



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

April 17, 2014

Mr. Michael J. Pacilio
Senior VP, Exelon Generation Co., LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
INTEGRATED INSPECTION REPORT 05000237/2014002;
05000249/2014002

Dear Mr. Pacilio:

On March 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the results of this inspection, which were discussed on April 2, 2014, with Mr. S. Marik, and other members of your staff.

Based on the results of this inspection, one self-revealed finding of very low safety significance was identified. The finding involved a violation of NRC requirements. However, because of the very low safety significance, and because the issue was entered into your corrective action program, the NRC is treating the issue as a non-cited violation (NCV) in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the subject or severity of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy 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, DC 20555-0001; and the Resident Inspector Office at the Dresden Nuclear Power Station. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Dresden Nuclear Power Station.

Additionally, as we informed you in the most recent NRC integrated inspection report, cross-cutting aspects identified in the last six months of 2013 using the previous terminology were being converted in accordance with the cross-reference in Inspection Manual Chapter (IMC) 0310. Section 4OA5 of the enclosed report documents the conversion of these cross-cutting aspects which will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross-cutting aspect assigned, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Dresden Nuclear Power Station.

M. Pacilio

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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 System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Jamnes Cameron, Chief
Branch 4
Division of Reactor Projects

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

Enclosure:
IR 05000237/2014002; 05000249/2014002
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000237; 05000249
License Nos: DPR-19; DPR-25

Report No: 05000237/2014002; 05000249/2014002

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: January 1 through March 31, 2014

Inspectors: G. Roach, Senior Resident Inspector
D. Betancourt, Acting Resident Inspector
M. Jones, Acting Resident Inspector
T. Go, Health Physicist
A. Shaikh, Reactor Engineer
R. Edwards, Reactor Inspector
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Management Agency

Approved by: J. Cameron, Chief
Branch 4
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

Inspection Report (IR) 05000237/2014002, 05000249/2014002; 01/01/2014 – 03/31/2014;
Dresden Nuclear Power Station, Units 2 & 3; Event Follow-Up.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. One Green finding was self-revealing. The finding was considered a non-cited violation (NCV) of NRC regulations. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas" effective date January 1, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated July 9, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" Revision 4, dated December 2006.

NRC-Identified and Self-Revealed Findings

Cornerstone: Barrier Integrity

- Green. A finding of very low safety significance and associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures", was self-revealed on November 28, 2013, when the integrity of the secondary containment for Unit 3 was not maintained when plant personnel bypassed interlock features, designed for preventing both doors of a secondary containment interlock from being simultaneously open, in order to remove equipment from a work area. Specifically, during demobilization activities from Unit 2 refueling outage D2R23, a radiation protection technician (RPT) and station laborers were dispatched to the Unit 2 main steam tunnel area, known as the Unit 2 X-Area, to remove lead blanket shielding which had been used to support maintenance work during the outage. Upon arriving at the Unit 2 X-Area the RPT and laborers opened and held open the outer containment door and attempted to simultaneously open the inner containment door. The installed door interlock prevented the RPT from unlocking the inner door. Not understanding the significance of this, the RPT pressed the emergency open push button which is normally reserved for personnel emergencies and bypassed the secondary containment interlock, opening both doors simultaneously. With both doors open, the team began removing the lead shielding blankets from the X-Area to the adjacent turbine building. Main control room operators, receiving the X-Area interlock door trouble alarm, dispatched an Equipment Operator (EO) to investigate. Upon arriving at the X-Area, the EO directed the doors to be shut restoring secondary containment integrity to Unit 3.

The simultaneous opening of the Unit 2 X-Area secondary containment interlock doors for 15 minutes was contrary to step 3.6 of licensee procedure CC-AA-201, "Plant Barrier Control Program," and was a performance deficiency warranting further review. The performance deficiency was determined to be more than minor, and thus a finding, because it was associated with the Barrier Integrity Cornerstone Attribute of Configuration Control and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide

releases caused by accidents or events. The finding was determined to be of very low safety significance because the inspectors answered "yes" to question C.1 in IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions." The finding has a cross-cutting aspect of Challenge the Unknown (H.11), in the area of human performance, for failing to appropriately challenge an unexpected condition when the RPT and laborers determined that the containment interlock doors were closed with the interlock in operation. Specifically, the individuals did not request further guidance from their supervision or the operations watch team with regards to the status of secondary containment. This information would have revealed to them that their task of demobilizing lead shielding in the Unit 2 X-Area would have to be completed while maintaining the integrity of the secondary containment interlock barrier. (Section 4OA3.1)

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

Unit 2

Unit 2 entered the inspection period at full power. Reactor power was lowered to 23 percent on January 6, 2014 following the unplanned trip of the 2B reactor recirculation pump. Operators restored two loop operation on January 8, 2014 and returned the unit to full power. Unit 2 remained at or near full power for the rest of the inspection period.

Unit 3

Unit 3 operated at or around full power during the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Condition – Heavy Snow and Ice With Extreme Cold Conditions

a. Inspection Scope

Since heavy snow and ice accompanied by extreme cold conditions were forecast in the vicinity of the facility for March 3, 2014, the inspectors reviewed the licensee's overall preparations/protection for the expected weather conditions. On March 3, 2014, the inspectors walked down the condensate storage tanks, Crib House which houses the diesel generator cooling water system and the 2/3 diesel fire pump, in addition to other non-safety related systems important to plant operation, and the Unit 2 and Unit 3 Reserve Auxiliary Transformers (normal source of offsite power) because their safety-related or important to safety functions could be affected or required as a result of the extreme cold conditions forecast for the facility. The inspectors observed insulation, heat trace circuits, space heater operation, and weatherized enclosures to ensure operability of affected systems. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one readiness for impending adverse weather condition sample as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Unit 2 emergency diesel generator (EDG) upon return to service from a planned maintenance outage;
- 3B standby liquid control (SBLC) train with the 3A SBLC Out-of-Service (OOS);
- Unit 2 high pressure coolant injection (HPCI) following return to service from a planned maintenance outage; and
- 2/3 EDG upon return to service from a planned maintenance outage.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS) requirements, outstanding work orders (WOs), condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted four partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On February 18-21, 2014, the inspectors performed a complete system alignment inspection of the Unit 2 containment cooling service water to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment

cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding work orders was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Unit 2 isolation condenser area, elevation 589', Fire Zone 1.1.2.5A;
- Unit 3 isolation condenser pipeway, elevation 545', Fire Zone 1.1.1.5C;
- Unit 3 standby liquid control area, elevation 589', Fire Zone 1.1.1.5D; and
- Unit 3 containment cooling service water pumps, elevation 495', Fire Zone 8.2.2B.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

These activities constituted four quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On January 30, 2014, the inspectors observed an unannounced fire brigade activation in the Unit 3 reactor feed pump area. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies; openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were:

- proper wearing of turnout gear and self-contained breathing apparatus;
- proper use and layout of fire hoses;
- employment of appropriate fire-fighting techniques;
- sufficient firefighting equipment brought to the scene;
- effectiveness of fire brigade leader communications, command, and control;
- search for victims and propagation of the fire into other plant areas;
- smoke removal operations;
- utilization of pre-planned strategies;
- adherence to the pre-planned drill scenario; and
- drill objectives.

Documents reviewed are listed in the Attachment to this report.

These activities constituted one annual fire protection inspection sample as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the UFSAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. The specific documents reviewed are listed in the Attachment to this report. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a

walkdown of the following plant area and observed maintenance to assess the adequacy of the:

- Unit 2 containment cooling service water flood vault barrier door seal repair and leak testing.

This inspection constituted one internal flooding sample as defined in IP 71111.06-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On February 10, 2014, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On January 6, 2014, the inspectors observed Unit 2 single loop operation due to a trip of the 2B reactor recirculation pump. This was an activity that required heightened

awareness or was related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms (if applicable);
- correct use and implementation of procedures;
- control board (or equipment) manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications (if applicable).

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- Radiation Monitors; and
- Primary Containment Valves.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Both units YELLOW for grid conditions;
- Unit 2 YELLOW with low pressure coolant injection (LPCI) A Train OOS;
- Unit 3 YELLOW with 3A SBLC OOS;
- Unit 2 YELLOW with HPCI OOS; and
- Unit 3 YELLOW with HPCI OOS.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

Documents reviewed during this inspection are listed in the Attachment to this report. These maintenance risk assessments and emergent work control activities constituted five samples as defined in IP 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Operability Evaluation 13-010, "2-132 Isolation Condenser;"
- Operability Evaluation 13-009, EC 396372, "2-8526 Unit 2 Nitrogen Make-Up Header Relief Valve;"
- 2B recirculation loop differential pressure switch 2-0261-35B LPCI loop select indicator off scale high;
- U2 emergency diesel generator failed to meet 13 second fast start time; and
- 2A LPCI heat exchanger supports exhibit cracking.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted five samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification:

- Secondary containment door interlock circuit permanent modification.

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the UFSAR, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected system. The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design

control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one permanent plant modification samples as defined in IP 71111.18-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance (PM) activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Work Order (WO) 1506917, "Dresden 3 Two Year Equipment 3A Core Spray Pump Motor Environmental Qualification Surveillance;"
- WO 1662856, "Dresden 1/2/3 Semi-Annual PM Operability Surveillance for the Technical Support Center Air Filtration Unit;"
- WO 01617170; "Operations PMT Air Start Regulator on Dresden 2 EDG DOS 6600-01;"
- Unit 3 Reactor Building to Turbine Building Interlock Door following modification;
- WO 01701347, "Dresden 2 Quarterly TS HPCI Pump Operability Test and In-service Test;" and
- WO 01714083, "Dresden 2/3 Monthly TS Unit Diesel Generator Operability."

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP

and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted six post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- WO 01702738, "Dresden Unit 2 Technical Specification Containment Cooling Service Water Pump Operability Test and In-service Test Surveillance" (IST);
- WO 1608070, "Dresden Unit 2 Annual TS Drywell / Equipment Floor Drain Leakage Transmitter Calibration" (RCS);
- WO 1507377, "Dresden 3 24 month Diesel Generator Test / Endurance & Margin/ Full Load Reject/ECCS" (routine);
- WO 01479667; "Dresden Unit 2 24 Month TS Core Spray System Logic System Functional Test (LSFT)" (routine); and
- WO 1046397, "Dresden 2/3 6 Year UFSAR Dresden Dam Failure Surveillance." (routine).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the UFSAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;

- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted three routine surveillance testing samples, one reactor coolant system leak detection inspection sample, and one in-service testing sample as defined in IP 71111.22, Sections-02 and-05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on March 4, 2014, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Technical Support Center and the Simulator Control Room to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06-05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

This inspection constituted one complete sample as defined in IP 71124.03-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the plant Final Safety Analysis Report (FSAR) to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems or airborne monitoring instrumentation. Instrumentation review included continuous air monitors (continuous air monitors and particulate-iodine-noble-gas-type instruments) used to identify changing airborne radiological conditions such that actions to prevent an overexposure may be taken. The review included an overview of the Respiratory Protection Program and a description of the types of devices used. The inspectors reviewed the FSAR, Technical Specifications (TSs), and emergency planning documents to identify location and quantity of respiratory protection devices stored for emergency use.

Inspectors reviewed the licensee's procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus (SCBA) as well as procedures for air quality maintenance.

The inspectors reviewed any reported performance indicators related to unintended dose resulting from intakes of radioactive material.

b. Findings

No findings were identified.

.2 Engineering Controls (02.02)

a. Inspection Scope

The inspectors reviewed the licensee's use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls (in lieu of respiratory protection devices) to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation and assessed whether the systems are used, to the extent practicable, during high-risk activities (e.g., using containment purge during cavity flood up).

The inspectors selected installed ventilation systems used to mitigate the potential for airborne radioactivity and evaluated whether the ventilation airflow capacity, flow path (including the alignment of the suction and discharges), and filter/charcoal unit

efficiencies, as appropriate, were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne area to the extent practicable.

The inspectors selected temporary ventilation system setups (high-efficiency particulate air/charcoal negative pressure units, down draft tables, tents, metal “Kelly buildings,” and other enclosures) used to support work in contaminated areas. The inspectors assessed whether the use of these systems is consistent with licensee procedural guidance and as-low-as-reasonably-achievable (ALARA) concept.

The inspectors reviewed airborne monitoring protocols by selecting installed systems used to monitor and warn of changing airborne concentrations in the plant and evaluated whether the alarms and setpoints were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR Part 20 and the ALARA concept.

The inspectors assessed whether the licensee had established trigger points (e.g., the Electric Power Research Institute’s “Alpha Monitoring Guidelines for Operating Nuclear Power Stations”) for evaluating levels of airborne beta-emitting (e.g., plutonium-241) and alpha-emitting radionuclides.

b. Findings

No findings were identified.

.3 Use of Respiratory Protection Devices (02.03)

a. Inspection Scope

For those situations where it is impractical to employ engineering controls to minimize airborne radioactivity, the inspectors assessed whether the licensee provided respiratory protective devices such that occupational doses are ALARA. The inspectors selected work activities where respiratory protection devices were used to limit the intake of radioactive materials and assessed whether the licensee performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is ALARA. The inspectors also evaluated whether the licensee established means (such as routine bioassay) to determine if the level of protection (i.e., protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in the licensee’s work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC per 10 CFR 20.1703(b). The inspectors selected work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or any conditions of their NRC approval.

The inspectors reviewed records of air testing for supplied-air devices and self-contained breathing apparatus (SCBA) bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors reviewed plant breathing air supply

systems to determine whether they meet the minimum pressure and airflow requirements for the devices in use.

The inspectors selected several individuals qualified to use respiratory protection devices and assessed whether they have been deemed fit to use the devices by a physician.

The inspectors selected several individuals assigned to wear a respiratory protection device and observed them donning, doffing, and functionally checking the device as appropriate. Through interviews with these individuals, the inspectors evaluated whether these individuals knew how to safely use the device and how to properly respond to any device malfunction or unusual occurrence (i.e., loss of power, loss of air, etc.).

The inspectors chose multiple respiratory protection devices staged and ready for use in the plant or stocked for issuance for use. The inspectors assessed the physical condition of the device components (mask or hood, harnesses, air lines, regulators, air bottles, etc.) and reviewed records of routine inspection for each. The inspectors selected several of the devices and reviewed records of maintenance on the vital components (e.g., pressure regulators, inhalation/exhalation valves, hose couplings). The inspectors reviewed the Respirator Vital Components Maintenance Program to ensure that the repairs of vital components were performed by the respirators' manufacturer.

b. Findings

No findings were identified.

.4 Self-Contained Breathing Apparatus for Emergency Use (02.04)

a. Inspection Scope

Based on the FSAR, TSs, and emergency operating procedure requirements, the inspectors reviewed the status and surveillance records of SCBAs staged in-plant for use during emergencies. The inspectors reviewed the licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions.

The inspectors selected several individuals on control room shift crews and from designated departments currently assigned emergency duties (e.g., onsite search and rescue duties) to assess whether control room operators and other emergency response and radiation protection personnel (assigned in-plant search and rescue duties or as required by emergency operating procedures or the emergency plan) were trained and qualified in the use of SCBAs (including personal bottle change-out). The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

The inspectors determined whether appropriate mask sizes and types are available for use (i.e., in-field mask size and type match what was used in fit-testing). The inspectors determined whether on-shift operators had no facial hair that would interfere with the sealing of the mask to the face and whether vision correction (e.g., glasses inserts or corrected lenses) were available as appropriate.

The inspectors reviewed the past two years of maintenance records for select self-contained breathing apparatus units used to support operator activities during accident conditions and designated as “ready for service” to assess whether any maintenance or repairs on SCBA unit’s vital components were performed by an individual, or individuals, certified by the manufacturer of the device to perform the work. The vital components typically are the pressure-demand air regulator and the low-pressure alarm. The inspectors reviewed the onsite maintenance procedures governing vital component work to determine any inconsistencies with the SCBA manufacturer’s recommended practices. For those SCBAs designated as “ready for service,” the inspectors determined whether the required, periodic air cylinder hydrostatic testing was documented and up-to-date, and the retest air cylinder markings required by the U.S. Department of Transportation were in place.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee’s Corrective Action Program (CAP). The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by the licensee.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

This inspection constituted one complete sample as defined in IP 71124.04-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the results of Radiation Protection Program audits related to internal and external dosimetry (e.g., licensee’s quality assurance audits, self-assessments, or other independent audits) to gain insights into overall licensee performance in the area of dose assessment and focus the inspection activities consistent with the principle of “smart sampling.”

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program accreditation report on the vendor’s most recent results to determine the status of the contractor’s accreditation.

A review was conducted of the licensee’s procedures associated with dosimetry operations, including issuance/use of external dosimetry (routine, multi-badging, extremity, neutron, etc.), assessment of internal dose (operation of whole body counter,

assignment of dose based on derived air concentration-hours, urinalysis, etc.), and evaluation of and dose assessment for radiological incidents (distributed contamination, hot particles, loss of dosimetry, etc.).

The inspectors evaluated whether the licensee established procedural requirements for determining when external and internal dosimetry is required.

b. Findings

No findings were identified.

.2 External Dosimetry (02.02)

a. Inspection Scope

The inspectors evaluated whether the licensee's dosimetry vendor is National Voluntary Laboratory Accreditation Program accredited and if the approved irradiation test categories for each type of personnel dosimeter used are consistent with the types and energies of the radiation present and the way the dosimeter is being used (e.g., to measure deep dose equivalent, shallow dose equivalent, or lens dose equivalent).

The inspectors evaluated the onsite storage of dosimeters before their issuance, during use, and before processing/reading. The inspectors also reviewed the guidance provided to rad-workers with respect to care and storage of dosimeters.

The inspectors assessed whether non-National Voluntary Laboratory Accreditation Program accredited passive dosimeters (e.g., direct ion storage sight read dosimeters) were used according to licensee procedures that provide for periodic calibration, application of calibration factors, usage, reading (dose assessment), and zeroing.

The inspectors assessed the use of active dosimeters (electronic personal dosimeters) to determine if the licensee uses a "correction factor" to address the response of the electronic personal dosimeter as compared to the passive dosimeter for situations when the electronic personal dosimeter must be used to assign dose. The inspectors also assessed whether the correction factor is based on sound technical principles.

The inspectors reviewed dosimetry occurrence reports or CAP documents for adverse trends related to electronic personal dosimeters, such as interference from electromagnetic frequency, dropping or bumping, failure to hear alarms, etc. The inspectors assessed whether the licensee identified any trends and implemented appropriate corrective actions.

b. Findings

No findings were identified.

.3 Internal Dosimetry (02.03)

Routine Bioassay (In Vivo)

a. Inspection Scope

The inspectors reviewed procedures used to assess the dose from internally deposited nuclides using whole body counting equipment. The inspectors evaluated whether the procedures addressed methods for differentiating between internal and external contamination, the release of contaminated individuals, the route of intake and the assignment of dose.

The inspectors reviewed the whole body count process to determine if the frequency of measurements was consistent with the biological half-life of the nuclides available for intake.

The inspectors reviewed the licensee's evaluation for use of its portal radiation monitors as a passive monitoring system to determine if instrument minimum detectable activities were adequate to determine the potential for internally deposited radionuclides sufficient to prompt additional investigation.

The inspectors selected several whole body counts and evaluated whether the counting system used had sufficient counting time/low background to ensure appropriate sensitivity for the potential radionuclides of interest. The inspectors reviewed the radionuclide library used for the count system to determine its appropriateness. The inspectors evaluated whether any anomalous count peaks/nuclides indicated in each output spectra received appropriate disposition. The inspector's reviewed the licensee's 10 CFR Part 61 data analyses to determine whether the nuclide libraries included appropriate gamma-emitting nuclides. The inspectors evaluated how the licensee accounts for hard-to-detect nuclides in the dose assessment.

b. Findings

No findings were identified.

Special Bioassay (In Vitro)

a. Inspection Scope

There was no internal dose assessment obtained using in vitro monitoring for the inspectors to review from the past year records. However, the inspectors reviewed the licensee's procedures and assessed the adequacy of the licensee's program for in vitro monitoring (i.e., urinalysis and fecal analysis) of radionuclides (i.e., tritium, fission products, and activation products), including collection and storage of samples.

The inspectors reviewed the vendor laboratory Quality Assurance Program and assessed whether the laboratory participated in an industry recognized cross-check program including whether out-of-tolerance results were resolved appropriately.

b. Findings

No findings were identified.

Internal Dose Assessment – Airborne Monitoring

a. Inspection Scope

The inspectors reviewed the licensee's program for airborne radioactivity assessment and dose assessment, as applicable, based on airborne monitoring and calculations of derived air concentration. The inspectors determined whether flow rates and collection times for air sampling equipment were adequate to allow lower limits of detection to be obtained. The inspectors also reviewed the adequacy of procedural guidance to assess internal dose if respiratory protection was used.

b. Findings

No findings were identified.

Internal Dose Assessment – Whole Body Count Analyses

a. Inspection Scope

The inspectors reviewed several dose assessments performed by the licensee using the results of whole body count analyses. The inspectors determined whether affected personnel were properly monitored with calibrated equipment and that internal exposures were assessed, consistent with the licensee's procedures.

b. Findings

No findings were identified.

.4 Special Dosimetric Situations (02.04)

Declared Pregnant Workers

a. Inspection Scope

The inspectors assessed whether the licensee informs workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors selected individuals who have declared pregnancy during the current assessment period and evaluated whether the licensee's Radiological Monitoring Program (internal and external) for declared pregnant workers is technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed exposure results and monitoring controls employed by the licensee and with respect to the requirements of 10 CFR Part 20.

b. Findings

No findings were identified.

Dosimeter Placement and Assessment of Effective Dose Equivalent for External Exposures

a. Inspection Scope

The inspectors reviewed the licensee's methodology for monitoring external dose in non-uniform radiation fields or where large dose gradients exist. The inspectors evaluated the licensee's criteria for determining when alternate monitoring, such as use of multi-badging, was to be implemented.

The inspectors reviewed dose assessments performed using multi-badging to evaluate whether the assessment was performed consistently with the licensee's procedures and dosimetric standards.

b. Findings

No findings were identified.

Shallow Dose Equivalent

a. Inspection Scope

The inspectors reviewed shallow dose equivalent dose assessments for adequacy. The inspectors evaluated the licensee's method (e.g., VARSKIN or similar code) for calculating shallow dose equivalent from distributed skin contamination or discrete radioactive particles.

b. Findings

No findings were identified.

Neutron Dose Assessment

a. Inspection Scope

The inspectors evaluated the licensee's Neutron Dosimetry Program, including dosimeter types and/or survey instrumentation.

The inspectors reviewed neutron exposure situations (e.g., independent spent fuel storage installation operations or at-power containment entries) and assessed whether: (a) dosimetry and/or instrumentation was appropriate for the expected neutron spectra; (b) there was sufficient sensitivity for low dose and/or dose rate measurement; and (c) neutron dosimetry was properly calibrated. The inspectors also assessed whether interference by gamma radiation had been accounted for in the calibration and whether time and motion evaluations were representative of actual neutron exposure events as applicable.

b. Findings

No findings were identified.

Assigning Dose of Record

a. Inspection Scope

For the special dosimetric situations reviewed in this section, the inspectors assessed how the licensee assigns dose of record for total effective dose equivalent, shallow dose equivalent, and lens dose equivalent. This included an assessment of external and internal monitoring results, supplementary information on individual exposures (e.g., radiation incident investigation reports and skin contamination reports), and radiation surveys and/or air monitoring results when dosimetry was based on these techniques.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors assessed whether problems associated with occupational dose assessment are being identified by the licensee at an appropriate threshold and are properly addressed for resolution in the licensee's CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving occupational dose assessment.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

Cornerstones: Initiating Events

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours performance indicator (PI) (IE01) Dresden Nuclear Power Station Units 2 and 3 covering the period from the first quarter 2013 through fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January through December 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two samples of unplanned scrams per 7000 critical hours as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications PI (IE04) Dresden Nuclear Power Station Units 2 and 3 covering the period from the first quarter 2013 through fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January through December 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two unplanned scrams with complications samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours PI (IE03) Dresden Nuclear Power Station Units 2 and 3 covering the period from the first quarter 2013 through fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports and NRC Integrated Inspection Reports for the period of January through December 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two samples of unplanned transients per 7000 critical hours as defined in IP 71151-05.

b. Findings

No findings were identified.

Cornerstones: Barrier Integrity and Occupational and Public Radiation Safety

.4 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the Reactor Coolant System (RCS) specific activity Performance Indicator (PI) (BI01) for Dresden Nuclear Power Station, Units 2 and 3, for the period from the first quarter 2013 through the fourth quarter 2013. The inspectors used Performance Indicator (PI) definitions and guidance contained in the Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's RCS chemistry samples, TS requirements, issue reports, event reports, and NRC Integrated Inspection Reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified.

In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze an RCS sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two RCS specific activity samples as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews were proper and adequate; and

that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Annual Sample: Review of Operator Workarounds

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of the operator workarounds (OWAs) on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents.

The inspectors performed a review of the cumulative effects of OWAs. The documents listed in the Attachment to this report were reviewed to accomplish the objectives of the inspection procedure. The inspectors reviewed both current and historical operational challenge records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP and proposed or implemented appropriate and timely corrective actions which addressed each issue. Reviews were conducted to determine if any operator challenge could increase the possibility of an Initiating Event, if the challenge was contrary to training, required a change from long-standing operational practices, or created the potential for inappropriate compensatory actions. Additionally, all temporary modifications were

reviewed to identify any potential effect on the functionality of Mitigating Systems, impaired access to equipment, or required equipment uses for which the equipment was not designed. Daily plant and equipment status logs, degraded instrument logs, and operator aids or tools being used to compensate for material deficiencies were also assessed to identify any potential sources of unidentified operator workarounds.

This review constituted one operator workaround annual inspection sample as defined in IP 71152-05.

b. Findings

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report (LER) 05000249/2013-001-00: Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously

a. Inspection Scope

On November 28, 2013 during demobilization activities from Unit 2 refueling outage D2R23, a radiation protection technician (RPT) and station laborers were dispatched to the Unit 2 Main Steam Tunnel Area, which is referred to by the licensee as the Unit 2 X-Area, to remove lead blanket shielding which had been used to support maintenance work during the outage. Upon arrival at the Unit 2 X-Area, the team noted that the Secondary Containment interlock doors were closed with the interlock feature operating. This was an unexpected condition as the interlock doors had been previously opened to support outage activities. The demobilization team was not aware that Secondary Containment conditions had been restored in the Unit 2 X-Area.

In an effort to expedite the removal of the shielding from the X-Area, the licensee's demobilization team proceeded in the face of uncertainty when they bypassed the Secondary Containment interlock doors to the space without seeking Shift Manager permission or contacting supervision when the unexpected plant condition was encountered.

The inspectors reviewed the licensee's actions in response to the event, the immediate corrective actions, and the licensee's apparent cause evaluation report. Documents reviewed are listed in the Attachment to this report. A finding and violation of NRC requirements was identified and is discussed below.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(C), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

b. Findings

Introduction: A finding of very low safety significance (Green) and associated non-cited violation of Technical Specification (TS) 5.4.1, "Procedures", was self-revealed on

November 28, 2013, when the integrity of the Secondary Containment for Unit 3 was not maintained when plant personnel bypassed interlock features, designed for allowing both doors of a Secondary Containment interlock from being simultaneously open, in order to remove equipment from a work area.

Description: On November 28, 2013, during demobilization activities from Unit 2 refueling outage D2R23, a radiation protection technician (RPT) and station laborers were dispatched to the Unit 2 Main Steam Tunnel Area, which is referred to by the licensee as the Unit 2 X-Area, to remove lead blanket shielding which had been used to support maintenance work during the outage. Upon arriving at the Unit 2 X-Area the RPT and laborers opened and held open the outer containment door and attempted to simultaneously open the inner containment door. The installed door interlock prevented the RPT from unlocking the inner door. Not understanding the significance of this, the RPT pressed the emergency open push button which is normally reserved for personnel emergencies and bypassed the Secondary Containment interlock opening both doors simultaneously. With both doors open, the team began removing the lead shielding blankets from the X-Area to the adjacent Turbine Building. With the opening of both Secondary Containment doors, Main Control Room operators received the X-Area Interlock Door Trouble alarm and dispatched an Equipment Operator (EO) to investigate. Upon arriving at the X-Area the EO directed the doors shut and informed the RPT and laborers that they had violated Secondary Containment integrity by holding the doors simultaneously open.

The licensee performed an Apparent Cause Evaluation (ACE 1590970) and determined the apparent cause of the event to be failure to recognize the hazard while proceeding in the face of uncertainty. Specifically, on November 12, 2013, the Unit 2 X-Area was physically separated from the combined Reactor Building environment by performing licensee procedure DMP 1600-13, "Installation and Removal of Temporary Plugging of X-Area Penetrations to Remove the X-Area from Secondary Containment." By performing this procedure, the X-Area interlock could be blocked open allowing the free access of maintenance and other personnel working in this area to support outage activities. On November 25, 2013, the licensee removed the temporary plugs and re-established the connection between the Unit 2 X-Area and the Reactor Building. As such, the interlock doors were placed in their normally closed configuration. The licensee investigation noted that the containment doors possessed a sign indicating that they were a part of the Secondary Containment and would require Shift Manager permission for both to be opened simultaneously. In addition, the investigation revealed that Radiation Protection was one part of the organization which had not been notified of the change in containment conditions as of November 25, 2013.

This event only affected Secondary Containment on Unit 3 as Unit 2 was not in an operational mode that required Secondary Containment to be set. The Reactor Building is configured as a common environment between Units 2 and 3 and so once the interlock was bypassed in the Unit 2 X-Area the entire Reactor Building was affected. The duration that the doors remained simultaneously open was approximately 15 minutes and the required 0.25 inches Water Column vacuum was always maintained in the Reactor Building.

Analysis: The inspectors determined that the simultaneous opening of the Unit 2 X-Area Secondary Containment interlock doors for 15 minutes was contrary to step 3.6 of licensee procedure CC-AA-201, "Plant Barrier Control Program," and was a performance

deficiency warranting further review. Specifically, with the two interlock doors opened simultaneously for 15 minutes the Secondary Containment could not have performed its safety function as specified by Technical Specification 3.6.4.1 and Updated Final Safety Analysis Report section 6.2.3. The performance deficiency was determined to be more than minor, and thus a finding, in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Barrier Integrity Cornerstone Attribute of Configuration Control and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events.

The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, dated June 19, 2012. The inspectors reviewed the Barrier Integrity Screening Questions in Appendix A, Exhibit 3 and answered "yes" to question C.1. As a result, the finding was determined to be very low safety significance (Green).

This finding has a cross-cutting aspect of Challenge the Unknown (H.11) in the area of human performance, for failing to appropriately challenge an unexpected condition when the RPT and laborers determined that the containment interlock doors were closed with the interlock in operation. Specifically, the individuals did not request further guidance from their supervision or the operations watch team as of the status of Secondary Containment which would have revealed to them that their task of demobilizing lead shielding in the Unit 2 X-Area would have to be completed while maintaining the integrity of the Secondary Containment interlock barrier.

Enforcement: Technical Specification Section 5.4.1 states, in part, that "written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978." NRC Regulatory Guide 1.33, Appendix A, Section 4.j.(1), states, in part, that procedures should be prepared for boiling water reactor safety systems during startup shutdown, and changing modes of operation for maintaining the integrity of containment. Procedure CC-AA-201, "Plant Barrier Control Program", step 3.6 requires in part that doors should always be placed in their required position after use in order to be considered operable.

Contrary to the above, on November 28, 2013, while performing outage demobilization activities in the Unit 2 X-Area, the licensee failed to implement step 3.6 of procedure CC-AA-201. Specifically, the licensee failed to control Secondary Containment interlock doors intentionally holding them open to allow for ease of material movement. This issue was entered into the licensee's CAP as Issue Report 1590970. Licensee corrective actions included a Radiation Protection Department stand down discussing the event; procedures for communicating changes in containment status were revised to include notification of additional departments; and additional briefing requirements for access to the X-Areas including the status of Secondary Containment were made.

Because this violation was of very low safety significance and it was entered into the licensee's CAP (Issue Report 1590970), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (**NCV 05000249/2014002-01, Failure to Maintain Secondary Containment Integrity During Outage Demobilization Activities**).

.2 (Closed) Licensee Event Report 05000237/2013-004-00; 05000249/2013-004-00: Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously

On November 5, 2013, at 0842 lasting for approximately one second, the secondary containment interlock doors on the Unit 2 side separating the reactor building and the turbine building were simultaneously open resulting in an unplanned entry into secondary containment, Technical Specification 3.6.4.1. At the time of the event, a designated door operator had just started opening the turbine building side door to allow passage of personnel when they noticed the reactor building side door come partially open and then immediately close. The reactor building to outside environment differential pressure requirements of maintaining at least 0.25 inches water column vacuum were maintained at all times.

Following the event, the licensee's initial troubleshooting indicated that the reactor building door's latching magnets were not effectively securing the door when closed. A closer look, identified that a recently installed limit switch (LS-2) associated with door position indication for the interlock circuitry was preventing the door from fully seating against the magnets, therefore preventing them from securely restraining the door shut. On October 28, 2013, the licensee replaced LS-2 due to an unrelated corrective maintenance action. The newly installed LS-2 was 0.150 inches wider than the limit switch it had replaced which exhibited some minor deformation due to repetitive interaction with the door face as it closed. This small clearance difference eventually resulted in the gap in the door to magnet interface and as a result the intermittent failure of the interlock. The licensee also performed an Equipment Apparent Cause Evaluation (EACE) 1581320 in support of the troubleshooting performed in the field and determined that the most likely cause of the event was an inadequate design specification for LS-2.

The inspectors concluded that the failure to account for the difference in dimensions for the limit switch and as a result the intermittent failure of the Unit 2 secondary containment interlock was a performance deficiency and a violation of 10 CFR 50, Appendix B, Criterion III, Design Control. The inspectors determined the violation to be minor by answering "no" to the four minor screening questions in accordance with IMC 0612, Appendix B, "Issue Screening," dated September 7, 2012. Specifically, the inspectors accounted for the extremely short duration of the intermittent door failure and noted that an individual was assigned responsibility for monitoring and controlling the operation of these doors and would have been available to respond had the doors remained open longer. Although this issue should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section 2 of the Enforcement Policy. The licensee's immediate corrective action included adjusting the door magnets to account for the limit switch to door interference. A permanent modification to the interlock circuit logic which will include adding a redundant and diversely powered latching system will be installed in April 2014. The modification includes ladder logic circuitry which addresses previously identified logic vulnerabilities and provides a diversely powered and redundant door latch system eliminating the possibility that a single failure would cause the interlock to fail open.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(C), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.3 (Closed) Licensee Event Report 05000237/2013-005-00: Primary Containment Inboard and Outboard Feed Water Isolation Valves Exceed Leakage Limits

On November 14, 2013, while Unit 2 was shut down for refueling outage D2R23, the in series Feed Water "B" Loop Containment Isolation valves failed their local leak rate acceptance criteria. The "as found" leak rate for both valve was estimated to exceed the limits for primary containment leakage as specified in the Technical Specifications. The licensee determined that the cause of this event was that "best practices, for installation and testing of the valves in order to maximize reliability, had not been implemented."

The inspectors reviewed the licensee's actions in response to the event, the immediate corrective actions, and the root cause evaluation report. Documents reviewed are listed in the Attachment to this report. No findings or violations of NRC requirements were identified.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(C), as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. Also 10 CFR 50.73(a)(2)(ii)(A), any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.4 (Closed) Licensee Event Report 05000237/2013-006-00: LPCI Swing Bus Auto Transfer Did Not Transfer as Expected

On November 14, 2013, during the performance of the Bus 24-1 Under Voltage and Emergency Core Cooling System (ECCS) Integrated Functional Test, in accordance with licensee procedure DOS 6600-05, the Low Pressure Coolant Injection (LPCI) swing bus MCC 28-7/29-7 did not automatically transfer its power supply from Bus 29 to Bus 28 as expected. The licensee successfully manually transferred power to Bus 28 immediately following the failure to automatic transfer.

Following the event, the licensee performed troubleshooting and was unable to identify a failed component. As a precaution a time delay relay in the control circuit was replaced and sent for offsite testing as the most likely cause of the failure. Significant testing of the time delay relay showed that the component performed its required function each time and was not failed.

The licensee also performed an Equipment Apparent Cause Evaluation (EACE) 1589071-02 and determined the apparent cause to be high resistance on contacts in the control portion of the control switch preventing the automatic transfer of power to Bus 28. This assessment was based on the time delay relay performing its function during post event testing and the operator's ability to successfully manually transfer to Bus 28 immediately following the event. In addition, once the operator's manually transferred power the control switch contacts in question would have repositioned open which could

alleviate an intermittent “dirty” or high resistance situation. It should also be noted that the licensee was able to successfully automatically transfer power later during the surveillance which would indicate that these contacts after being exercised open had properly reclosed and were no longer in a high resistance condition. This would corroborate why initial troubleshooting did not indicate a faulted component.

The licensee’s corrective actions include creating work orders to replace the control switch in question as well the equivalent control switches associated with Division 1 and both Divisions of power on Unit 3. In addition, the licensee is reviewing changes to the maintenance template for cleaning and inspecting control switches. The inspectors reviewed the licensee’s corrective actions and had no concerns. Documents reviewed are listed in the Attachment to this report. No findings or violations of NRC requirements were identified.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(B), as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat. Also 10 CFR 50.73(a)(2)(v)(D), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.5 (Closed) Licensee Event Report 05000237/2013-007-00; 05000249/2013-007-00: Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously

On November 16, 2013, at 1019 lasting for approximately five seconds, the secondary containment interlock doors on the Unit 3 side separating the reactor building and the turbine building were simultaneously open resulting in an unplanned entry into secondary containment, Technical Specification 3.6.4.1. An operator, specifically staged inside the interlock due to recent challenges associated with the performance of the doors, rapidly shut the secondary containment boundary door on the reactor building side of the interlock. This ensured that reactor building to outside environment differential pressure requirements were maintained at all times. At the time of the event, the designated door operator had just started opening the reactor building side door to allow passage of personnel when they noticed a change in the airlock pressure. The operator noted at that point that the turbine building side door had come ajar approximately one inch.

Following the event, the licensee performed troubleshooting on the interlock to determine the cause. The interlock doors were challenged more than 50 times, but a recreation of the failure experienced on November 16, 2013, did not occur. The licensee also performed an Equipment Apparent Cause Evaluation 1581320 in support of the troubleshooting performed in the field and determined that the most likely cause of the event was an intermittent failure of the K1 relay which is an active component in the interlock circuitry. Specifically, the relay becomes energized to prevent the opposite door in the interlock from opening when a demand to open is received by a door.

The licensee's immediate corrective actions included installing mechanical barriers, physically preventing door motion, which would need to be removed by the assigned interlock operator prior to engaging the interlock circuit. This temporary modification was replaced on November 18, 2013, with mechanical door latches that would again require the assigned door operator to open prior to pressing the door open pushbutton. A permanent modification to the interlock circuit logic which included adding a redundant and diversely powered latching system was installed in March 2014. The modification includes ladder logic circuitry which addresses previously identified logic vulnerabilities and provides a diversely powered and redundant door latch system eliminating the possibility that a single failure would cause the interlock to fail open. The inspectors reviewed the licensee's corrective actions and had no concerns. No findings or violations of NRC requirements were identified.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(C), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.6 (Closed) Licensee Event Report 05000237/2013-008-00: Leak Identified On a Relief Valve During Pressure Test Resulting In a Degraded Principal Safety Barrier

On November 26, 2013, while Unit 2 was shut down for refueling outage D2R23, the licensee was performing the Reactor Vessel System Leakage Test per licensee procedures ER-AA-330-001 and DOS 0201-01. Licensee staff observing for indications of system leakage noted a 1 drop per second leak from the 2-0203-3C Electromatic Relief Valve (ERV). This component is a part of the reactor coolant system pressure boundary and as such the leak was coded as ASME Section XI Code Class I pressure boundary leakage.

The licensee replaced the leaking component prior to starting up from the refueling outage. Subsequent investigation noted a flaw which propagated from a void in the weld supporting the line connecting the main valve body to the pilot valve of the ERV. A licensee review of drywell radiation conditions during the previous operating cycle indicated that the leak did not exist prior to the pressure test. The inspectors concurred with this assessment through independent review of daily reactor coolant system leakage rates and other drywell parameters during the previous operating cycle and no noted indications of historical leakage (residue or discoloration) on the ERV during numerous drywell walk downs performed by the inspectors in support of refueling outage inspection activities.

The inspectors reviewed the licensee's actions in response to the event, the immediate corrective actions, and the licensee's cause evaluation report. Documents reviewed are listed in the Attachment to this report. No findings or violations of NRC requirements were identified.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(ii)(A), any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.7 (Closed) Licensee Event Report 05000237/2013-009-00: HPCI Failed to Achieve Rated Flow Due to Failure of Stop Valve to Open

On November 30, 2013, plant operations staff was performing a fast start of the Unit 2 High Pressure Coolant Injection (HPCI) system in accordance with Technical Specification Surveillance Requirement 3.5.1.6 in conjunction with a unit start-up from refueling outage D2R23. After an initiation signal was given to the HPCI system, the HPCI turbine stop valve failed to fully open which prevented the HPCI main pump from achieving its required flow rate. The failure to successfully complete Surveillance Requirement 3.5.1.6 is considered a failure to meet Technical Specification 3.0.4 in this instance, as the unit had entered mode 1 in order to establish the reactor coolant system conditions necessary to perform this surveillance.

Following the event, the licensee performed troubleshooting on the Unit 2 HPCI system and identified that a cover plate over the spare control valve opening had become dislodged and was allowing steam to be directly admitted to the HPCI turbine bypassing the six operational control valve openings. The spare control valve cover plate was compression fit in place with an additional seal weld since the beginning of plant operation more than forty years ago. The HPCI system is designed to use steam from the reactor to turn a turbine which is mechanically linked to a pump which sends water to the reactor coolant system making up for water loss during a Loss of Coolant Accident (LOCA) where the reactor does not fully depressurize. The reactor steam passes through a steam admission valve to the turbine stop valve. The stop valve is a poppet valve, consisting of a pilot valve and main valve. A hydraulic piston opens the pilot valve which in turn allows steam pressure to build up between the stop valve and the control valve. Once steam pressure builds to a sufficient value, it will begin to open the turbine stop main valve from under the main disk. In this instance with the spare control valve cover plate failed open, steam immediately bypassed the control valves directly to the turbine which in turn prevented the pressure build up between the turbine stop main valve and the control valve needed to fully open the stop valve. Without the turbine stop valve fully open, an inadequate driving steam reached the turbine which meant that rated water flow conditions (5000 gallons per minute) to the reactor coolant system could not be achieved. Prior to the failed the surveillance during the plant start-up, the licensee successfully tested the HPCI system under low pressure conditions as required by Surveillance Requirement 3.5.1.7. This corroborated the time of failure to time of discovery.

The licensee also performed an Equipment Apparent Cause Evaluation 1599436-02 in support of the troubleshooting performed in the field and determined that the failure was attributed to a 360 degree circumferential fracture in a grooved lip that was designed to allow for thermal expansion of the cover plate with respect to the control valve casing during system warm-up. Specifically, when steam is first introduced to the control valve the cover plate being physically smaller than control valve casing expands to a greater extent. This would provide the compression fit working in concert with the seal weld to hold the cover plate in place. Over forty years of operation and more than 350 system actuations to support surveillance testing, the fracture occurred due to thermally induced fatigue cracking. A contributing cause also identified that the gap between the cover

plate and the valve casing was on average 0.01 inches greater than design which would change the interference fit conditions from those that were designed.

The licensee's corrective actions include creating an outage preventative maintenance item to perform non-destructive testing on the spare control valve cover plate to assist in early identification of fatigue cracking. In addition, a contingency repair package has been created in the event cracking is identified. The licensee shared this operating experience with the Quad Cities Nuclear Plant which possesses a similar HPCI turbine configuration. The inspectors reviewed the licensee's corrective actions and had no concerns. Documents reviewed are listed in the Attachment to this report. No findings or violations of NRC requirements were identified.

The licensee reported this event in accordance with 10 CFR 50.73(a)(2)(v)(D), as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident. The licensee also reported this event in accordance with 10 CFR 50.73(a)(2)(i)(B), as any operation or condition prohibited by the plant's Technical Specifications.

This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

4OA5 Other Activities

- .1 (Closed) Unresolved Item (URI) 05000237/2013004-02: 05000249/2013004-02, Potential Non-American Society of Mechanical Engineers (ASME) Code Section XI Repair on Unit 2 Containment Cooling Service Water (CCSW) 16" Line

During review of the repair and replacement plan under work order 1667426-01, for the repair of a thru-wall leak identified by the licensee on a 16" CCSW line, the inspectors questioned the licensee's interpretation of defect removal requirements as described in ASME Code, Section XI, IWA 4422.1.

On March 6, 2014, the licensee provided the inspectors a response documenting the ASME Code Committee's position on defect removal for thru-wall leaks as it pertains to the above mentioned URI. The ASME Code Committee concluded that removal of only the degraded material that is below minimum wall thickness constitutes adequate defect removal in accordance with ASME Code, Section XI IWA 4422.1 requirements. The inspectors reviewed the URI response provided by the licensee, consulted with NRC office of Nuclear Reactor Regulation, and concluded that the additional information contained in the response resolved the inspectors' concern.

This URI is closed.

- .2 The table below provides a cross-reference from the third and fourth quarter 2013 findings and associated cross-cutting aspects to the new cross-cutting aspects resulting from the common language initiative. These aspects and any others identified since January 2014, will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review.

Finding	Old Cross-Cutting Aspect	New Cross-Cutting Aspect
05000237/2013203-01 05000249/2013203-01	H.2.(c)	H7
05000237/2013005-01 05000249/2013005-01	H.3.(b)	H5

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 2, 2014, the inspectors presented the inspection results to Mr. S. Marik, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of in-plant airborne radioactivity control and mitigation; occupational dose assessment; and RCS specific activity performance indicator verification with Mr. S. Marik, Site Vice President, on February 6, 2014.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Marik, Site Vice President
J. Washko, Station Plant Manager
D. Anthony, NDES Manager
J. Biegelson, Engineering
M. Overstreet, Radiation Protection Manager
J. Cady, Radiation Protection Supervisor
P. Chambers, Dresden Licensed Operator Requalification Training Lead
P. DiSalvo, GL 89-13 Program Owner
H. Do, Engineering Manager
D. Doggett, Emergency Preparedness Manager
J. Fox, Design Engineer
D. Glick, Radioactive Material Shipping Specialist
G. Graff, Nuclear Oversight Manager
M. Hosain, Site EQ Engineer
R. Johnson, Chemistry
B. Kapellas, Operations Director
D. Ketchledge, Engineering
J. Knight, Director, Site Engineering
M. Knott, Instrument Maintenance Manager
J. Kish, Site ISI
S. Kvasnicka, NDE Level III
T. Mohr, Supervisor, Engineering Programs
G. Morrow, Operations
M. McDonald, Maintenance Director
T. Mohr, Engineering Program Manager
P. O'Brien, Regulatory Assurance – Corrective Action Program Coordinator
D. O'Flanagan, Security Manager
M. Pavey, Radiation Protection Specialist
D. Schiavoni, Engineering
J. Sipek, Work Control Director
R. Stachniak, Engineering
R. Sisk, Buried Pipe Program Owner
D. Walker, Regulatory Assurance – NRC Coordinator

Nuclear Regulatory Commission

A. Boland, Director, Division of Reactor Projects
J. Cameron, Chief, Division of Reactor Projects, Branch 4
J. Rutkowski, Project Engineer, Division of Reactor Projects, Branch 4
A. Shaikh, Reactor Engineer, Division of Reactor Safety

IEMA

R. Zuffa, Illinois Emergency Management Agency
M. Porfirio, Resident Inspector,
Illinois Emergency Management Agency

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000249/2014002-01	NCV	Failure to Maintain Secondary Containment Integrity During Outage Demobilization Activities (4OA3.1)
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Closed

05000249/2014002-01	NCV	Failure to Maintain Secondary Containment Integrity During Outage Demobilization Activities (4OA3.1)
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05000237/2013004-02 05000249/2013004-02	URI	Potential Non-American Society of Mechanical Engineers (ASME) Code Section XI Repair on Unit 2 Containment Cooling Service Water (CCSW) 16" Line (4OA5)
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05000249/2013-001-00	LER	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously (4OA3.1)
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05000237/2013-004-00 05000249/2013-004-00	LER	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously (4OA3.2)
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05000237/2013-005-00	LER	Primary Containment Inboard and Outboard Feed Water Isolation Valves Exceed Leakage Limits (4OA3.3)
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05000237/2013-006-00	LER	LPCI Swing Bus Auto Transfer Did Not Transfer as Expected (4OA3.4)
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05000237/2013-007-00 05000249/2013-007-00	LER	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously (4OA3.5)
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05000237/2013-008-00	LER	Leak Identified On a Relief Valve During Pressure Test Resulting In a Degraded Principal Safety Barrier (4OA3.6)
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05000237/2013-009-00	LER	HPCI Failed to Achieve Rated Flow Due to Failure of Stop Valve to Open (4OA3.7)
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LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or 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 (71111.01)

- IR 1628984, "Unit 3 North Turbine Building Filter Runout Alarm"
- IR 1630364, "Difference Found on Piping and Procedure on Hydrogen Vacuum System"
- IR 1633590, "2/3 Oil Separator Pit Not Pumping Down"
- IR 1633780, "Unexpected Alarm – 125V Battery Ground"

1R04 Equipment Alignment (71111.04)

- DOP 6600-M1, "Unit 2 Standby Diesel Generator," Revision 29
- DOP 6600-E1, "Unit 2 Standby Diesel Generator," Revision 04
- DOP 1100-M1/E1, "Unit 3 Standby Liquid Control (SBLC) System Checklist," Revision 16
- DOP 2300-M1/E1, "Unit 2 HPCI System Checklist," Revision 38
- WO 1714083, "D2/3 1M TS Unit Diesel Generator Operability"
- IR 1639244, "2/3 EDG Autotrips During Testing"
- IR 1639137, "Received 902-7 H-8 During Start of 2/3 EDG Maintenance Run"
- IR 1639625, "Items for 2/3 Emergency Diesel Generator Fragnet Critique"
- DOS 6600-01, "Diesel Generator Surveillance Tests," Revision 124
- DOP 6600-E2, "Unit 2/3 Standby Diesel Generator," Revision 06
- DOP 6600-M2, "Unit 2/3 Emergency Diesel Generator Checklist," Revision 27

1R04 Equipment Alignment (71111.04S)

- IR 1463882, "Revise DIS 1500-02", Revision 16
- IR 1463902, "Install Banana Jack Adapters Support DIS 1500-20"
- IR 1464563, "Excessive Corrosion in Battery Box"
- IR 1475437, "U3 CCSW Vault Door Logs But Does Not Latch"
- IR 1517254, "Issues with Inlet CCSW Gage for CREVS RCU"
- DOP 1500-E1, "Unit 2 LPCI and CCSW Electrical Checklist," Revision 14
- DOP 1500-M1, "Unit 2 LPCI and Containment Cooling Valve Checklist," Revision 43

1R05 Fire Protection (71111.05)

- Dresden Generating Station Pre-Fire Plan, 115 U2RB-12, Revision 1
- Dresden Generating Station Pre-Fire Plan, 130 U3RB-30, Revision 2
- OP-AA-201-009, Revision 12, "Control of Transient Combustible Material"
- Dresden Generating Station Pre-Fire Plan, 158-U3TB-69, Revision 2
- DRE97-0105, "Determination of Combustible Loading," Revision 9
- IR 1637993, "Large Pile of Transient Combustibles in Unit 3 Trackway"

1R05 Fire Protection (71111.05A)

- Fire Drill Scenario 24, Pump Motor Fire In The Unit 3 Turbine Building, Elevation 517', Fire Zone 8.2.5.E

- Pre-Fire Plan, 161 U3TB-72, Revision 1
- OP-AA-201-003, Revision 12, Attachment 1, "Fire Drill Record"
- IR 1628080, "Fire Drill Lessons Learned"

1R06 Flooding (71111.06)

- WO 1658616, "U2 CCSW Vault Door Leaks"
- IR 1625930, "IEMA CCSW Vault Walkdown Questions"

1R11 Licensed Operator Requalification Program (71111.11)

- IR 1617579, "Security – Zone 15 and Zone 16 Unable to Test / OOS Environs"
- IR 1589744, "Pre-NRC 71111.11 Licensed Operator Requalification Program"
- IR 1605163, "OPS Questioning of Post Recirc Pump Trip Temperature Indications"
- IR 1604658, "2B Reactor Recirc Pump Trip"
- EC 395650, "Evaluate Forcing the DEHC Points for Unit 3 Stator Cooling Water Generator Inlet Pressure During Pump Swaps," Revision 0
- DIP 5600-39, "EHC Forced Points," Revision 3
- DGP 03-03, Revision 44, "Single Recirculation LOOP [loss of offsite power] Operation"
- DOS 0202-04, Revision 16, "Operator's Single LOOP Operation Surveillance"
- IR 1617411, "Siemens Requests Removal of Parts for RCR Investigation"
- IR 1614844, "2B ASD – Siemens Failure Analysis Results"
- OP-AA-106-101-1006, "Issue Resolution Documentation Form" For IR 1604658, Revision 13

1R12 Maintenance Effectiveness (71111.12)

- IR 1556906, "MRule Function for Process Monitors Needs Review"
- IR 1581571, "Radiation Monitor Did Not Respond as Expected"
- IR 1387396, "Isolation Condenser Vent Monitor Downscale Again"
- IR 1371210, "Received Alarm 902-3 C-3, Isolation Condenser Vent Monitor Downscale"
- IR 1371025, "Unexpected Alarm – Isolation Condenser Vent Monitor Downscale"
- IR 1315860, "U2 B ISO COND RAD Monitor Downscale Alarms"
- IR 1599538, "2/3-7506-A (ASSY) 2/3-7506A 2/3A Train Standby Gas Treatment Fan"
- IR 1381237, "U2 IC Vent Rad Monitor Downscale"
- IR 1606375, "Trip/Isolation of U2 Reactor Building Vent"
- IR 1316481, "'B' G.E. Rad Monitor Inoperable"
- IR 1606513, "D2 RBCCW Rad Monitor High Voltage Cable Connector Loose"
- IR 1556906, "MRule Function For Process Monitors Needs Review"
- IR 1599538, "2/3A SBGT Auto Started When C/S Was Taken to Standby"
- IR 1606375, "Trip/Isolation of U2 Reactor Building Vent"
- IR 1311274, "D2/3 Chimney Sping Malfunction"
- IR 1319325, "U2 SWRM Rad Monitor Unexpected Alarm"
- IR 1320895, "2/3 Chimney Sping Channel 5 D/A output Not In"
- IR 1327217, "Performed Intentionally Abbreviated Maintenance on Recorder"
- IR 1392529, "DAN 923-7 A-6 (U2/3 Chimney Gas Rad Hi)"
- IR 1342770, "Unexpected Alarm, 923-7 A-6 Chimney Gas Rad HI"
- IR 1372083, "Z18 Area Rad Monitoring at MR (A)(2) Risk"
- IR 1338886, "D2 ARM 2-1802-5 ISO COND Area Spike"
- IR 1334440, "Unexpected Alarm for Reactor Bldg Rad HI"
- IR 1305481, "D2/3 Main Chimney Sping Will Not Start"
- IR 1322164, "Unit 2 RX Bldg Rad High Alarm Due to ISO COND ARM"

- IR 1606355, "Abnormal Noise Coming From U2 SWRM"
- IR 1584997, "Leak Rate for 2-220-62B Above Acceptance Criteria"
- IR 1584996, "Leak Rate for 2-220-58B Above Acceptance Criteria"
- IR 1317234, "NOS ID – Op Eval Requires Follow-Up Action"
- IR 1592490, "MRule Function 100-1 Needs (A)(1) Determination"

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

- IR 1605270, "Unplanned Change to U2 and U3 On-Line Risk"
- Protected Equipment List for U2 Div 1 Core Spray
- Protected Equipment List for U2 ADS [Automatic Depressurization System]
- Protected Equipment List for U2 HPCI
- Protected Equipment List for U2 Div 2 Core Spray
- Protected Equipment List for "B" SBLC
- IR 1632601, "NOS ID: Main Power Breakers Not Included for ADS Protection"
- IR 1632003, "NRC Identified Oil in TB Cable Tray from Turb BRNG #10 Above"
- IR 1631794, "NRC Concerns"
- IR 1631429, "Delay of Work on 250VDC BKR by Protective Path Boundary Post"
- Protected Equipment List for U2 HPCI Fragnet
- Protected Equipment List for Unit 3 Division 1 LPCI
- Protected Equipment for Unit 3 ADS
- IR 1632601, "NOS ID: Main Power Breakers Not Included for ADS Protection"

1R15 Operability Determinations and Functional Assessments (71111.15)

- OP Eval 13-010, 2-132 Isolation Condenser
- IR 1610873, "IR For Historical Operability / Reportability of Isolation Condenser (IC)"
- IR 1599386, "INCR in Measured Carryover During U2 IC Heat Capacity Test"
- IR 1509103, "NRC Questioned Calculation Methodology for Isolation Condenser"
- IR 1586824, "OPS Schedule Hit"
- WO 12505408, D2 5year TS Isolation Condenser Heat Removal Test"
- DOS 1300-01, Revision 40, "Isolation Condenser Five Year Heat Removal Capability Test"
- IR 1594637, "Code Required Exam Not Performed per Repair/Replacement Plan"
- IR 1605193, "Needle on DP Indicator Appears to be Stuck"
- IR 1605906, "Untimely Review of IR 1605193"
- WO 1689667, "EM Replace U2 D/G Air Start Motor Solenoid"
- IR 1631398, "Historical Operability for Panel 2-2252-10 and EDG System"
- IR 1585414, "DOS 6600-05, Unit Div 2 Undervoltage Test (EDG Closure Time)"
- IR 1586087, "Common Cause Failure Testing – U2/3 EDG"
- IR 1586089, "Common Cause Failure Testing – U3 EDG"
- IR 1610814, "Unit 2 EDG Failed Under-Voltage Test (EDG Closure Time)"
- IR 1612242, "NOS ID: Historical Operability Bases Inadequate for U2 EDG"
- IR 1617950, "MSPI Failure: EACE Not Created"
- IR 1612301, "NOS ID: Adverse Trend in Historical Operability Evaluations"
- IR 1619834, "Long Stem Thread Transition Times on MOV 3-2301-8"
- IR 1620217, "NRC Questioned the Bolt Holds Not Being Engaged on EDG Panel"
- IR 1622967, "Mixed Stem Lubricants on MOV 3-1501-3B"
- IR 1620787, "Historical: U2 EDG Failed UV Test (EDG Closure Time)"
- MA-DR-773-302, "Dresden Standby Diesel Generator 2 and 4 KV ACB 2422 Control Circuit Checks," Revision 09
- Unit 2 Operator Logs, December 14, 2013

- ECR 412407, Determine Actions Necessary To Validate No Common Cause Issue Related To The U2 EDG Failure Under IR 1585414
- ECR 412409, Determine Actions Necessary To Validate No Common Cause Issue Related To The U2 EDG Failure Under IR 1585414, Dated December 13, 2013
- DWG: M-1164D-580, Hanger Mark No. M-1164D-580
- IR 1627236, "NDE Identifies Rejectable Indications on U2 LPCI HX Supports"
- IR 1585328, "Re-Visit Corrective Action on LPCI System"
- IR 1229047, "NDES Perform MT of LPCI HX Support M-1164D-580"
- EC Eval 345249, "Access Capacity of Upper Support of 2A LPCI Heat Exchanger (2-1503-A) With Missing Section of Attachment Weld"
- EC Eval 386506, "Assess Capacity of Upper Support of 2B LPCI Heat Exchanger (2-1503-B) with Missing Section of Attachment Weld"

1R18 Plant Modifications (71111.18)

IR 1624780, "Unit 3 RB/TB Interlock Door RB Side Degraded"
 IR 1626982, "Adverse Trend in Secondary Containment Door Limit Switch Adjustments"
 IR 1628762, "Unit 3 Interlock Door Wiring Error"
 IR 1629215, "Unexpected Alarm Reactor Building Interlock Door INOP/Bypass"
 IR 1632988, "Unit 3 517 Interlock Turbine Side Door Limit Switch Hanging Up"
 IR 1632126, "Unexpected Alarm 903-4 E-19, RX/TURB 517 INTLK DOORS INOP/BY"
 IR 1634747, "Unexpected Alarm 903-4 E-19, RX/TURB 517 INTLK DOORS INOP/BY"
 IR 1637095, "903-4 E-19, RX/TURB 517 INTLK DOORS INOP/BY"
 Electrical Drawing 12E-6801E, "Wiring Diagram Reactor Building Personnel Entry Door Interlocks Area 1"
 Electrical Drawing 12E-6801B, "Schematic Diagram Reactor Building Personnel Entry Door Interlock"
 EC 396213, "Unit 3 TB to RB Interlock Door Circuit Logic Reconfiguration" Revision 3
 Work Planning Instruction, "Unit 3 TB to RB Interlock Door Circuit Reconfiguration"
 ECR (Request) 413167, "Engineering Rapid Response Team Review: Perform Grout Repair (Cosmetic) of Hole in Wall Using NSWP S-02, Section 6.7," January 31, 2014
 50.59 Screening 2013-0295, "2(3) TB to RB Interlock Door Circuit Reconfiguration,"
 Revision 0
 CC-AA-308, "DC Load Data Form, "Load Change 13-D03," Revision 4

1R19 Post-Maintenance Testing (71111.19)

- WO 1506917, "D3 2year Equipment 3A Core Spray Pump Motor EQ Surv"
- DOS 1400-05, Revision 48, "Core Spray System Pump Operability and Quarterly IST Test With Torus Available"
- Dresden Operator Log, 1/6/2014 11:50:00am – 1/8/2014 11:21:16 am
- DTP 09, Revision 15, "Leak Detection and Reduction Program (W-2) (W-3) (W-8)"
- IR 1605593, "DTP 09: Core Spray Pump Discharge Line Leak"
- OP-AA-111-101, Revision 9, "Operating Narrative Logs and Records"
- IR 1605444, "PMID 13144 Should Be Scheduled During Refuel Outages"
- WO 1662856, "D1/2/3 Semi-Annual PM Operability Surv for the TSC [Technical Support Center] AFU's [Air Filtration Unit]"
- DOP 5750-16, Revision 11, " Technical Support Center Ventilation"
- DOS 5750-05, Revision 16, "Semi-Annual Technical Support Center Air Filtration Unit Operability Test"
- WO 01617170, Operations PMT Air Start Regulator on Dresden 2 EDG DOS 6600-01, Task 2

- Appendix X, Technical Specification Action Statement Initiated Surveillances, Revision 32
- DOS 6600-01, Diesel Generator Surveillance Tests, Revision 124
- IR 1619930, U2 EDG Issues During DOS 6600-01
- WO 1701347, "D2 Qtr TS HPCI Pump OPER Test and IST Surv"
- DOS 2300-08, "HPCI Pump Discharge Line Temperature Monitoring," Revision 11
- IR 1632200, "U2 HPCI MGU Did Not Stop at LSS [low speed stop]"
- IR 1632439, "Unexpected Alarm 902-4 F-20, Refuel Floor INTLK Doors INOP/B"
- IR 1632576, "Inadvertent Turbine Trip"

1R22 Surveillance Testing (71111.22)

- IR 1630277, "Procedure Enhancement Required for DOS 1500-02"
- DOS 1500-02, Containment Cooling Service Water Pump Test and Inservice Test
- WO 1608070, "Dresden Unit 2 Annual TS Drywell / Equipment Floor Drain Leakage Transmitter Calibration"
- DIS 20000-01, Revision 30, "Unit 2 Drywell Floor Drain and Equipment Drain Flow Calibration"
- IR 1615602, "Lighting in U2 Torus Catwalk Needs Relamping, Housekeeping"
- IR 1615711, "NRC/IEA Comments for IMD Work Observation"7
- WO 1507377, "D3 24month Diesel Generator Test / Endurance & Margin / Full Load REJ/ECCS"
- WO 01479667, "Dresden Unit 2 24 Month TS Core Spray System Logic System Functional Test (LSFT)"
- IR 1614421, "Instrument Maintenance Department Crew Clock Reset (Discretionary)"
- IR 1613364, "DIS 1400-05 Core Spray LSFT Prerequisite Needs Clarified"
- DIS 1400-05, Revision37, "Core Spray Logic System Functional Test"
- DOP 6500-07, Revision 73, "Racking In 4160 Volt Manually Operated Air Circuit Breaker (ACB), Magna Blast Hybrid or SF6 Gas Circuit Breaker and Hot Canal Cooling Tower 5 KV Rated Switchgear or 5 KV Rated Vacuum Contactor"
- DIS 1400-05, Revision 37, "Core Spray System Logic System Functional Test"
- DWG: 12E-2430, Schematic Diagram Core Spray System 1
- DWG: 12E-2757C, Wiring Diagram Auxiliary Electric Equipment Room Panel 902-32
- DWG: 12E-2757B, Wiring Diagram Auxiliary Electric Equipment Room Panel 902-32
- DWG: 12E-2758B, Wiring Diagram Auxiliary Electric Equipment Room Panel 902-33
- P&ID 12E-2430, 2349, Revision 00, Core Spray Logic
- WO 1046397, "D2/3 6Y UFSAR Dresden Dam Failure Surveillance"
- IR 1633039, "Leak on Pipe from Screen Refuse Pumps to Bay 13"
- IR 1632402, "Revise DOS 0010-01, Dresden Dam Failure"
- IR 040966, "D2000-06826: CCSW System Dispositioned to Maintenance Rule"
- IR 1221386, "NRC Identifies Issues with Procedure for Dam Failure"
- IR 1221390, "NRC IDs Issues with Surveillance Procedure for Dam Failure"
- IR 1251904, "Receipt of NRC 2nd Qtr Inspection Report 2011-003"
- WO 990051872, "D3 6RFL TS Dresden Dam Failure Every 3rd Refuel"
- WO 967017, "D2/3 6Y UFSAR Dresden Dam Failure Surveillance"
- DOS 0010-01, Dresden Dam Failure Equipment Test, Revision 22
- DOS 0010-01, Dresden Dam Failure Equipment Test, Revision 31

1EP6 Drill Evaluation (71114.06)

- IR 1631871, "DRE-EP-2014-OYE[Off-Year]-SIM-UNSAT DCS"
- IR 1631874, "DRE-EP-2014-OYE-TSC-UNSAT DCS"
- IR 1631875, "DRE-EP-2014-OYE-OSC-UNSAT DCS"

- IR 1631880, "DRE-EP-2014-OYE-SIM-Comments"
- IR 1631884, "DRE-EP-2014-OYE-TSC-Comments"
- IR 1631886, "DRE-EP-2014-OYE-OSC-Comments"
- IR 1628940, "Drill Notification Not Received on Phone"
- IR 1629085, "NOD ID: Staging Area / OSC Drill Deficiencies"
- IR 1629148, "NOS ID: EP Off-Year Exercise Improvement Areas – TSC"

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

- RP-AA-301, Radiological Air Sampler Program, Revision 6
- RP-AA-700-1246, Operation of Air Samplers, Revision 2
- RP-AA302, Determination of Alpha Levels and Monitoring, Revision 5
- HR-AA-07-106, OSHA Respirator Medical Evaluation Questionnaire Data of 2013
- NRR Letter, Exelon Stations Approval to Use Delta Protection Muroroa Model BLU Single-Use Self-Fed Respiratory Protection Equipment, July 5, 2007
- PSI Engineering Consulting and Testing, Quarterly Service Air and Self Contained Breathing Apparatus – Performed January 31, 2012 through October 29, 2013
- Dresden 63 SCBA Packs and 67 Bottles Inventory Records
- No. 818105, NIOSH Approval of OptimAir MM-2K
- RP-AA-825-1033, Operation of the OptimAir MM 2K Mask Mounted Air Purifying Respirator, Revision 1
- RP-DR-830, MSA HIP Pack Inspection Checklist, January 8, 2014
- RP-AA-870-1001, Set-up and Operation of Portable Air Filtration Equipment (HEPA), Revision 3
- RP-AA-870-1002, Use of Vacuum Cleaners in Radiologically Controlled Areas, Revision 5
- RP-AA-870-1003, Testing Portable HEPA Filter Units, Revision 3
- HEPA Test Data Sheet on Portable HEPA Unit, November 22, 2013
- RP-AA-13, Respiratory Protection Program Description, Revision 0
- Verification of Spectacle Kits for Operation Crews, October 28, 2013
- AR01405143, Can't Filled SCBA Bottles with Eagle Air Compressor, August 26, 2012
- AR-01415905, Diesel Fumes Accumulating in the SBO Truck Bay Where the Air Compressor is Located, September 20, 2012
- AR-01459958, Eagle Air Compressor not Functioning, January 8, 2013
- AR-01544252, Eagle Air Compressor Needs to be Relocated, August 7, 2013

2RS4 Occupational Dose Assessment (71124.04)

- RP-AA-11, External Dose Control Program Description, Revision 1
- RP-AA-12, Internal Dose Control Program Description, Revision 1
- RP-AA-230, Operation of the Canberra Fastscan Whole-Body Counter, Revision 1
- RP-AA-700-1235, PM-12 Calibration Data Sheet, Revision 0a
- Canberra Calibration of the Fastscan No.1 WBC System at Dresden Nuclear Power Station, Report Date, August 27, 2013
- Landauer, Inc., NVLAP National Voluntary Laboratory Accreditation Program Code 100518-0, January 1, 2014
- RP-AA-270, Prenatal Radiation Exposure, Revision 6
- RP-AA-210, Dosimetry Issue, Usage and Control, Revision 22
- RP-AA-203-1001, Personnel Exposure Investigation, Revision 7
- RP-AA-203-1002, Response to Electronic Dosimeter Reset Alarms, Revision 1
- RP-AA-210-1001, Dosimetry Logs and Forms, Revision 8
- RP-AA-211, Personnel Dosimetry Performance Verification, Revision 10

- RP-AA-220, Bioassay Program, Revision 9
- RP-AA-250, External Dose Assessments from Contamination, Revision 5
- AR-01444590, Individual Alarms PCM at Main Access Exit Point, November 26, 2012
- AR-01586277, Nuisance Contamination from Grinding Activity, November 15, 2014
- AR-01370128, Operability Issues with PM-12 Gamma Sensitive Portal Monitor, May 23, 2012
- AR-01391081, Unstable Background Levels Associated with RCA Exit Monitors, July 20, 2012
- LS-AA-126-1005, Self-Assessment, December 18, 2013

4OA1 Performance Indicator Verification (71151)

- 2013 ROP Performance Indicator Summary Dresden Units 2&3
- NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7
- IR 1622690, "Safety System Functional Failure Criteria Exceedance"
- CY-AA-130-3010-F-03, Dose Equivalent Iodine Determination (DEI), Revision 2
- DEI Data PI Inputs Were Reviewed From January 2013 through December 2013
- DEI Sampling and Determination Observed on January 15, 2014

4OA2 Identification and Resolution of Problems (71152)

- IR 1635731, "New Operator Challenge Identified by OWAB [Operator Work Around Board] RW Air Receiver"
- IR 1619560, "U3 H2 Addition Flow Oscillation in "Manual" Mode"
- IR 1608535, "50,000 Gal Surge Tank Pumps Inoperable"
- IR 1615080, "Increasing Trend in WCF D/P Following Backwash"
- IR 1594632, "2/3 Lift Station Lube Water Pump Discharge Check Valve Leaks By"
- IR 1602209, "2/3-2012-274 AOV Diaphragm is Broken"
- IR 1620286, "Screening Required for Potential OWA"
- IR 1589349, "U2, Div II, LPCI Gas Void During Fill and Vent"
- OP-AA-102-103, "Operator Work-Around Program," Revision 3

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

- IR 1590970, "U2 X-Area Secondary Containment Doors Open at the Same Time"
- IR 1598997, "U2 MRule Function 01-1 Needs (A)(1) Determination"
- CC-AA-201, "Plant Barrier Control Program," Revision 10
- IR 1581320, "U2 517 RB-TB Interlock Doors Open Simultaneously"
- IR 1577325, "U2 517 Interlock RB Side Door Electromagnets Not Working"
- Root Case Report 1336479-02, Dated April 9, 2012
- LS-AA-120, Revision 15, "Issue Identification and Screening process"
- IR 1584997, "Leak Rate for 2-220-62B Above Acceptable Criteria"
- Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," Dated September 1995
- NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J"
- ACE "MCC28-7/29-7, Did Not Transfer as Expected"
- EACE "Received Failure Analysis Results for ERV BK3334"
- IR 1608540, "Replace Control Switch in LPCI Swing Bus Control Circuit"
- IR 1608550, "Replace Control Switch in LPCI Swing Bus Control Circuit"
- IR 1605098, "High Resistance in the Control Circuit of C/S of LPCI Bus"
- IR 1589071, "Generate EACE per IR# 1585176"

- IR 1623808, "Received Failure Analysis Results for ERV [Electromagnetic Relief Valve] BK3334"
- IR 1590050, "Leak Identified on Unit 2 'C' ERV"
- IR 1590714, "ENS Notification Delayed Due to Inadequate Communication"
- IR 1590433, "ENS Notification Required for 2-0203-3C Leakage"
- IR 1590433-03, "Prompt Investigation for Unit 2 3C ERV Leak"
- IR 1599436, "EACE Required for Unit 2 HPCI Control Valve"

4OA5 Other Activities

- IR 01230185, NSAL 04-07 Response Requires Re-Evaluation, April 30, 2010
- OPR 1166457, Containment Isolation Sump 'B' Valves Voids, Operability Evaluation; Revision 0
- SY-AA-101-122-1001, Performance of Security Systems Tests, Revision 10

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CCSW	Containment Cooling Service Water
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EO	Equipment Operator
ERV	Electromatic Relief Valve
GL	Generic Letter
HPCI	High Pressure Coolant Injection
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
IR	Issue Report
LER	Licensee Event Report
LLC	Limited Liability Corporation
LOCA	Loss of Coolant Accident
LPCI	Low Pressure Coolant Injection
LSFT	Logic System Functional Test
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OOS	Out-Of-Service
OWA	Operator Work-Around
PARS	Publicly Available Records System
PI	Performance Indicator
PM	Planned or Preventative Maintenance
PMT	Post-Maintenance Testing
RCS	Reactor Coolant System
RPV	Reactor Pressure Vessel
RPT	Radiation Protection Technician
SBGT	Standby Gas Treatment
SBLC	Standby Liquid Control
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
WO	Work Order

M. Pacilio

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/RA/

Jamnes Cameron, Chief
Branch 4
Division of Reactor Projects

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