiological access and exposure control programs to verify that identified problems were entered into the corrective action program for resolution. In particular, the inspectors reviewed radiological problems which occurred over the 9 month period that preceded the inspection, including the review of any high radiation area (HRA) radiological incidents (non-PI occurrences identified by the licensee in high and locked high radiation areas) to verify that follow-up activities were conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

1. Initial problem identification, characterization, and tracking;
2. Disposition of operability/reportability issues;
3. Evaluation of safety significance/risk and priority for resolution;
4. Identification of repetitive problems;
5. Identification of contributing causes; and
6. Identification and implementation of corrective actions.

The inspectors evaluated the licensee's process for problem identification, characterization and prioritization, and verified that problems were entered into the corrective action program and were being resolved in a timely manner. For potential repetitive deficiencies or possible trends, the inspectors verified that the licensee's self-assessment activities were capable of identifying and addressing these deficiencies, if applicable.

The inspectors reviewed the licensee's documentation for all potential PI events occurring since the last radiological access control inspection to determine if any of these events involved dose rates >25 Rem/hour at 30 centimeters or >500 Rem/hour at 1 meter or involved unintended exposures >100 millirem total effective dose equivalent (or >5 Rem shallow dose equivalent or >1.5 Rem lens dose equivalent). None were identified.

Additionally, the inspectors reviewed the circumstances surrounding two radiological incidents that occurred in the latter stages of the fall 2003 refueling outage, both which prompted apparent cause evaluations. Specifically, the licensee's evaluation reports were reviewed and the details were discussed with radiation protection staff, the actual and potential radiological impact of the incidents were independently assessed using the NRC's significance determination process for the occupational radiation safety cornerstone, and the adequacy of the licensee's problem identification and corrective

actions were evaluated. The problems associated with one of these incidents is described in Section 2OS1.7.

These reviews represented four inspection samples. Specifically, the samples pertained to the licensee's self-assessment capabilities, its problem identification and resolution program for radiological incidents, a review of the licensee's ability to identify and address repetitive deficiencies, and a review of those radiological incidents and potential PI occurrences of greatest radiological risk.

b. Findings

No findings of significance were identified.

.4 Job-In-Progress Reviews and Review of Work Practices in Radiologically Significant Areas

a. Inspection Scope

The inspectors observed the locked high radiation area (LHRA) controls used for entry into the radwaste building basement and evaluated the radiation protection staff job coverage while shielding was installed in the area in preparation for repairs to the spent resin pump. The inspectors reviewed radiation surveys and evaluated the radiological job requirements provided in the RWP package for conformity with LHRA Technical Specifications and with the licensee's access control procedure. The inspectors also attended the pre-job brief with the work crew to assess the adequacy of the information exchanged.

Job performance was observed to verify that radiological conditions in the work area were adequately communicated to workers through the pre-job brief and area postings. The inspectors also verified the adequacy of the oversight provided by the radiation protection staff including the completion of confirmatory radiological surveys, the work oversight provided by the radiation protection technician (RPT), and the administrative and physical controls used over ingress/egress into this LHRA.

The inspectors also reviewed the licensee's procedures and discussed with radiation protection (RP) staff its practices for at power drywell entry, for initial drywell entry following down power, and for traversing in-core probe (TIP) room access to determine the adequacy of the radiological controls and hazards assessment associated with such entries. Work instructions provided in RWPs and in pre-entry briefing documents were discussed with RP staff to determine their adequacy relative to industry practices and NRC Information Notices.

The inspectors also reviewed the licensee's procedure and generic practices associated with dosimetry placement and the use of multiple whole body dosimetry for work in high radiation areas having significant dose gradients for compliance with the requirements of 10 CFR 20.1201(c) and applicable industry guidelines.

These reviews represented three inspection samples.

b. Findings

No findings of significance were identified.

.5 High Risk Significant, Locked High Radiation Area and Very High Radiation Area Access Controls

a. Inspection Scope

The inspectors reviewed the licensee's procedures, radiation protection (RP) job standards and evaluated RP practices for the control of access to radiologically significant areas (high, locked high, and very high radiation areas) and assessed compliance with the licensee's Technical Specifications, procedures, the requirements of 10 CFR Part 20, and the guidance contained in Regulatory Guide 8.38. In particular, the inspectors evaluated the RP staff's control of keys to Locked High Radiation Area (LHRAs) and Very High Radiation Area (VHRAs), the use of access control guards during prolonged work in these areas, and methods and practices for independently verifying proper closure and locking of access doors upon area egress. The inspectors selectively reviewed key issuance/return and door lock verification records for the first quarter of 2004 and key accountability logs for April 2004 to verify the adequacy of accountability practices and documentation. The inspectors also reviewed selected records and evaluated the RP staff's practices for radiation protection manager and station management approval for access into Level 2 LHRAs and VHRAs and for the use of flashing lights in lieu of locking areas to verify compliance with procedure requirements and those of 10 CFR 20.1602.

The inspectors discussed with RP staff the controls that were in place for areas that had the potential to become high radiation areas during certain plant operations to determine if these plant operations required communication before hand with the RP group, so as to allow corresponding timely actions to properly post and control the radiation hazards. In particular, revisions to radwaste and reactor operations procedures and recently developed RP guidance that detailed process piping flow paths and identified vulnerable areas subject to changing radiological conditions were discussed with RP supervisory staff.

The inspectors conducted plant walkdowns to verify the posting and locking of entrances to numerous LHRAs in the Unit 2/3 Reactor and Turbine Buildings and the common Radwaste Building, and for VHRAs (TIP rooms and Drywell airlocks).

These reviews represented three inspection samples.

b. Findings

No findings of significance were identified.

.6 Radiation Worker Performance

a. Inspection Scope

During performance of the shielding installation in the radwaste basement, the inspectors evaluated radiation worker performance for conformity with radiation protection work requirements and to determine whether workers were aware of the radiological conditions, the RWP controls and limits in place, and that their performance had accounted for the level of radiological hazards present.

The inspectors reviewed several radiological problem reports which found that the cause of the event was due to radiation worker errors to determine if there was an observable pattern traceable to a similar cause, and to determine if this matched the corrective action approach taken by the licensee to resolve the identified problems.

These reviews represented two inspection samples.

b. Findings

No findings of significance were identified.

.7 Radiation Protection Technician Proficiency

a. Inspection Scope

During job observations and general plant walkdowns, the inspectors evaluated radiation protection technician (RPT) performance with respect to radiation protection work requirements, conformance with procedures and those requirements specified in the RWP, and to determine if their performance was consistent with the radiological hazards that existed.

The inspectors reviewed selected radiological problem reports generated between July 2003 and April 2004 to determine the extent of any specific problems or trends that may have been caused by deficiencies with RPT work control, and to determine if the corrective action approach taken by the licensee to resolve the reported problems, if applicable, was adequate. In particular, the inspectors reviewed the circumstances associated with radiological control problems that occurred during the licensee's October 2003 refueling outage, during cleanup of debris in the Unit 2 "C" condenser false bottom. Specifically, the inspectors reviewed the licensee's apparent cause evaluation report, the RWP and as-low-as-is-reasonably-achievable (ALARA) plan developed for the job, and discussed the incident with some of the individuals involved in its investigation.

These reviews represented two inspection samples.

b. Findings

Introduction: A self-revealed Green finding and an associated Non-Cited Violation (NCV) were identified because a work crew was exposed to high radiation levels from

the accumulation of contaminants in a vacuum cleaner used to clean debris in the Unit 2 condenser false bottom. As a result, one worker received unplanned dose beyond the administrative limit established by the RWP.

Description: On October 30, 2003, three contract workers were assigned to clean/vacuum debris (filings) from the Unit 2 "C" condenser false bottom following condenser maintenance. The work was governed by an RWP and the radiological controls were supplemented by an ALARA plan. However, since the ALARA plan was developed to address a variety of condenser maintenance activities, it did not specifically cover vacuum operations.

A pre-job brief was completed about 7 hours before work commenced and was attended by the three person work crew, the RPT that was intended to provide job coverage along with RP and work group supervisory staff. During the brief, the workers were informed of elevated dose rates in one corner of the condenser bottom and were instructed to back away from that area should a dose rate alarm occur on their electronic dosimetry (ED). The workers were to exit the area if they received a second dose rate alarm. Dosimetry alarms were set at 80 mrem accumulated dose with a dose rate set at 100 mrem/hour. The workers were also instructed to carry the vacuum to ensure its exhaust would not create an airborne radioactivity problem since high contamination levels were present in the area. The pre-job briefing was deficient because there was insufficient, if any, discussion that the vacuum itself could become a source of high radiation. Moreover, no plans were developed to monitor the vacuum for contamination buildup or to change the vacuum filters at a defined frequency. The start of the job was delayed until the end of the RP shift so radiological work coverage was transferred to another RPT. That RPT was briefed about the job by the technician that attended the pre-job briefing earlier that day.

While the vacuuming was taking place, the RPT observed the work crew from a platform about 20 feet above the false bottom. As a result, the RPT was not positioned to allow proper work oversight. Additionally, the technician was not wearing the necessary protective clothing to enter the work area (a highly contaminated wet area) which further hampered the quality of the work oversight. Consequently, the vacuum was not surveyed as the work progressed to evaluate the likely potential for changing radiological conditions the vacuum created. Additionally, the work crew wore their EDs inside the protective clothing (a poor practice) so neither the RPT or the workers could readily monitor their radiation exposures. Proper exposure monitoring was further compounded because the workers wore power air purifying respirators and combined with the noise of the vacuum motor, ED alarms were difficult to distinguish. During the course of the work, two of the workers in the crew heard ED dose rate alarms which apparently occurred as they vacuumed near the corner area that was discussed as a location with elevated radiation levels. Consistent with their briefing instruction, they backed away and continued to work. Shortly thereafter, a second dose rate alarm was heard by the same two workers and all three exited the area.

The licensee's follow-up investigation found that all three workers had dose rate alarms that were caused primarily by the vacuum, with rates ranging from 1051-1310 mrem/hour. The worker that was unable to hear his ED dose rate alarms also had an accumulated dose alarm which was also not heard. That individual received an

unplanned dose of 12 mrem greater than the RWP established 100 mrem limit. Post work surveys disclosed vacuum cleaner contact and 30 centimeter dose rates of 3800 mrem/hour and 600 mrem/hour, respectively.

Analysis: The inspectors determined that the licensee's failure to evaluate the radiological hazards the vacuum posed as contamination built-up, producing a source of high radiation, was a performance deficiency because: (1) the problem was within the licensee's ability to foresee and could have been prevented; and (2) the licensee failed to satisfy the radiological evaluation requirements of 10 CFR 20.1501(a). The issue was more than minor because deficiencies with radiological work planning coupled with radiation protection technician work coverage were associated with the "Program and Process" and "Human Performance" attributes of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Also, the issue involved the occurrence of a worker's unplanned dose that resulted from actions contrary to NRC regulations. Therefore, the issue represents a finding which was evaluated using the Significance Determination Process (SDP) for the Occupational Radiation Safety Cornerstone.

The inspectors determined that the deficiencies with the radiological work planning and with RPT job coverage were failures of those radiological barriers intended to protect worker health and safety. As such, the inspectors determined utilizing NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," that the finding did not involve an ALARA issue as collective dose was not an issue, and there was not an overexposure. Also, given the maximum radiation levels on the vacuum and the departure of the work crew from the area when ED dose rate alarms occurred, there was not a substantial potential for an overexposure. Further, the licensee's ability to assess dose to the workers was not compromised. Consequently, the inspectors concluded that the SDP assessment for this finding was of very low safety significance (Green). To address this issue, the licensee developed guidance for the use of vacuums in highly contaminated areas, workers were counseled, and the work planning problems were entered into the licensee's lessons learned database.

Enforcement: 10 CFR 20.1501(a) requires, in part, that each licensee make or cause to be made surveys (evaluations) that: (1) may be necessary to comply with the regulations in this part; and (2) are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and potential radiological hazards. In this instance, the licensee failed to evaluate the radiation levels and radiological hazards posed by the vacuum cleaner to ensure compliance with 10 CFR 20.1201, which limits the occupational dose to adults. However, since the licensee documented this issue in its corrective action program (CR and apparent cause evaluation No. 183965) and because the violation is of very low safety significance, it is being treated as a NCV. **(NCV 05000237/2004006-04; 05000249/2004006-04)**

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

.1 Initiating Events and Mitigating Systems

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:

- Scrams with loss of normal heat removal;
- Unplanned scrams; and
- RCS leak rate.

Unit 3:

- Scrams with loss of normal heat removal;
- Unplanned scrams; and
- RCS leak rate.

b. Findings

No findings of significance were identified.

Cornerstone: Occupational Radiation Safety

.2 Radiation Safety Strategic Area

a. Inspection Scope

The inspectors sampled licensee submittals for the performance indicator (PI) listed below for the period October 2003 through March 2004. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in Revision 2 of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," were used. The following PI was reviewed:

- Occupational Exposure Control Effectiveness

  For the time period reviewed, no reportable occurrences were identified by the licensee. To assess the adequacy of the licensee's PI data collection and analyses, the inspectors discussed with RP staff the scope and breadth of its data review and the results of those reviews. The inspectors independently reviewed electronic dosimetry dose rate and accumulated dose alarm reports, personnel radiation exposure investigation reports, dose assignments for intakes that occurred and the licensee's CR database along with individual CRs

generated during the period reviewed to verify there were no unrecognized occurrences. Additionally, as discussed in Section 2OS1, the inspectors walked down the boundaries of selected locked high radiation areas and very high radiation areas to verify the adequacy of postings and access control physical barriers.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Daily Reviews

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by reviewing daily condition reports and attending daily condition report review meetings.

.2 Semiannual Review for Trends

a. Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's corrective action program (CAP) and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspector's review nominally considered the 6 month period of January 2004 through June 2004, although some examples expanded beyond those dates when the scope of the trend warranted. The inspectors reviewed selected condition reports (CRs) generated during the time period of January through May 2004 in an attempt to identify potential trends. The screening was accomplished as follows:

- CRs dealing with company policies, administrative issues, and other minor issues were eliminated as being outside the scope of this inspection;
- for the semiannual inspection, the CRs were sorted into groups involving the same equipment, the same issue, or the same program and were screened for potential common cause issues and considered potential trends;
- the inspectors removed groups of CRs that discussed strictly programmatic problems because the inspection requirement was primarily for equipment problems and human performance issues;
- the inspectors removed groups of CRs that discussed security issues, those will be reviewed and documented as necessary in a separate report during a future inspection by a security specialist;
- the inspectors removed groups of CRs where their review indicated that duplicate CRs had been written for the same event or failure;
- the inspectors removed groups of CRs where a sudden increase in the number of CRs generated was due to a special licensee initiative to specifically look for issues in a certain area;

- the inspectors obtained lists of all licensee common cause investigations initiated in the last 6 months, all CRs in which the title indicated a trend or potential trend, and all systems in the maintenance rule (a)(1) status, these were considered licensee-identified trends;
- the remaining groups, considered potential unidentified trends, were provided to the licensee for discussion in case there was extenuating information that the inspectors were not aware of; and
- groups of CRs remaining after all of the above screening were considered trends which the licensee had failed to identify.

In addition, the inspectors reviewed the corrective maintenance backlog, the engineering change backlog, the deferred preventive maintenance backlog, the open temporary modification backlog, the change in the number of Maintenance Rule a(1) systems over the last 2 quarters, and all Nuclear Oversite assessments and audits conducted during January to June of 2004.

b. Findings

There were no findings of significance identified. The inspectors determined that licensee employees were writing CRs with a low threshold, and that employees at all levels of the organization were writing CRs. The inspectors determined that the licensee had identified the same specific trends as the inspectors. The licensee had initiated about 22 common cause analysis actions for identified trends in the last 6 months.

.3 Biennial Sample Review

a. Inspection Scope

The inspectors reviewed several licensee training department self-assessment reports. The licensee's self-assessments reviewed the licensed operator training program for approximately 12 months prior to this inspection activity. The self-assessments were reviewed to ensure that any issues identified during the self-assessment were appropriately evaluated, prioritized, and controlled.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up (71153)

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 Unresolved Items to determine if the licensee was in violation of any regulatory requirement.

b. Findings

.1 Closed Licensee Event Report (LER) 50-237/2004-001-00: Unit 2 High Pressure Coolant Injection System Inoperability Due to Lifted Leads

Introduction: A Green self-revealing finding was identified involving the failure to follow administrative procedures to restore the Unit 2 High Pressure Coolant Injection System to operable status, which resulted in a Non-Cited Violation (NCV) of Technical Specification 3.5.1, "Emergency Core Cooling Systems (ECCS) and Isolation Condenser (IC) System," Action Statement H. This finding was considered to be self-revealing because of the obvious nature of the leads being lifted and taped.

Discussion: On April 12, 2004, the licensee conducted a quarterly Technical Specification surveillance in accordance with procedure DIS 2300-08, Revision 20, "Unit 2 Contaminated Condensate Storage Tank Level Switches Functional Test and Unit 2 Torus Level Switches Functional Test." However, the licensee discovered that electrical leads for level switches 2-2351A and 2-2351B to be lifted per step I.5 of the procedure, were already lifted and taped. These lifted leads had not been re-landed following the previous Technical Specification Surveillance testing which occurred on March 9, 2004. On March 9, 2004, the licensee conducted a surveillance in accordance with procedure DIS 2300-16, Revision 2, "Torus Level Switches Channel Calibration." The procedure provides instructions to lift the leads for the level switches per step I.6, perform calibration of the switches, and then re-land the leads per step I.21 after calibration is complete.

On March 9, 2004, work on the HPCI surveillance was begun, leads for the level switches were lifted and taped, and then work was stopped due to contingent parts for level switch 2-2351B not being available on site. Procedure DIS 2300-16, Revision 2, provides guidelines to reconnect the leads even if only one switch is going to be calibrated. In this case, switch 2-2351A was already replaced, tested, and declared operable. However, when work was stopped, station personnel did not review the work package in its entirety and did not reconnect the leads in accordance with DIS 2300-16. This was not discovered until April 12, 2004. The licensee's root cause report determined that failure to reconnect the leads was due to human performance deficiencies and inadequate enforcement of the maintenance fundamentals.

The HPCI system is designed to take suction from the condensate storage tanks and automatically realign to the suppression pool when the water level in the tanks is low or the torus water level is high. The lifted leads prevented the HPCI system from performing its auto function of closing pump suction motor operated valves 2-2301-35 and 2-2301-36, and subsequent automatic realignment to the suppression pool when required, from March 9, 2004 to April 12, 2004.

The licensee's corrective actions, as described in the root cause evaluation, included re-landing the HPCI electrical leads, performing monthly reinforcement of station expectations with regards to conduct of maintenance for 4 months, and requiring Operations to track all work requests to completion prior to exiting the associated LCO action statement, specifically for any activity not completed in its entirety.

Analysis: The licensee determined that the root cause of this event was a human performance issue in that the instrument maintenance supervisor failed to verify restoration of the leads when the surveillance test was stopped. Using IMC 0612, Appendix B, "Issue Screening," the inspectors determined that this licensee identified failure to implement administrative procedures to restore the HPCI system to its operable status within its Technical Specification allowed outage time was a performance deficiency. The inspectors concluded that this issue was more than minor because, if left uncorrected, the deficiency would become a more significant safety concern. This finding affected the mitigating systems cornerstone objectives and affected the availability and reliability of the Unit 2 HPCI system, which is designed to provide coolant to the reactor vessel under loss of coolant accident conditions.

Based on the inoperability of the HPCI system for 34 days, a Senior Risk Analyst (SRA) was asked to evaluate any impact of the increase in overall plant risk. The SRA, with the assistance of the inspectors, evaluated the potential risk impact to Unit 2.

Using IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the inspectors answered "Yes" to question number three in the mitigating systems column of the Phase 1 worksheet of the SDP worksheet. This required a Phase 2 analysis.

The initial phase 2 risk assessment performed by the resident inspectors characterized this finding as potentially risk significant using the benchmarked site specific Risk-Informed Inspection Notebook. Although the HPCI suction valves would not have automatically swapped from the condensate storage tanks to the suppression pool, the valves were capable of manual realignment. The station associated alarm procedure requires operator actions to manually perform the swap if automatic realignment does not occur upon a receipt of an alarm of condensate storage tanks level low or torus level hi. A Phase 3 analysis performed by the Senior Risk Analyst (SRA) determined the issue was a Green finding. The analyst concluded the safety significance of this finding based on the change in CDF and LERF to be Green. A Green finding represents a finding of very low safety significance.

Enforcement: Technical Specification 3.5.1, "Emergency Core Cooling Systems (ECCS) and Isolation Condenser (IC) System," Action Statement H, requires, in part, that if restoration of the HPCI system to operable status was not complete in 14 days, the plant is to be in Mode 3 within 12 hours and to reduce reactor steam dome pressure to less than or equal to 150 psig. Contrary to the above, the licensee failed to implement Procedure DIS 2300-16, Revision 2, step I.21 to re-land the level switch leads back to a normal lineup, which resulted in the Unit 2 HPCI system being inoperable from March 9, 2004, to April 12, 2004, and the licensee failed to take the appropriate actions as dictated by T.S. 3.5.1 Action Statement H.

Because this issue is of very low safety significance and has been entered into the licensee's corrective action program as Condition Report 214543, this violation is being treated as a Non-Cited Violation, consistent with Section VI.A., of the NRC Enforcement Policy. **(NCV 05000237/2004006-05)**

4OA4 Cross-Cutting Findings

.1 A finding described in Section 1R11of this report had, as its primary cause, a human performance deficiency, in that 3 of 12 licensed operator crews operated the plant with knowledge and ability performance weaknesses which resulted in performance which did not pass an NRC required annual operating test.

.2 A finding described in Section 1R11 of this report had, as its primary cause, a human performance deficiency, in that 14 of 62 licensed operators operated the plant with knowledge and ability performance weaknesses which resulted in performance which did not pass an NRC required annual operating test.

.3 A finding described in Section 2OS1 of this report had, as its primary cause, a human performance deficiency in that the Radiation Protection Technician responsible for covering work in the Unit 2 condenser did not provide adequate coverage of the work performed which resulted in an individual exceeding the allowed radiation dose described in the radiation work permit.

.4 A finding described in Section 40A3 of this report had, as its primary cause, a human performance deficiency, in that an instrument maintenance supervisor failed to verify restoration of the leads when the surveillance testing on the Unit 2 high pressure coolant injection (HPCI) torus level switch was stopped. This resulted in the inoperability of the automatic cross over function of the HPCI suction valves from the condensate storage tank to the torus when condensate storage tank level reached its low level setpoint.

4OA5 Other Activities

.1 TI 2515/156, Offsite Power System Operational Readiness

a. Scope

The inspectors performed an operational readiness review of the offsite power (OPS) systems in response to Temporary Instruction (TI) 2515/156, "Offsite Power System Operational Readiness." Specifically, the inspectors gathered and reviewed licensee data supporting the following requirements:

- Appendix A to 10 CFR Part 50, General Design Criterion (GDC) 17, "Electrical Power Systems," to minimize the likelihood of losing offsite power on loss of the generating unit;
- Appendix B to 10 CFR Part 50, Criterion III, "Design Control," to confirm the design interface between the nuclear power plant (NPP) and the regional transmission operator;

- Criterion XVI, “Corrective Actions,” to confirm the licensee’s assessment of the industry operating experience from the August 14, 2003, grid event;
- licensee Technical Specifications for determining OPERABILITY of the OPS; and
- the licensee’s assumptions used in the station blackout analysis performed per 10 CFR 50.63, “Loss of All Alternating Current Power,” to determine an acceptable coping time.

The inspectors also reviewed the licensee’s requirements for assessing risk when performing work on the OPS or the emergency onsite power systems per 10 CFR 50.65(a)(4).

b. Observations and Findings

No findings of significance were identified. Based on the inspection, no immediate operability issues were identified. In accordance with TI 2515/156 reporting requirements, the inspectors provided the required data to the headquarters staff for further analysis.

.2 (Closed) Unresolved Item 50-249/02-17-03: ‘A’ Loop of Reactor Recirculation Flow Sensing Line Socket Weld Failure

This item was addressed in the closure of two LERs (2002-003-00; and 2002-006-00) in NRC integrated inspection report number 05000237/2003007; 05000249/2003007, issued October 30, 2003.

4OA6 Meetings

Interim Exit Meetings

- Occupational radiation safety radiological access control inspection with Mr. D. Wozniak on April 23, 2004.
- Licensed Operator Requalification 71111.11B with Mr. C. Symonds on June 8, 2004, via telephone.
- Licensed Operator Requalification 71111.11B 2004 with Mr. B. Surges on June 14, 2004, via telephone.
- Biennial Licensed Operator Requalification Training Program Inspection 71111.11B with Mr. D. Wozniak on June 29, 2004.

4OA7 Licensee Identified Violation

The following violation of very low safety significance (Green) 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).

Cornerstone: Mitigating Systems

- Title 10 of Federal Code of Regulations (CFR) Part 55.49 states that applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part. The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or, but for detection, would have affected the equitable and consistent administration of the test or examination. This includes activities related to the preparation and certification of license applications and all activities related to the preparation, administration, and grading of the tests and examinations required by this part. As described in CR 205924, on July 3, 2003, an individual participating in the 2003 annual licensed operator requalification examination (required by 10 CFR 55.59 (a) (2)) was administered a duplicate operating test previously administered to the same individual during the 2002 annual licensed operator requalification examination. The licensee identified this issue during a self-assessment performed on March 3, 2004. Examining an individual with the same test material 2 consecutive years affected the equitable and consistent administration of the examination and was a violation of 10 CFR 55.49. The violation was more than minor because the operator was returned to, and performed, on-shift duties. The violation is of very low safety significance based on a review of the Significance Determination Process IMC 609, Appendix I, and because when the licensee identified the error the individual was re-examined and received a passing grade.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
D. Wozniak, Plant Manager
R. Bauman, ISI Coordinator
D. Bost, Site Vice President
H. Bush, Radiological Engineering Manager
R. Conklin, Radiation Protection Supervisor
J. Fox, Design Engineer
R. Gadbois, Shift Operations Superintendent
D. Galanis, Design Engineering Manager
R. Geier, RV/ISI NDE Coordinator
G. Gratf, Operations
J. Griffin, Regulatory Assurance - NRC Coordinator
K. Hall, NDE Level III
J. Hansen, Regulatory Assurance Manager
J. Henry, Operations Director
M. Johnson, Training
E. Keene, Training
M. Laney, Training
T. Loch, Supervisor, Design Engineering
S. McCain, Corporate Emergency Preparedness Manager
D. Nestle, Radiation Protection Technical Manager
P. O'Connor, Training
D. O'Rourke, NOS
M. Overstreet, Radiation Protection Supervisor
T. Richmond, Training
R. Rybak, Lead Licensing Engineer
J. Sipek, Nuclear Oversight Director
N. Spooner, Site Maintenance Rule Coordinator
B. Surges, Operations Requalification Training Supervisor
B. Svaleson, Maintenance Director
C. Symonds, Training Director
S. Taylor, Radiation Protection Director
D. Winchester, Corporate NOS
L. Young, Training

Nuclear Regulatory Commission
M. Ring, Chief, Division of Reactor Projects, Branch 1

IEMA
R. Schulz, Illinois Emergency Management Agency

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000237/2004006-01	FIN	Crew Performance on the Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test
05000237/2004006-02	FIN	Individual Operator Performance on the Job Performance Measure or Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test
05000237/2004006-03	URI	Potential Common Mode Failure due to hardened lubricant on Safety Related Merlin Gerin 4KV electrical breakers
05000237/2004006-04 05000249/2004006-04	NCV	Work crew was exposed to high radiation levels from the accumulation of contaminants in a vacuum cleaner used to clean debris in the Unit 2 condenser
05000237/2004006-05	NCV	Violation of Technical Specification Section 3.5.1 Unit 2 High Pressure Coolant Injection (HPCI) suction swap overloads were lifted and not relanded

Closed

05000237/2004006-01	FIN	Crew Performance on the Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test
05000237/2004006-02	FIN	Individual Operator Performance on the Job Performance Measure or Dynamic Scenario Portion of the 2004 Facility-Administered Annual Requalification Examination Operating Test
05000237/2004006-04 05000249/2004006-04	NCV	Work crew was exposed to high radiation levels from the accumulation of contaminants in a vacuum cleaner used to clean debris in the Unit 2 condenser
05000237/2004006-05	NCV	Violation of Technical Specification Section 3.5.1 Unit 2 High Pressure Coolant Injection (HPCI) suction swap overloads were lifted and not relanded
50-249/02-17-03	URI	'A' Loop of Reactor Recirculation Flow Sensing Line Socket Weld Failure
50-237/2004-001-00	LER	Unit 2 High Pressure Coolant Injection System Inoperability Due to Lifted Leads

Discussed

None.

LIST OF ACRONYMS USED

ADSV	Automatic Depressurization System Valve
ALARA	As Low As Is Reasonably Achievable
ANSI/ANS	American National Standard Institute/American Nuclear Society
ATWS	Anticipated Transient Without Scram
BWR	Boiling Water Reactor
CFR	Code of Federal Regulations
CR	Condition Report
DIS	Dresden Instrument Surveillance
DOS	Dresden Operating Surveillance
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ED	Electronic Dosimetry
EDG	Emergency Diesel Generator
FIN	Finding
FWLC	Feedwater Level Control
FRV	Feedwater Regulation Valve
HPCI	High Pressure Coolant Injection System
HRA	High Radiation Area
IEMA	Illinois Emergency Management Agency
IMC	Inspection Manual Chapter
JPM	Job Performance Measure
LER	Licensee Event Report
LHRA	Locked High Radiation Area
LORT	License Operator Requalification Training
LPCI	Low Pressure Coolant Injection
MCC	Motor Control Center
MWe	megawatts electrical
NCV	Non-Cited Violation
NDO	Nuclear Duty Officer
NRC	Nuclear Regulatory Commission
OA	Other Activities
OE	Operability Evaluation
PCV	Pressure Control Valve
PD	Performance Deficiency
PI	Performance Indicator
RP	Radiation Protection
RPT	Radiation Protection Technician
RWP	Radiation Work Permit
SDP	Significance Determination Process
SPOG	System Planning Operating Guide
TIP	Traversing In-Core Probe
URI	Unresolved Item
VHRA	Very High Radiation Area

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.

1R01 Adverse Weather Protection

CR 216043; Unable to Fully Execute DOA 0010-02 Tornado Warning/Severe Wind; April 20, 2004

CR 214730; NOS Id's Summer Readiness Issues; April 13, 2004

CR 214128; Potential CRD System Summer Readiness Issue-drive Water Filter; April 8, 2004

CR 212008; Bus Duct Rubber Boot Continuing to Degrade; March 26, 2004

CR 223896; Unit 3 Battery Room Temperature Increase due to Failed A/C; May 26, 2004

CR 225042; County Severe Weather Siren Failed to Operate as Required; June 1, 2004

OP-AA-108-109, "Seasonal Readiness," Revision 1

AR 166301; Summer Readiness 2004; July 4, 2003

CR 227168; Reactor Building Chillers not Meeting Summer Readiness Commitment; June 9, 2004

CR 226909; DOS 8300-47 Failed Acceptance Criteria; June 8, 2004

1R04 Equipment Alignment

Unit 2(3) DOP 7500-M1/E1, "Standby Gas Treatment," Revision 5

Unit 2(3) DOP 7500-01, "Standby Gas Treatment Operation," Revision 18

DOP 6600-M2, "Unit 2/3 Standby Diesel Generator," Revision 21

DOP 6600-E2, "Unit 2/3 Standby Diesel Generator," Revision 3

P&ID M-517, Sheet 2, "Diesel Generator Engine Cooling Water System," Revision G

P&ID M-518, Sheet 2, "D/G Fuel Oil System," Revision D

P&ID M-478, Sheet 2, “Diagram of Diesel Generator Lube Oil Piping,” Revision H

P&ID M-49, “Diagram of Standby Gas Treatment”

CR 226674; Temperature Switch for SBGT not Found on any Electrical Prints; June 8, 2004

CR 226855; NRC Identified Deficiencies; June 8, 2004

CR 225441; NRC Walkdown Identified Deficiencies; June 2, 2004

CR 225112; NRC concerns from plant tour; June 1, 2004

CR 224927; Configuration Control Trend Identified; June 1, 2004

1R05 Fire Protection

CR 224493; Fire Door Inoperable; May 28, 2004

CR 227124; NOS Identified that Fire Watch Inspection was not Documented; June 9, 2004

CR 212349; NOS IDs missing documentation on fire drill records; March 27, 2004

Fire Drill Pre-Plan U2TB-45

1R11 Operator Requalification

2003 License Operator Requalification Training (LORT) Biennial Comprehensive Section A Written Examination Static-06; Small Recirc Loop Break/RWCU PCV Failure/Recirc Pump Speed Mismatch/Bus 27 Overcurrent/Target-Rock Safety Valve Failure; Revision 12

2003 LORT Biennial Comprehensive Section B Written Examination 2003LNC4W6-B-RO; dated July 15, 2003

2003 LORT Biennial Comprehensive Section B Written Examination 2003LNC4W6-B-SRO; dated July 15, 2003

BWROG Simulator Scenario Development Guideline; Revision 0, June-93

CR 205924; Quick Human Performance Investigation for Identified Overlap Between Annual Licensed Operator Examination 2002 and 2003

Dresden Initial License Training; Primary Containment Control Module; 295L-S2, dated April 5, 2004

Dresden 2004 Licensed Operator Requal Exam Results Summary

Dresden LORT Classroom Attendance (sheets); Cycle 4, 2003 - Cycle 2; 2004

Dresden Simulator ANSI/ANS-3.5-1985 Certification Report, Initial Report; March 1991

Dresden Station Improved Technical Specifications

Dresden Station Improved Technical Specifications Bases

Dresden Station LORT Sample Plan Cycle 4, 2002 - Cycle 3; 2003

Inspection Report 05000237/249/2003-006

Inspection Report 05000249/237/249/2003-011

JPM P2-0300-01; Respond to a CRD Flow Control Valve Failure; Revision 13

JPM P2-6900-01; Restore U-2 Battery System to Operate Following a Failure of One or More of the Battery Buses; Revision 10

JPM S-0600-12; Recovery of Locked Up FRV/Placing Second FRV in Auto; Revision 3

JPM S-1500-10; Perform LPCI System Operability Test With Torus Available; Revision 1

JPM S-7500-01; Start Standby Gas Treatment; Revision 2

JPM S-EP-13; Determine Emergency Classification; Revision 7

Licensee Event Report (LER) 05000237/2003-007-00; Unit 2 Manual Scram Due To High Stater Water Cooling System Temperature

LER 05000237/2003-003-00; Unit 2 Reactor Feedwater Pump Trip and Automatic Reactor Scram

LER 05000249/2004-001-00; Unit 3 Automatic Scram During Testing of the Main Turbine Master Trip Solenoid Valves

LER 05000249/2004-002-00; Unit 3 Automatic Scram Due to Main Turbine Low Oil Pressure Trip and Subsequent Discovery of Inoperability of the Units 2 and 3 High Pressure Coolant Injection Systems

LS-AA-125; Corrective Action Program Procedure

LS-AA-125-1001; Root Cause Analysis Manual

LS-AA-126-1001; Dresden 2004 LORT [licensed operator requalification training] Self-Assessment Report; dated March 1 - 5, 2004

Simulator Review Board Minutes; dated January 31, 2003; June 3, 2003; September 16, 2003; and December 2, 2003

OP-AA-105-102; NRC Active License Maintenance; Revision 3

Reader Transaction History 6/19-30/2003; 2/20-27/2004

Scenario OPEX-AE; SRM Failure/Loss of Bus 24 and MCCs 28-7/FWLC Failure/ ATWS; Revision 5; February 2004

Scenario OPEX-N; Feedwater Regulating Valve Lockup/Reactor Building to Suppression Chamber Vacuum Breaker Fails Open/Turbine Trip Due to High Vibration/ Reactor Scram/Steam Leak in Drywell; Revision 8; January 2004

Scenario OPEX-R; ADSV Blown Fuse/Relief Valve Failure/ATWS (Power/Level Control); Revision 7; February 2004

Scenario OPEX-S; ATS Panel Power Loss/Feedwater Regulating Valve Lockup/ Instrument Line Break in Drywell/RPV Flooding; Revision 8; February 2004

Ten Licensed Operators' Medical Records; dated various

TQ-AA-106-0102; Exelon Nuclear LORT Classroom Attendance; Revision 0

TQ-AA-106-0113; Simulator Demonstration Examination Individual Competency Evaluations; (Annual) Crew 2, 5/28/04; Crew 3, May 21, 2004; (Annual Re-eval) Crew 3, 5/25/04; (Annual Re-eval) Crew 2, June 2, 2004

TQ-AA-106-0114; Simulator Demonstration Examination Crew Competency Evaluations; (Annual) Crew 2, May 28, 2004; Crew 3, May 21, 2004; (Annual Re-eval) Crew 3, May 25, 2004; (Annual Re-eval) Crew 2, June 2, 2004

TQ-AA-106-0115; Simulator Demonstration Examination Shift Manager Competency Evaluations; (Annual) Crew 2, May 28, 2004; Crew 3, May 21, 2004; (Annual Re-eval) Crew 3, May 25, 2004; (Annual Re-eval) Crew 2, June 2, 2004

TQ-AA-106-0303; JPM Development Job Aid; Revision 0

TQ-AA-106-0304; Licensed Operator Requal Training Exam Development Job Aid; Revision 2

TQ-AA-201; Examination Security and Administration; Revision 4

TQ-A-302-0101; Test T.9, Maximum Size Unisolable Main Steam Line Rupture; dated March 14, 2002

TQ-A-302-0101; Test T.9, Maximum Size Unisolable Main Steam Line Rupture; dated March 4, 2003

TQ-A-302-0101; Test T.9, Maximum Size Unisolable Main Steam Line Rupture; dated March 11, 2004

TQ-AB-303-101; BWR Moderator Temperature Coefficient of Reactivity; dated October 24, 2003

TQ-AB-303-102; BWR Critical Conditions at 170 F; dated October 24, 2003

TQ-AB-303-103; BWR Power Coefficient of Reactivity; dated October 25, 2003

TQ-AB-303-104; BWR Control Blade Worth; dated October 26, 2003

TQ-AB-303-105; BWR Xenon Worths; dated October 27, 2003

Condition Reports Initiated Based on NRC Observations and Findings

CR 223729; During Performance of NRC Inspection 71111.11 An Outdated Reference To UFSAR Data Was Identified In A Simulator Malfunction Test

CR 224557; During Performance of NRC Inspection 71111.11 Flags Were Left in the Technical Specifications Manual During Dynamic Scenario Evaluation

CR 229557; During Performance of NRC Inspection 71111.11 Crew and Individual Operating Test Failures Exceeded SDP Green Criteria

1R12 Maintenance Effectiveness

CR 216133; Supporting data in Maint. Rule database should be revised; April 16, 2004

CR 214830; Capture lessons learned for 2/3 EDG LCO; April 7, 2004

CR 214581; SSD Emergency Lights Failed Maintenance Rule Criteria; April 12, 2004

CR 214283; 3A instrument air compressor trip; April 10, 2004

CR 212965; Service water rad monitor low; April 3, 2004

1R13 Maintenance Risk Assessments and Emergent Work Control

CR 213315; Higher than expected as-found 3-1501-21A thrust; April 5, 2004

1R14 Nonroutine Evolutions

CR 216799; MSIV failed DOS 250-02; April 24, 2004

1R15 Operability Evaluations

Operability Evaluation 04-003, Unit 2 & 3 “Steam Dryer Potential Vulnerabilities Due to Flaws Found During Quad Cities Q2R17 Dryer Inspection”

Operability Evaluation 04-005, Unit 2 & 3 “Offsite Power Supply Potentially Does Not Conform to GDC 17"

Operability Evaluation 04-009, Unit 2 & 3 “No Documentation Exists for Seismic Capability of the Containment Cooling Service Water Vault Drain Lines; Nonconforming Condition Associated with the Safety Classification of Level Switches 2(3)-4941-8"

Operability Evaluation 04-010, Unit 0 “Secondary Containment Degraded While Drywell -Torus Purge is in Operation”

CR 232525; Step increase in U2 Drywell temperatures; June 30, 2004

CR 227409; Review Version of Engineering Evaluation Attached to Operability Evaluation; June 10, 2004

CR 220484; Unsupported Pipe Segment Containing Safety Related Valves; May 12, 2004

CR 219020; Additional Crack Found in Bottom Panel of U3 EDG Air Box; May 5, 2004

CR 217085; Control Valve #4 Limit Linkage Arm Helm Joint Pin Deformed; April 26, 2004

CR 216166; Predicted post unit trip w/LOCA loading voltage low; April 21, 2004

CR 215155; U2 Steam Dryer Performance Monitoring Notification Criteria; April 15, 2004

CR 214753; Notified by NDO that voltage was below alarm limit; April 12, 2004

CR 214674; Entry into DOA 6500-12, Low Switchyard Voltage; April 13, 2004

CR 214298; Visual inspection discrepancies; April 10, 2004

CR 213714; Validation of dryer inspections; April 7, 2004

CR 213616; Mounting screws are too short for replacement breaker; April 6, 2004

CR 212836; State Estimator No Longer Predicts 345kV Voltages; April 2, 2004

CR 211430; Condenser Low Vacuum Alarm; March 29, 2004

CR 160504; 2C Condensate pump breaker trip upon start of 2C Pump, dated May 26, 2003

CR 182191; breaker failures during DIV 2 UV test, dated October 21, 2003

CR 182885; Bus 23 Cubical charging springs did not charge, dated October 25,2004

CR 182960; 2C C/CB pp breaker had to be racked multiple times for aux contacts to makeup, dated October 26, 2003

CR 190703; 2C Cond Pump failed to start during U2 start-up, dated December 14, 2003

CR 200392; 2C Condensate pump breaker failure to close, dated February 8, 2004

CR 217402; 2C C/CB pump breaker tripped free during attempted start, dated April 28, 2004

CR 219381; Equipment failures during U3 SCRAM, dated May 7, 2004

CR 227093; Initial Failure Analysis on 4KV Merlin Gerin SF6 Breaker; dated June 6, 2004

CR 228807; Initial failure analysis for 2 Dresden 4KV Merlin Gerkin BKRS, dated June 9, 2004

EC 349233; Piping Stress Evaluation on CCSW Vault Scupper Drain Lines Associated with Valves 2-4999-74 and 3-4999-74

Procedure CC-AA-304, Revision 2, "Component Classification"

UFSAR 3.4.1.2.1.2, "Isolation of the Containment Cooling Service Water Pumps from Flood Water"

Letter from J. S. Abel, Nuclear Licensing Administrator, Commonwealth Edison, to D. L. Ziemann, Chief, Operating Reactors - Branch 2, AEC, dated August 20, 1973, "Dresden Station, Units 2 and 3, Flooding of Critical Equipment - Dresden Station Special Report No. 33"

1R16 Operator Workaround

CR 215477; Feedwater level control trouble alarm distraction; April 10, 2004

Exelon "Operator Workaround Program" OP-AA-102-103, Revision 1

Dresden OWA/OC Logs–Long Form Report

Dresden CRAM ARRAYS DAP 14-14, Revision 18

CR 150151; Control rod drive rod select pushbuttons which failed to select on first attempt data; March 21, 2003

DEOP-0400-05 "Failure to Scram," Revision 12

DEOP 0500-05 "Alternate Insertion Of Control Rods," Revision 13

DOA 7400-01 "Failure of the Stator Coolant System," Revision 020

April 16, 2004 Plant Health Committee Review Package

DOS 0300-01; "Control Rod Exercise" Surveillance Procedure, Revision 036

Dresden "Operability Determinations" LS-AA-105, Revision 001

Dresden "Policy 14 Operations Aggregate Equipment Status"

1R19 Post Maintenance Testing

CR 219187; HPCI 2301-45 vlv flange bolting torque; May 6, 2004

CR 216018; 3A SDC pump discharge pressure indication; April 20, 2004

CR 214543; While performing DIS 2300-08 found leads already lifted; April 12, 2004

CR 214269; PMT fail on 3-1601-22-1; April 9, 2004

CR 213557; Incorrect spring pack values in MOV thrust software; April 2, 2004

WR 00679156-01, Replace/Regrease CR105X Contacts

1R20 Refuel and Outage

CR 220267; Failure to exercise all control rods prior to U3 startup; May 9, 2004

CR 220166; 2A RR Pump Runup; May 11, 2004

CR 217821; Delay in power ascension due to procedure inadequacy; April 28, 2004

CR 217301; Multiple D2 FW htr problems identified prior to Turb Roll; April 27, 2004

CR 210345; Unit 2 Outstanding Issues; March 22, 2004

1R22 Surveillance Test

CR 229824; 3B H2O2 Monitor saturation during post maintenance test; June 19, 2004

CR 228458; h2o2 3-2452-B; June 14, 2004

CR 228454; DPIS switches found out of tolerance, during DIS 0250-01; June 14, 2004

CR 225862; Core Spray suction valve 3-1402-3B timing; June 4, 2004

CR 225140; Dual indication for SDV vent valves; June 1, 2004

CR 223897; Target rock valve failed the IST set pressure test; May 26, 2004

CR 220369; Turbine stop valve 10% fast closure not seen first attempt; May 11, 2004

CR 216670; CRD HCU pressure switch 58-23 out of tolerance; April 23, 2004

CR 216440; TSC ventilation failed the operability surveillance; April 22, 2004

CR 216419; SRC 3-1559-C LPCI system flow SRC found out of tolerance; April 22, 2004

CR 216219; Conting. switches for unit 2 and 3 DIS 1500-01 not evaluated; April 20, 2004

CR 215966; U3 24/48 battery pilot cell temp > AC per DOS 8300-47; April 20, 2004

CR 214757; CRD accumulator PS's out of tolerance (non tech spec); April 13, 2004

CR 214543; While performing DIS 2300-08 found leads already lifted; April 12, 2004

CR 214298; Visual inspection discrepancies; April 10, 2004

CR 213800; Used NSR grease on 6 yr stem lube surveillance; April 7, 2004

CR 213157; DIS 0500-21 RX mode switch logic functional; April 5, 2004

CR 212566; Pressure switch and tem switch found out of tolerance; April 1, 2004

CR 212498; 2-262-42A and -42B trip setpoints were out of tolerance; April 1, 2004

CR 212313; H2 O2 monitor calibration; March 29, 2004

CR 207151; Torus level switch 2-2351A Failed; March 9, 2004

DES 8300-56, Revision 3, "125V DC Battery Charger Capacity Test For Charger 3-83125-3"

12E346S, "Schematic Diagram Reactor Protection System Channel "A" Scram and Auxiliary Trip Relays," sheets 1 and 2

2OS1 Access Control to Radiologically Significant Areas

DRS 5600-1; High Locked High and Very High Radiation Area Boundary and Posting Checklists; March 1, 2004 Completed Surveillance Checklist

RP-DR-1016; Radiological Briefing Expectations; Revision 1

RP-AA-460; Controls for High and Very High Radiation Areas; Revisions 2 & 4

RP-AA-403; Administration of the Radiation Work Permit Program; Revision 1

RP-AA-220; Bioassay Program; Revision 1

RP-AA 222; Methods for Estimating Internal Exposure From In Vivo and In Vitro Bioassay Data; Revision 1

RP-AA-376-1001; Radiological Posting, Labeling and Marking Standard; Revision 2

RP-DR-ALR-001; Steam Sensitive Area Entries; Revision 3

RP-AB-460; TIP Area Access Controls; Revision 0

DOP 1600-22; Drywell Entry (Initial or at Power); Revision 15

DFP 0800-39; Control of Material/Equipment Hanging in Units 2 and 3 Spent Fuel Pools; Revision 14

MA-AA-716-008; Foreign Material Exclusion Program; Revision 1

NF-AA-330; Inventory Listing of Nuclear Fuel, SNM Instruments and Sources; Attachment 1; dated February 19, 2004

RP-AA-210; Dosimetry Issue, Usage and Control; Revision 4

RWP 10003420; Non-Outage Shielding; Revision 0

RWP 10003478; Unit 2/3 Radwaste System Maintenance; Revision 0

ALARA Plan for Maintenance on the Unit 2/3 2001-484B Radwaste Floor Drain Sample Tank; dated March 31, 2004

RWP 10003450; Unit 2 Steam Sensitive Areas - Activities @ Power; Revision 0

RWP 10003471; Unit 3 Steam Sensitive Areas - Activities @ Power; Revision 1

RWP 1000 2557; D2R18 Main Condenser Maintenance and Associated ALARA Plan; Revision 1

Apparent Cause Evaluation (CR 183965); Worker Exceeds Accumulated Radiation Dose Setpoint While Vacuuming in Condenser; dated November 11, 2003

Apparent Cause Evaluation (CR 183294); Elevated Dose Rates Due to Irradiated Hardware on Reactor Cavity Bulkhead; dated November 17, 2003

RWP 10002568; D2R18 In-Vessel Inspection Activities and Associated ALARA Plan; Revision 1

DRP 6210-17; Issuance and Control of Vacuum Cleaners in Radiologically Controlled Areas; Revision 6

CR 1882241; Elevated Dose Rates Found on Equipment Drain Line; October 22, 2003

CR 173675; Exposure Received by Electrical Maintenance Shop Higher than Estimated; August 29, 2003

CR 190676; Individual Violates Rad Rules; December 14, 2003

CR 197229; High Radiation Area Discovered During Routine Surveys; January 23, 2004

CR 189497; Unposted HRA at Unit 2 Dryer Separator Pit; December 7, 2003

CR Database Listing of Radiation Protection Issues for July 2003 - April 8, 2004

Focus Area Self-Assessment Report; Access Control to Radiologically Significant Areas; dated March 26, 2004

Focus Area Self Assessment Report; Access Control to Radiologically Significant Areas/ALARA Planning and Controls; dated June 16, 2003

Field Observation No. 138460-17; Locked High Radiation Area Controls; dated February 6, 2003

Field Observation No. 164468-04; Radiological Postings; dated July 16, 2003

Field Observation No. 175784-13; Radiography ALARA Brief; dated November 7, 2003

Field Observation No. 175784-02; Drywell Entry and Briefing; dated October 16, 2003

71114.06 Emergency Preparedness

CR 217835; Drill enhancements; April 29, 2004

CR 216993; NOS Id's Deficiencies during the Annual EP Exercise; April 21, 2004

4OA1 Performance Indicator Verification (71151)

LS-AA-2140; Monthly Data Elements for NRC Occupational Exposure Control Effectiveness; Attachment 1 Data Sheets for October 2003 - March 2004

Dresden Radiation Protection Accumulated Exposure ED Alarm Report; Monthly Reports for October 2003 - March 2004

Dose Rate ED Dose Rate Alarm Report; Monthly Reports for October 2003 - March 2004

RP-AA-203-1001; Personnel Exposure Investigation Report; Attachment 1; Various Reports for October 2003 - March 2004

CR 214325; Unplanned load drop due to leaking HCU H-07; April 10, 2004

CR 212727; Safety System Performance Indicator; April 1, 2004

CR 182241; Elevated Dose Rates on Equipment Drain Line; October 22, 2003

CR 182622; Individual's Access Control Software Record Shows Daily Dose Over Admin. Limit; October 23, 2003

4OA2 Identification and Resolution of Problems (71152)

CR 226039; Corrective Actions for ACE not Performed as Planned; June 4, 2004

CR 216787; U2 Iso condenser inoperable (ENS notification); April 24, 2004

CR 216768; U2 reactor scram; April 24, 2004

CR 216632; Requirement missed during review of eval 31635; April 23, 2004

CR 216068; NOS Identifies Potential Decline in CAP Effectiveness; April 16, 2004

CR 214990; 345Kv voltage meter select switches in off; April 14, 2004

CR 214532; Collegial review of ACEs 171016-01, 203774-01, & 205340-01; April 9, 2004

CR 214209; Vendor Spring Packs Do Not Have Recommended Enhancement; April 1, 2004

CR 213846; Control rm annunciator procedures w/ hand written info; April 7, 2004

CR 212978; Clearance issues on 3A & 3B LPCI pumps and CCSW vault scaffolds; April 3, 2004

CR 212442; Incomplete action tracking item; April 1, 2004

CR 202183; Document finds of 2B core spray PP repair on seal water line; February 17, 2004

CR 200059; FME concerns in 125VDC battery bus; February 6, 2004

CR 198295; Foreign material discovered in 3-3508-A; January 29, 2004

CR 198254; Misc. deficiencies identified during 2 yr. PM on D3 D/G; January 29, 2004

CR 197333; FME found in DG fuel pump; January 24, 2004

CR 197316; FME caps found in new EDG fuel oil pump piping; January 23, 2004

CR 194058; ACIT 181718-16 closed without performing required action; January 8, 2004

4OA3 Event Follow Up (71153)

CR 216787; U2 Iso Condenser inoperable (ENS Notification); April 24, 2004

CR 216768; U2 Reactor Scram, April 24, 2004

CR 216801; Open Torque Switch Bypass Not Set per Setpoint Binder; April 25, 2004

4OA5 Other Activities

OP-AA-101-113-1004, "Guidelines for the Morning Plant Status Reports," Revision 3

OP-MW-108-107-1001, "Station Response to Grid Capacity Conditions," Revision 0

System Planning Operating Guide (SPOG): 1-3, “Generating Station Stability,” May 1, 2000

SPOG: 2-1, “Expected Transmission Voltage Levels at Generating Stations,” May 15, 2003

SPOG: 5-4, “Operating Steps to Reduce the Impact of Geomagnetic Disturbances (GMD),” Revision 0