



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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January 23, 2014

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Co., LLC
President and Chief Nuclear Officer, Exelon Nuclear
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Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
NRC INTEGRATED INSPECTION REPORT 05000237/2013005;
05000249/2013005

Dear Mr. Pacilio:

On December 31, 2013, 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 January 7, 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 the 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.

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised beginning in calendar year (CY) 2014. New cross-cutting aspects identified in CY 2014 will be coded under the latest revision to IMC 0310. Cross-cutting aspects identified in the last six months of 2013 using the previous terminology will be converted to the latest revision in accordance with the cross-reference in IMC 0310. The revised cross-cutting aspects will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the CY 2014 mid-cycle assessment review.

M. Pacilio

-2-

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any) 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 6
Division of Reactor Projects

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

Enclosure:
IR 05000237/2013005; 05000249/2013005
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000237/2013005; 05000249/2013005

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: October 1 through December 31, 2013

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Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS	1
REPORT DETAILS	3
Summary of Plant Status	3
1. REACTOR SAFETY	3
1R01 Adverse Weather Protection (71111.01)	3
1R04 Equipment Alignment (71111.04)	4
1R05 Fire Protection (71111.05)	5
1R08 Inservice Inspection (ISI) Activities (71111.08G)	5
1R11 Licensed Operator Requalification Program (71111.11)	7
1R12 Maintenance Effectiveness (71111.12)	8
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)	9
1R15 Operability Determinations and Functional Assessments (71111.15)	9
1R19 Post-Maintenance Testing (71111.19)	10
1R20 Outage Activities (71111.20)	11
1R22 Surveillance Testing (71111.22)	14
1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)	16
1EP6 Drill Evaluation (71114.06)	16
2. RADIATION SAFETY	17
2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)	17
2RS2 Occupational As-Low-As-Reasonably-Achievable Planning and Controls (71124.02)	21
2RS5 Radiation Monitoring Instrumentation (71124.05)	22
4. OTHER ACTIVITIES	23
4OA1 Performance Indicator Verification (71151)	23
4OA2 Identification and Resolution of Problems (71152)	24
4OA3 Follow Up of Events and Notices of Enforcement Discretion (71153)	25
4OA5 Other Activities	27
4OA6 Management Meetings	29
SUPPLEMENTAL INFORMATION	1
KEY POINTS OF CONTACT	1
LIST OF ITEMS OPENED, CLOSED AND DISCUSSED	2
LIST OF DOCUMENTS REVIEWED	3
LIST OF ACRONYMS USED	14

SUMMARY OF FINDINGS

Inspection Report (IR) 05000237/2013005, 05000249/2013005; 10/01/2013 – 12/31/2013;
Dresden Nuclear Power Station, Units 2 & 3, Refueling Outage Activities.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. One Green finding was self-revealed. 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 Inspection Manual Chapter (IMC) 0310, "Components Within the Cross Cutting Areas" dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 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.

Self-Revealed Findings

Cornerstone: Mitigating Systems

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 17, 2013, when the 2/3 Emergency Diesel Generator (EDG) was inoperable to Unit 3 with an Emergency Core Cooling Systems (ECCS) signal present on Unit 2 due to sensing a low reactor water level condition. Specifically, while the licensee performed procedure DIS 0263-07, Revision 20, "Unit 2 ATWS RPT/ARI and ECCS Level Transmitters Channel Calibration Test and EQ Maintenance Inspection", in conjunction with Anticipated Transient Without a Scram (ATWS) level transmitter replacements, a failure to remove trip relays in addition to performing all transmitter replacements at the same time resulted in an unexpected Lo-Lo reactor water level trip signal, subsequently resulting in the auto initiation of the Unit 2 EDG and the 2/3 EDG, causing the 2/3 EDG to be inoperable to Unit 3. The licensee immediately restored the ATWS trip relay circuitry, clearing the Lo-Lo reactor water level signal. This enabled the EDGs to be returned to a standby condition and, thereby, restored 2/3 EDG availability to Unit 3.

The licensee's failure to properly implement the steps in the procedure was a performance deficiency that was determined to be more than minor, and thus a finding, because it was associated with the Mitigating Systems Cornerstone attribute of Configuration Control and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance. The finding was of very low safety significance because each of the questions provided in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," were answered "no." The finding has a cross-cutting aspect in the area of human performance, work control, for failing to appropriately coordinate work activities by incorporating actions to address the impact of changes to the work activity on the plant. Specifically, the licensee committed a human performance error by failing to adequately address the impact of work activity changes on the plant and implement the required prerequisites (H.3(b)). (Section 1R20)

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

Unit 2

Unit 2 entered the inspection period in power coastdown operations in preparation for a refueling outage. On November 5, 2013, operators reduced power to 60 percent for a planned isolation condenser heat removal test and after the test resumed power coastdown on November 6, 2013. On November 11, 2013, the unit was shut down for refueling outage D2R23. Unit 2 remained shut down until December 1, 2013, when it was synchronized to the grid and achieved full power on December 3, 2013, where it remained for the rest of the inspection period.

Unit 3

Unit 3 was shutdown on October 18, 2013 in order to correct a hydrogen leak in the main generator housing to the stator water cooling system. The unit remained shutdown until October 26, 2013, when repairs were completed. The unit achieved full power on October 27, 2013, where it remained for the rest of the inspection period with the exception of planned short duration reduction in power to support control rod pattern adjustments

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

.1 Winter Seasonal Readiness Preparations

a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Cold weather protection, such as heat tracing and area heaters, was verified to be in operation where applicable. The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report. The inspectors' reviews focused specifically on the following plant structures, systems, and components due to their risk significance or susceptibility to cold weather issues:

- Unit 2/3 Cribhouse; and
- Unit 2/3 Isolation Condenser Makeup Pump House.

This inspection constituted one winter seasonal readiness preparations sample as defined in 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:

- 2/3B standby gas treatment (SBGT) with 2/3A SBGT out-of-service (OOS);
- Bus 23-1/33-1 and Bus 24-1/34-1 cross tie with Reserve Auxiliary Transformer TR22 OOS; and
- Unit 2 isolation condenser with high pressure coolant injection (HPCI) inoperable.

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, UFSAR, Technical Specification (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 three partial system walkdown samples 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 high pressure heaters/steam lines, elevation 517', Fire Zone 8.2.5A;
- Unit 2 low pressure heater bays, elevation 517', Fire Zone 8.2.5B;
- Unit 2 low pressure heater bays, elevation 538', Fire Zone 8.2.6B; and
- Unit 2 torus, elevation 476', Fire Zone 1.1.2.1

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.

1R08 Inservice Inspection (ISI) Activities (71111.08G)

From November 12 through 18, 2013, the inspectors conducted a review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring degradation of the reactor coolant system, risk significant piping and components, and containment systems in Unit 2.

The inservice inspections described in Sections 1R08.1 and 1R08.5 below constituted one inspection sample as defined in IP 71111.08-05.

.1 Piping Systems ISI

a. Inspection Scope

The inspectors observed the following non-destructive examinations mandated by the American Society of Mechanical Engineers (ASME) Section XI Code to evaluate compliance with the ASME Code Section XI and Section V requirements and if any indications and defects were detected, to determine if these were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- Ultrasonic examination (UT) of the isolation condenser return line pipe-to-elbow welds;
- UT of the main steam pipe-to-elbow weld 2/1/3001D-20/20-3;
- Automated phased array UT of the N1B-3 nozzle-to-safe-end weld; and
- Magnetic particle examination of reactor shutdown cooling piping stanchion attachment weld 2/1/1001A-16/M-1159D-260(IWA).

The inspectors reviewed the following examination record with a recordable indication accepted for continued service to determine whether acceptance was in accordance with the ASME Code Section XI or an NRC-approved alternative.

- Surface indication identified in the vertical shell-to-fillet repair weld 1A on the standby liquid control tank (Report No. 11-716).

The inspectors observed and/or reviewed records for the following pressure boundary welds completed for risk significant systems during the outage to determine if the licensee applied the preservice non-destructive examinations and acceptance criteria required by the construction Code, and/or the NRC approved Code relief request. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine whether the weld procedures were qualified in accordance with the requirements of the Construction Code and the ASME Code, Section IX.

- Lower head flange face repair weld No. 1 on the low pressure coolant injection heat exchanger (WO 01287892-01);
- Recirculation system piping overlay weld PS2-TEE/202-4B (WO 1444980-01); and
- Standby liquid control tank-to-shell repair weld areas (WO 01483448-01).

b. Findings

No findings were identified.

.2 Not Used

.3 Not Used

.4 Not Used

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI related problems entered into the licensee's Corrective Action Program and conducted interviews with licensee staff to determine if:

- the licensee had established an appropriate threshold for identifying ISI related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspectors are listed in the Attachment to this report.

b. Findings

No findings were identified

1R11 Licensed Operator Regualification Program (71111.11)

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

a. Inspection Scope

On October 18, 2013, the inspectors observed operators performing a down-power and shutdown of Unit 3 for a maintenance outage. This was an activity that required heightened awareness and 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 (71111.12Q)

a. Inspection Scope

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

- Maintenance Rule Z03, control rod drive; and
- Maintenance Rule Z5701, main control room ventilation.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted or could have 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:

- Unit 3 high pressure coolant injection (HPCI) with isolation condenser unavailable during emergent repairs to 3-1301-3 valve control circuit repairs;
- Unit 2 Yellow risk due to 2A fuel pool cooling train OOS during pump breaker replacement; and
- Unit 3 Yellow risk for 2/3A SBGT train 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 three 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:

- Unit 3 isolation condenser (IC) initiation circuit relay failure;
- Secondary containment conditions during 2/3B SBGT run;
- Snubber 2-3001A-42 failed functional testing (tension test) historic operability;
- HPCI injection valve 2-2301-8 preconditioning;
- LPCI injection valve 2-1501-21B failed to stroke open associated with degraded auxiliary electrical contact;
- HPCI check valve in vertical piping; and

- Degraded power cable to Unit 2 IC steam admission motor operated valve, 2-1301-1.

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 seven samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

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) 010106190-01, "D3 22Y EQ Torus to Reactor Building Diff PT XMTR Replacement;"
- WO 01681150, "IM PMT Isolation Condenser Time Relay 3-0595-117A;"
- WO 01623420, "Contingency Repairs to the 2-0220-58B Feedwater Check Valve," Task 08 and WO 01623422; "Operations Perform As Left LLRT 2-0220-62B per DOS 7000-26;" Task 06;
- WO 01689458-01, "EM MCC 28-7/29-7 Did Not Transfer as Expected;"
- WO 01511291-04 and -20, "D2 RFL TS Perform 10% Sample Select Criteria per DTS 0020-02, Following Snubber 2-3001A-42 Failure;" and
- WO 01225306-02, "PMT Run Pump and Check Schraeder Valve for Leaks."

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.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the Unit 2 refueling outage (RFO), conducted November 11, 2013 to December 1, 2013, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cool down processes and monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met, and controls over switchyard activities;
- monitoring of decay heat removal processes, systems, and components;
- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TS;
- licensee fatigue management, as required by 10 CFR 26, Subpart I;
- refueling activities, including fuel handling and core alterations;
- startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been

- left which could block emergency core cooling system suction strainers, and reactor physics testing; and
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RFO sample as defined in IP 71111.20-05.

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 17, 2013, when the 2/3 EDG was inoperable to Unit 3 with an emergency core cooling system (ECCS) signal present on Unit 2 due to sensing a low reactor water level condition. Specifically, while the licensee performed Procedure DIS 0263-07, Revision 20, "Unit 2 ATWS [anticipated transient without scram] RPT/ARI and ECCS Level Transmitters Channel Calibration Test and EQ Maintenance Inspection", in conjunction with ATWS level transmitter replacements, a failure to remove trip relays in addition to performing all transmitter replacements at the same time resulted in an unexpected Lo-Lo reactor water level trip, subsequently resulting in the auto initiation of the U2 EDG and the 2/3 EDG, causing the 2/3 EDG to be inoperable and unavailable to Unit 3.

Description: During performance of the replacement of the Unit 2 ATWS level transmitters, a failure to remove trip relays in addition to performing all transmitter replacements at the same time versus the original schedule sequence resulted in an unexpected Lo-Lo reactor water level trip signal, subsequently resulting in the auto initiation of the U2 EDG and the 2/3 EDG, causing the 2/3 EDG to be inoperable and unavailable to Unit 3. The licensee entered TS 3.8.1, Required Action D.2, to restore the 2/3 EDG to operable within 12 hours. The licensee immediately restored the ATWS trip relay circuitry, clearing the Lo-Lo reactor water level signal. This allowed them to return the EDGs to a standby condition and, thereby, restored 2/3 EDG availability to Unit 3 and TS 3.8.1 was exited.

According to the licensee's apparent cause report, approximately 24 hours prior to work execution, the Outage Specialist Group revised the level transmitter replacement schedule. Initially, the level transmitters were to be replaced sequentially utilizing individual work packages (WO 1645246-01, 1645249-01, 1645251-01, 1645248-01) which contained instructions to collect the "As Found" data, replace the transmitter, and then restore. After all four transmitters were replaced, the ATWS level transmitter surveillance DIS 0263-07 (WO 1488328-01) was to be completed. The schedule revision directed the Instrument Maintenance Department (IMD) to perform the "As Finds" for all four transmitters, simultaneously replace the transmitters, then complete the "As Lefts", completing DIS 0263-07. The scheduling change resulted in DIS 0263-07 being used to gather the "As Found" data. In addition, replacing the transmitters in parallel required removal of the associated Lo-Lo reactor water level trip relays prior to replacement to prevent the one out of two taken twice logic that provides the trip function.

The licensee post event investigation identified that the IMD First Line Supervisor (FLS) annotated the ATWS level transmitter replacement work package steps to remove the

relays as “work performed under WO #148828-01”. The licensee interviewed the IMD FLS and identified the FLS annotated this note based upon shift turnover, the point at which the revised schedule was currently at, and the notification from the IMD Outage Scheduler/Lead that the work was ready. In addition, procedure DIS 0263-07, step E.5 was not adequately implemented in that it requires technicians and supervisors to identify that “no other ECCS or ATWS testing or maintenance (is) ongoing that will affect logic tested in (the) surveillance.”

Analysis: The inspectors determined that the failure to properly implement the steps in DIS 0263-07 and ATWS level transmitter work packages (WO 1645246-01, 1645249-01, 1645251-01, 1645248-01) was contrary to the requirements of TS 5.4.1, “Procedures”, and was a performance deficiency warranting further review. 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 Mitigating Systems Cornerstone Attribute of Configuration Control and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

The inspectors determined the finding could be evaluated using the SDP 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 Mitigating Systems Screening Questions in Appendix A, Exhibit 2 and answered “no” to all questions. As a result, the finding was determined to be very low safety significance (Green).

This finding has a cross-cutting aspect in the area of human performance, work control, for failing to appropriately coordinate work activities by incorporating actions to address the impact of changes to the work activity on the plant. Specifically, the licensee committed a human performance error by failing to adequately address the impact of work activity changes on the plant and implement the required prerequisites, which resulted in the 2/3 EDG being inoperable to Unit 3 (H.3(b)).

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 9a, states, in part, that maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Procedure DIS 0263-07, “Unit 2 ATWS RPT/ARI and ECCS Level Transmitters Channel Calibration Test and EQ Maintenance Inspection”, Section E “Prerequisites”, Step 5 requires technicians to verify that no other ECCS or ATWS testing or maintenance is ongoing that will affect logic tested in surveillance. Contrary to the above, on November 17, 2013, while performing the replacement of the ATWS level transmitters, the licensee failed to implement Step 5 of procedure DIS 0263-07, Section E. Specifically, the licensee failed to correctly implement the prerequisites outlined in the procedure. The issue was entered into the licensee’s CAP as IR 1586451.

Because this violation was of very low safety significance and it was entered into the licensee's CAP (IR 1586451), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (**NCV 05000237/2013005-01; 05000249/2013005-01, Inadvertent Lo-Lo Reactor Water Level Indication Received During Maintenance Resulting in Unavailability of the 2/3 EDG to Unit 3**).

.2 Other Outage Activities

a. Inspection Scope

The inspectors evaluated outage activities for a planned maintenance outage on Unit 3 that began on October 18, 2013 and continued through October 26, 2013. The inspectors reviewed activities to ensure that the licensee considered risk in developing, planning, and implementing the outage schedule.

The inspectors observed or reviewed the reactor shutdown and cool down, outage equipment configuration and risk management, electrical lineups, selected clearances, control and monitoring of decay heat removal, control of containment activities, personnel fatigue management, startup and heatup activities, and identification and resolution of problems associated with the outage. The licensee performed a planned maintenance outage on Unit 3 following indications of a hydrogen leak from the main generator housing environment into the stator water cooling system. Licensee subsequent investigation identified three small through wall flaws into the stator water cooling system inside the main generator housing. The inspectors observed the licensee's adverse condition monitoring plan prior to the commencement of the outage, troubleshooting and inspection of the stator water cooling system, and system repairs and post maintenance testing.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one other outage sample as defined in IP 71111.20-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

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 01489069, "D2 30M/RFL TS LLRT MSIV 203-1A & 203-2A Dry Test" (isolation valve);
- WO 01429950-01, "D2 2Y EQ LPCI System XMTR Calibration/Inspection" (routine);
- WO 01659462, "U2 Diesel Generator Cooling Water Pump Quarterly Pump and Valve Surveillance" (routine);

- WO 01205408, “OP D2 5Y TS Isolation Condenser Heat Removal Test” (routine);
- WO 01489071, “D2 2Y/RFL TS Bus 24-1 UV and ECCS Integrated Functional Test” (routine); and
- WO 01506607, “D2 RFL TS 1000 PSI Reactor Vessel System Leakage Test/Hydrostatic” (RCS leak detection).

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 four routine surveillance testing samples, one isolation valve sample, and one RCS leak detection sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The Office of Nuclear Security and Incident Response headquarters' staff performed an in-office review of the latest revisions to the Emergency Plan and various Emergency Plan Implementing Procedures (EPIPs) located under ADAMS Accession Numbers ML123260651, ML130180297, ML13162A199, and ML13200A124, as listed in the Attachment to this report.

The licensee transmitted the EPIP revisions to the NRC pursuant to the requirements of 10 CFR Part 50, Appendix E, Section V, "Implementing Procedures." The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment to this report.

This emergency action level and emergency plan change inspection constituted one sample as defined in Inspection Procedure (IP) 7114.04-05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspector observed an emergency preparedness drill in the Technical Support Center on October 3, 2013, which required emergency plan implementation by a qualified Site Emergency Director and members of the Emergency Response Organization (ERO). This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the team. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the ERO's performance and ensure that the licensee evaluators noted the same issues and entered them into the corrective action program. As part of the inspection, the inspectors reviewed the scenario package and other documents listed in the Attachment to this report.

This inspection of the licensee's emergency preparedness drill constituted one sample as defined in IP 71114.06-06.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

The inspection activities supplement those documented in NRC Inspection Report 05000237(249)/2013002 and constitute one complete sample as defined in IP 71124.01-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed all licensee performance indicators for the Occupational Exposure Cornerstone for follow-up. The inspectors reviewed the results of radiation protection program audits (e.g., licensee's quality assurance audits or other independent audits). The inspectors reviewed any reports of operational occurrences related to occupational radiation safety since the last inspection. The inspectors reviewed the results of the audit and operational report reviews to gain insights into overall licensee performance.

b. Findings

No findings were identified.

.2 Radiological Hazard Assessment (02.02)

a. Inspection Scope

The inspectors determined if there have been changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public. The inspectors evaluated whether the licensee assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

The inspectors reviewed the last two radiological surveys from selected plant areas and evaluated whether the thoroughness and frequency of the surveys were appropriate for the given radiological hazard.

The inspectors selected the following radiologically risk-significant work activities that involved exposure to radiation:

- D2R23 Drywell In Service Inspection Activities;
- D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities;

- D2R23 Refuel Floor Reactor in Vessel Activities;
- D2R23 Scaffold Installation/Removal Activities (Excluding Drywell); and
- D2R23 Drywell Control Rod Drive (CRD) System Maintenance Activities.

For these work activities, the inspectors assessed whether the pre-work surveys performed were appropriate to identify and quantify the radiological hazard and to establish adequate protective measures. The inspectors evaluated the radiological survey program to determine if hazards were properly identified, including the following:

- identification of hot particles;
- the presence of alpha emitters;
- the potential for airborne radioactive materials, including the potential presence of transuranics and/or other hard-to-detect radioactive materials (This evaluation may include licensee planned entry into non-routinely entered areas subject to previous contamination from failed fuel.);
- the hazards associated with work activities that could suddenly and severely increase radiological conditions and that the licensee has established a means to inform workers of changes that could significantly impact their occupational dose; and
- severe radiation field dose gradients that can result in non-uniform exposures of the body.

The inspectors observed work in potential airborne areas and evaluated whether the air samples were representative of the breathing air zone. The inspectors evaluated whether continuous air monitors were located in areas with low background to minimize false alarms and were representative of actual work areas. The inspectors evaluated the licensee's program for monitoring levels of loose surface contamination in areas of the plant with the potential for the contamination to become airborne.

b. Findings

No findings were identified.

.3 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors reviewed the following radiation work permits used to access high radiation areas and evaluated the specified work control instructions or control barriers:

- RWP 10014902; D2R23 Drywell In Service Inspection Activities;
- RWP 10014939; D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities;
- RWP 10014940; D2R23 Refuel Floor Reactor in Vessel Activities; and
- RWP 10014860; D2R23 Scaffold Installation/Removal Activities (Excluding Drywell).

For these radiation work permits, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each radiation work permit were clearly identified. The inspectors

evaluated whether electronic personal dosimeter alarm set-points were in conformance with survey indications and plant policy.

The inspectors reviewed selected occurrences where a worker's electronic personal dosimeter noticeably malfunctioned or alarmed. The inspectors evaluated whether workers responded appropriately to the off-normal condition. The inspectors assessed whether the issue was included in the Corrective Action Program and dose evaluations were conducted as appropriate.

b. Findings

No findings were identified.

.4 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors potentially contaminated material leaving the radiological control area and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use and evaluated whether the work was performed in accordance with plant procedures and whether the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site. The inspectors assessed whether the radiation monitoring instrumentation had appropriate sensitivity for the type(s) of radiation present.

The inspectors selected several sealed sources from the licensee's inventory records and assessed whether the sources were accounted for and verified to be intact.

The inspectors evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

b. Findings

No findings were identified.

.5 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors assessed whether radiation monitoring devices were placed on the individual's body consistent with licensee procedures. The inspectors assessed whether the dosimeter was placed in the location of highest expected dose or that the licensee properly employed an NRC-approved method of determining effective dose equivalent.

The inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel in high-radiation work areas with significant dose rate gradients.

The inspectors reviewed the following radiation work permits for work within airborne radioactivity areas with the potential for individual worker internal exposures:

- RWP 10014939; D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities;
- RWP 10014940; D2R23 Refuel Floor Reactor in Vessel Activities;
- RWP 10014860; D2R23 Scaffold Installation/Removal Activities (Excluding Drywell); and
- RWP 10014896; D2R23 Drywell Control Rod Drive (CRD) System Maintenance Activities.

For these radiation work permits, the inspectors evaluated airborne radioactive controls and monitoring, including potential for significant airborne levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, and reactor cavities). The inspectors assessed barrier (e.g., tent or glove box) integrity and temporary high-efficiency particulate air ventilation system operation.

b. Findings

No findings were identified.

.6 Risk-Significant High Radiation Area and Very-High Radiation Area Controls (02.06)

a. Inspection Scope

The inspectors evaluated licensee controls for very-high radiation areas and areas with the potential to become a very-high radiation area to ensure that an individual was not able to gain unauthorized access to the very high radiation area.

b. Findings

No findings were identified.

.7 Radiation Worker Performance (02.07)

a. Inspection Scope

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be human performance errors. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. The inspectors discussed with the radiation protection manager any problems with the corrective actions planned or taken.

b. Findings

No findings were identified.

.8 Radiation Protection Technician Proficiency (02.08)

a. Inspection Scope

The inspectors observed the performance of the radiation protection technicians with respect to all radiation protection work requirements. The inspectors evaluated whether technicians were aware of the radiological conditions in their workplace and the radiation

work permit controls/limits, and whether their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be radiation protection technician error. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

b. Findings

No findings were identified.

.9 Problem Identification and Resolution (02.09)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's Corrective Action Program. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring and exposure controls. The inspectors assessed the licensee's process for applying operating experience to their plant.

b. Findings

No findings were identified.

2RS2 Occupational As-Low-As-Reasonably-Achievable Planning and Controls (71124.02)

The inspection activities supplement those documented in NRC Inspection Report 05000237(249)/2012005 and 05000237(249)/2013003, and constitute one complete sample as defined in IP 71124.02-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed site-specific procedures associated with maintaining occupational exposures as-low-as-reasonably-achievable (ALARA), which included a review of processes used to estimate and track exposures from specific work activities.

b. Findings

No findings were identified.

.2 Radiological Work Planning (02.02)

a. Inspection Scope

The inspectors selected the following work activities of the highest exposure significance:

- D2R23 Drywell In Service Inspection Activities;
- D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities; and
- D2R23 Refuel Floor Reactor in Vessel Activities.

The inspectors reviewed the ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements. The inspectors determined whether the licensee reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances.

b. Findings

No findings were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems (02.03)

a. Inspection Scope

The inspectors reviewed the assumptions and basis (including dose rate and man-hour estimates) for the current annual collective exposure estimate for reasonable accuracy for select ALARA work packages. The inspectors reviewed applicable procedures to determine the methodology for estimating exposures from specific work activities and the intended dose outcome.

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation (71124.05)

The inspection activities supplement those documented in NRC Inspection Report 05000237(249)/2012004 and constitute one complete sample as defined in IP 71124.05-05.

.1 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring instrumentation were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee Corrective Action Program. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring instrumentation.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

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

4OA1 Performance Indicator Verification (71151)

.1 Reactor Coolant System Leakage

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Leakage performance indicator (PI) for Dresden Nuclear Power Station Units 2 and 3 covering the period from the fourth quarter 2012 through third 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 2013, were used. The inspectors reviewed the licensee's operator logs, RCS leakage tracking data, issue reports, event reports and NRC Integrated Inspection Reports for the period of October 2012 through September 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 reactor coolant system leakage samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

a. Inspection Scope

The inspectors sampled licensee submittals for the radiological effluent Technical Specification/Offsite Dose Calculation Manual (RETS/ODCM) radiological effluent occurrences PI for the period from the first quarter 2012 through the third quarter 2013. The inspectors used PI definitions and guidance contained in the Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 2013 to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's issue report database and selected individual reports generated since this indicator was last reviewed to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous effluent summary data and the results of associated offsite dose calculations

for selected dates to determine if indicator results were accurately reported. The inspectors also reviewed the licensee's methods for quantifying gaseous and liquid effluents and determining effluent dose. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one Radiological Effluent Technical Specification/Offsite Dose Calculation Manual radiological effluent occurrences sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

.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 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the period of June through December 2013, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend inspection sample as defined in IP 71152-05.

b. Findings

No findings were identified.

40A3 Follow Up of Events and Notices of Enforcement Discretion (71153)

.1 Hydrogen Leak Into Unit 3 Main Generator Stator Water Cooling System Results In Unit Shutdown

On October 9, 2013 at 0310, the licensee received a Stator Cooling Panel Trouble alarm on Unit 3. Operator response identified local alarm Hydrogen Leak Rate High was active. Over the next 90 minutes operators noted a significant rise (4 to 172 standard cubic feet per day) in hydrogen flow rate as indicated by the stator leak monitoring system (SLMS). These indications led operators to determine that a leak of hydrogen gas into the stator water cooling system inside the main generator housing was occurring. The inspectors observed licensee actions to ensure hydrogen gas was not concentrating in the turbine building and was being safely exhausted to the outside environment as well establishing an adverse condition monitoring plan to include hourly logging of pertinent parameters including SLMS hydrogen flow rate, main generator hydrogen pressure, and stator bar temperatures was being performed and analyzed for negative trends.

On October 18, 2013, the licensee commenced a maintenance outage on Unit 3 to identify and repair the source of the hydrogen leak into the stator water cooling system. The licensee identified small defects in the stator water cooling system connection ring which is located inside the main generator housing. Due to the normal operating pressure of the hydrogen environment in the main generator (60 psig) and the stator water cooling system (approximately 25 - 30 psig) the hydrogen would be driven through the defects into the stator water cooling system and then eventually out a system vent located at the roof of the turbine building. The licensee was able to repair the two larger defects but was unable to successfully remove a pin hole sized flaw. The inspectors observed portions of the flaw repair and post maintenance vacuum testing utilized to validate the integrity of the repairs made. Prior to restart the licensee evaluated the small defect which remained and determined that safe operation of the main generator was not impacted by continued operation with the flaw. No findings or violations of NRC requirements were identified.

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

.2 (Closed) Licensee Event Report 05000237/2013-003-00; 05000249/2013-003-00, "Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously"

On September 23, 2013, between 1655:59 and 1656:05, the secondary containment interlock doors separating the reactor building and the 2/3 emergency diesel generator (EDG) room were simultaneously open resulting in an unplanned entry into secondary containment, TS 3.6.4.1. An operator on scene rapidly shut the secondary containment boundary door on the 2/3 EDG side of the interlock ensuring that reactor building to outside environment differential pressure requirements were maintained at all times. At the time of the event, the operator actuated the reactor building side doorway in order to complete passing through the interlock when they reported hearing clicking noises from the interlock relays followed by both the 2/3 EDG side and reactor building side doors opening. The operator manually closed the 2/3 EDG side door, proceeded to exit the interlock through the reactor side door and then reported the event to the main control room operators.

Following the event, the licensee performed troubleshooting on the interlock to determine the cause. Licensee troubleshooting included a voltage test of the interlock circuit relays, visual inspection of electrical connections, resistance readings across applicable relay contacts, and monitoring of relay voltages via a chart recorder while functionally testing the interlock doors. The interlock doors were challenged more than 500 times in all conceivable operational scenarios but a re-creation of the failure experienced on September 23, 2013 did not occur. In addition, the latch bolt monitor (LBM) switch tripper associated with the 2/3 EDG room door strike which was the faulted component in the June 28, 2013 failure of this interlock was shown to be successfully performing its function. The licensee also performed an Equipment Apparent Cause Evaluation (EACE) 1545683-02 in support of the troubleshooting performed in the field and was not able to identify a definitive cause for this event. Licensee engineering identified intermittent relay malfunction or intermittent limit switch failure as the two most likely failure modes. Based on the report of relay clicking prior to both doors opening, it is surmised that an intermittent relay malfunction degraded the voltage to the diesel side door strike resulting in the failure.

The licensee installed a permanent modification to the circuit logic for the reactor building to 2/3 EDG interlock in November 2013. The modification includes ladder logic circuitry which addresses the previously identified need to establish an XOR gate style logic ensuring that both doors do not open when simultaneously operated. In addition the new logic is designed to prevent interlock failure due to a loss of power (125 VDC and 120 VAC) and addresses parts obsolescence concerns. 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), as an 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 05000237/2013-001-01; 05000249/2013-001-01, "Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously"

The licensee submitted supplemental LER 05000237/2013-001-01; 05000249/2013-001-01 in order to describe the results of EACE 1545683-02 performed following the 2/3 EDG to reactor building interlock failures of June 28, 2013 and September 23, 2013. In addition, the supplemental LER describes corrective actions taken to address the failures including redesign of the 2/3 EDG door strike latch bolt monitor switch tripper which was specifically identified as the failed component directly responsible for the June 28, 2013, event and the relay circuitry modification addressing latent design vulnerabilities for the interlock logic circuit. 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.

Licensee LER 05000237/2013-001-00; 05000249/2013-001-00 was reviewed and closed in NRC Inspection Report 05000237/2013004; 05000249-2013004.

This supplemental LER is closed.

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

40A5 Other Activities

.1 (Discussed) NRC Temporary Instruction 2515/188, Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns

a. Inspection Scope

The inspectors continued to accompany the licensee, on a sampling basis, during their seismic walkdowns to verify that the licensee's walkdown activities were conducted

using the methodology endorsed by the NRC. Specifically, the inspectors observed the licensee inspect components in the Unit 2 Drywell and Torus areas during refueling outage D2R23. The licensee will periodically continue to walkdown identified components as they become accessible. These walkdowns are being performed at all sites in response to a letter from the NRC to licensees, entitled "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340).

Enclosure 3 of the March 12, 2012, letter requested licensees to perform seismic walkdowns using an NRC-endorsed walkdown methodology. Electric Power Research Institute (EPRI) document 1025286 titled, "Seismic Walkdown Guidance," (ADAMS Accession No. ML12188A031) provided the NRC-endorsed methodology for performing seismic walkdowns to verify that plant features, credited in the current licensing basis (CLB) for seismic events, are available, functional, and properly maintained.

The inspectors closed Temporary Instruction 2515/188 in Dresden NRC Inspection Report 05000237/2012005; 05000249/2012005 following a review of the licensee's initial walkdown of identified components. The licensee continues to perform these seismic walkdowns as components located in inaccessible areas become available.

b. Findings

No findings were identified.

.2 (Closed) Temporary Instruction 2515/190 – Inspection of the Proposed Interim Actions Associated with Near-Term Task Force Recommendation 2.1 Flooding Hazard Evaluations.

a. Inspection Scope

The inspectors independently verified that the licensee's proposed interim actions as described in a letter submitted to the NRC titled "Supplemental Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Flooding Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated August 28, 2013 (ADAMS Accession No. ML13241A288) would perform their intended function for flooding mitigation.

The inspectors verified that the licensee's proposed interim actions were acceptable through:

- Visual inspection of the flood protection feature looking for indications of degradation that would prevent its credited function from being performed.
- Visual observation and by review of technical documents when appropriate to validate flood protection feature functionality.
- Reasonable simulation in the case of deploying the Aqua Dam, Isolation Condenser Make-up Pump House flood barriers, and reactor building flood barriers.

The inspectors verified that issues identified were entered into the licensee's corrective action program.

b. Findings

No findings were identified.

.3 Licensee Strike Contingency Plans (92709)

a. Inspection Scope

The inspectors reviewed the licensee's work stoppage plans to determine if the plans adequately addressed the areas of reactor operations, emergency planning, facility security, fire protection, technical specifications, and other regulatory requirements in the event of an employee strike or management lockout. The inspectors reviewed records and conducted interviews with licensee staff to verify that qualified personnel would be available to meet the minimum requirements for safe operation of the plant, if a strike or lockout were to occur. No actual work stoppage occurred during the inspection period.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On January 7, 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 verified that no proprietary information was retained by the inspectors or documented in this report.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The results of the inservice inspection with Site Vice President, Mr. S. Marik, on November 18, 2013.
- The inspection results for the areas of radiological hazard assessment and exposure controls; occupational as-low-as-reasonably-achievable planning and controls; and RETS/ODCM radiological effluent occurrences performance indicator verification with Mr. J. Washko, Plant Manager, on November 22, 2013.

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, Former Station Plant Manager
J. Washko, Station Plant Manager
D. Anthony, NDE Services Manager
J. Biegelson, Engineering
H. Bush, Radiation Protection Manager
P. Chambers, Dresden Licensed Operator Requalification Training Lead
P. DiGiovanna, Training Director
H. Do, Engineering Manager
D. Doggett, Emergency Preparedness Manager
J. Fox, Design Engineer
G. Graff, Nuclear Oversight Manager
M. Hosain, Site EQ Engineer
G. Howard, Engineering
B. Kapellas, Operations Director
J. Knight, Director, Site Engineering
M. Knott, Instrument Maintenance Manager
J. Kish, Site ISI
G. Morrow, Regulatory Assurance Manager
M. McDonald, Maintenance Director
C. Mckean, NDE Level III
D. O'Flanagan, Security Manager
M. Otten, Operations Training Manager
M. Overstreet, RP General Supervisor
M. Pavey, RP Technical Support
R. Schmidt, Chemistry and Environmental Manager
J. Sipek, Work Control Director
D. Throne, Operations
D. Walker, Regulatory Assurance – NRC Coordinator
B. Weight, Design Engineering

Nuclear Regulatory Commission

J. Cameron, Chief, Branch 6, Division of Reactor Projects
J. Rutkowski, Project Engineer, Branch 6

IEMA

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

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000237/2013005-01 05000249/2013005-01	NCV	Inadvertent Lo-Lo Reactor Water Level Indication Received During Maintenance Resulting in Unavailability of the 2/3 EDG to Unit 3 (1R20)
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Closed

05000237/2013005-01 05000249/2013005-01	NCV	Inadvertent Lo-Lo Reactor Water Level Indication Received During Maintenance Resulting in Unavailability of the 2/3 EDG to Unit 3 (1R20)
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05000237/2013-003-00 05000249/2013-003-00	LER	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously
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05000237/2013-001-01 05000249/2013-001-01	LER	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously
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NRC Temporary Instruction 2515/190		Inspection of the Proposed Interim Actions Associated with Near-Term Task Force Recommendation 2.1 Flooding Hazard Evaluations.
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Discussed

NRC Temporary Instruction 2515/188		Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns
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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)

- DOS 0010-26, "Initiation of Cold Weather Operations for Unit 3," Revision 7
- DOS 0010-23, "Preparation for Cold Weather for Unit 3," Revision 19
- DOS 0010-22, "Cold Weather Operation for Unit 2," Revision 22
- EC 379330, "Evaluate Placement of Temporary Heaters Outside of Unit 2 125V Battery Room"
- IR 1575879, "IAM on 2/3 "A" Boiler Feed Pump Min Flow Valve"
- IR 1580143, "Blown Fuse in Panel 2/3-2223-137"
- IR 1580216, "Entered DOA 5700-01"
- IR 1580193, "Entered DOA 5700-01"
- IR 1581211, "A" Heating Boiler Replacement Parts Required"
- IR 1581448, "2/3 B Heating BLR Fuel Oil Line Pressure Gauge Pegged High"
- IR 1582081, "Iso Cond Makeup Pump House Heat Trace Trouble"
- IR 1585014, "Iso Condenser make-up Pump House Space Heater Broke"
- IR 1587606, "Temperature Controller Not Maintaining Setpoint"

1R04 Equipment Alignment (71111.04)

- DOP 1300-M1/E1; Unit 2 Isolation Condenser System Checklist; Revision 19
- IR 1436327; 923-1 A-6 Isolation Condenser Makeup Trouble in Alarm
- IR 1593450; Annunciator 2/3-2223-224-1 In Alarm
- DOP 7500-M1/E1; Standby Gas Treatment; Revision 6
- OP-DR-201-012-1001; Dresden On-Line Fire Risk Management; Revision 0
- IR 1585367; "NRC Question: Impact of TCP On Protected Equipment"
- IR 1585363; "NRC Identified: Expired TCP 13-0212"

1R05 Fire Protection (71111.05)

- Pre-Fire Plan; Fire Zone 8.2.5B; Revision 1
- Pre-Fire Plan; Fire Zone 8.2.5A; Revision 1
- Pre-Fire Plan; Fire Zone 8.2.6B; Revision 1
- Pre-Fire Plan; Fire Zone 1.1.2.1; Revision 1
- IR 1579136, "NRC Identified CO2 Piping Pressurized"
- IR 1584302, "NRC Identified Issues in U2 Torus Basement"
- IR 1593450, "Annunciator 2/3-223-224 I-1 in Alarm"
- IR 1593464, "Junction Box Degraded in B ISO Cond Pump Room Basement"
- IR 1593454, "SSD Light 2/3-7902-400A Green Trickle Charge Light Not Lit"

1R08 In-service Inspection Activities (71111.08G)

- IR 01585328; Revisit Corrective Actions on LPCI HX; dated November 14, 2013
- IR 01550403; U2 CCSW Piping Leak; dated August 25, 2013
- IR 01369925; NDE Identifies Degraded HPCI Pipe Wall Thickness; dated May 23, 2012

- IR 01369302; HPCI Steam Leak ASME Code Class Piping; dated May 22, 2012
- IR 01285433; Leak East End Bell U2 ISO Condenser; dated November 3, 2011
- IR 01283680; NDE Detected Linear Indication in 2-1103 SBLC Tank; dated October 31, 2011
- AR 01283484; Linear MT Indications; Integral Welded Attachment; dated October 30, 2011
- ASME Weld Record; Weld No. 1 LPCI HX Flange; dated November 14, 2013
- Drawing ISI-101; ISI Class 1 Main Steam Piping; Revision H
- Drawing ISI-105; ISI Class 1 Isolation Condenser Piping; Revision N
- ER-AA-335-003; Magnetic Particle (MT) Examination; Revision 5
- GEH-PDI-UT-1; PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds; Revision 8
- GEH-PDI-UT-2; PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds; Revision 7
- GEH-PDI-UT-10; PDI Generic Procedure for the Ultrasonic Examination of Dissimilar Metal Welds; Revision 4
- GEH-UT-247; Procedure for Phased Array Ultrasonic Examination of Dissimilar Metal Welds; Revision 2
- Liquid Penetrant Examination Data Sheet; SBLC Tank Pre-Weld; dated November 3, 2011
- Liquid Penetrant Examination Data Sheet; SBLC Tank Weld; dated November 6, 2011
- Liquid Penetrant Examination Data Sheet (Report 11-716); SBLC Tank Final 1A Vertical Weld; dated November 6, 2011
- Liquid Penetrant Examination Data Sheet; SBLC Tank Base Weld; dated October 31, 2011
- Magnetic Particle Examination Data Sheet; HX 2B-M-1164D; dated October 30, 2011
- NCR 11-270; Bare Metal PT Indications; dated October 19, 2011
- NCR 11-272; PT Rejectable on Sacrificial ER 309L Layer; dated October 21, 2011
- PDQS 613; GEH-UT-247 Revision 1; dated February 3, 2009
- PDQS 654; PDI-UT-10; Revision E; dated August 23, 2011
- PDQS 704; PDI-UT-1 Revision E; dated September 20, 2011
- PDQS 750; PDI-UT-2 Revision F; dated March 14, 2013
- PQR 08-08-T-009; dated August 27, 2002
- PQR 08-08-TS-001; dated January 20, 2010
- PQR 08-08-TS-002; dated January 20, 2010
- PQR 1-51A; dated December 28, 1983
- PQR 4-51A; dated September 12, 1986
- PQR A-003; dated February 8, 2000
- PQR A-004; dated February 8, 2000
- Report 206577-PT-005; PS2-TEE/202-4B Final Weld Overlay; dated October 28, 2011
- Report 206577-PT-006; PS2-TEE/202-4B Final Weld Overlay; dated October 28, 2011
- Report 206577-PT-009; Final Weld Repair PS2-TEE/202-4B Overlay; dated October 31, 2011
- Report D2R22-008; PS2-TEE/202-4B Weld Overlay UT; dated November 2, 2011
- Report D2R23-041; 2/1/3001D-20/20-3 Pipe-Elbow UT; dated November 13, 2013
- Report D2R23-024; 2/1/1001A-16/M-1159D-260IWA; dated November 13, 2013
- Report D2R23-019; 2/1/0202B-28/N1B-3 Nozzle-Safe-End; dated November 14, 2013
- Report 13-206; MT Yoke Functional Lift Report; dated September 23, 2013
- Rod Ticket; ER 70S-6; dated November 14, 2013
- RT Examination and Interpretation Report 11-719; SBLC Tank Weld 1A; dated November 6, 2011
- Ultrasonic Thickness Report; SBLC Tank 1103; dated October 31, 2011
- VT-2 Visual Examination Report; Tank 2-1103; dated November 9, 2011
- Welder Qualification W3762; Revision 0

- Work Order 1444980-01; Weld Overlay Recirculation System Valve-to-Tee Weld PS2-TEE/202-4B; dated October 30, 2011
- Work Order 01287892-01; Weld Map No. 1 and 2; dated November 14, 2013
- WPS-8-8-GTSM; ASME Welding Procedure Specification Record (QW-482); Revision 3
- WPS 08-08-T-001; Revision 2
- WSI Traveler 206577-TR-003; Recirculation Piping WOL Repair; Revision 0

1R11 Licensed Operator Regualification Program (71111.11)

- DOS 0400-02, "Rod Worth Minimizer Operability Surveillance," Revision 22
- DGP 02-01, "Unit Shutdown," Revision 153
- DGP 03-01, "Power Changes" Revision 124
- OP-AB-300-1003, "BWR Reactivity Maneuver," Revision 8

1R12 Maintenance Effectiveness (71111.12)

- DRE288LN003, "Control Room HVAC System," Revision 06
- Dwg 28803-001, Control Room HVAC, Revision 01
- Dwg 28803-002, Train "B" HVAC Equipment Room, Revision 02
- Dwg 28803-003, Train "A" HVAC Equipment Room, Revision 01
- Dwg 28803-004, RCU SW/CCSW Valves, Revision 01
- Dwg 28803-006, Air Filtration Unit, Revision 01
- Dwg 28803-007, Control HVAC Overview, Revision 00
- IR 1118531, "2-0305-26-11-104 Body to Bonnet Leak"
- IR 1238571, "2-0305-104 (54-23) Body to Bonnet Leakage"
- IR 1321011, "Unit 2 CRD FCV Failed Closed"

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

- Unit 3 High Pressure Coolant Injection Protected Equipment List
- 2B Fuel Pool Cooling Protected Equipment List
- 2/3B Standby Gas Treatment System Protected Equipment List

1R15 Operability Determinations and Functional Assessments (71111.15)

- IR 1572151, "D3 DIS 1300-01 Unexpected Response"
- Drwg. 12E-3502, Schematic Diagram Primary Containment Isolation System Switch Development, Reset CKT. TIP. Isol. Recirc. Loop Interlock
- Drwg. 12E-3506, Schematic Diagram Primary Containment Isolation System
- Isol. Condenser Control Logic, Sh. 6
- Drwg. 20700LN001-007, U3 Division 1 Initiation/Isolation Logic, Revision 00
- Drwg. 20700LN001-002, Unit 2, Division 1 and 2 Initiation/Isolation Logic, Revision 03
- DIS 1300-01, Revision 34, "Sustained High Reactor Pressure Calibration"
- WO 1674903-01, "D2/3 1M TS SBTG Charcoal Absorber Moisture Removal"
- IR 1573131, "Rec'd 923-5, C-1 Reactor Bldg DP Low"
- Operations Log, 2013/10/16, 0436 – 2013/10/17, 0349
- IR 1584327; "Snubber 2-3001A-42 Failed Functional Testing"
- IR 1589130; "Historical Operability of MS-A Line Due to Degraded Snubber"
- Drawing M-564E; Restraint for SRV Piping; Revision E
- EC 396125; Perform Historical Operability Evaluation of Main Steam "A" Line Due to Snubber 2-3001A-42 that Failed Its Functional Testing;" Revision 0

- IR 1588061; "D2R23LL: Unacceptable Preconditioning of MOV 2-2301-8"
- IR 1587933, "D2R23LL: Preconditioning Near-Miss of MOV 2-020-5A"
- IR 1590651, "Historical: MOV 2-2301-8 had the Incorrect Stem Lubrication"
- IR 1587603, "2-2301-8 Stem nut Needs to be Cleaned"
- ER-AA-321-1007, "Inservice Testing Program Corporate Technical Positions," Revision 1
- MA-AA-723-301, "Periodic Inspection of Limitorque Model SMB/SB/SBD-000 Through 5 Motor Operated Valves," Revision 9
- IR 1598361, "NRC Follow-up for MOV 2-1501-21B Degraded Aux Contact in MCC"
- IR 1592327, "NRC Question: Follow up to MOV Issues"
- IR 1588565; "MOV 2-1501-21B Failed to Stroke Open, Degraded Aux Contact"
- EC 388891, Revision 000, "2013: Unit 2 SR 480V Bucket Replacement Project"
- Dwg. 12E-2662C, Wiring & Schematic Diagram 480V AC Reactor Building MCC 29-7
- DOS 1500-01, "LPCI System Valve Operability," Revision 35
- Operations Log, 2013/09/16 10:15:28, 2013/09/24 05:11:28
- WO 1690106-06, "PMT for 2-2354-501 Failed SLT"
- IR 1585911, "2/2354-501 HPCI Stop Check Valve"
- IR 1588249; "Stop Check Valve Not Installed Per Manufacturer Recommendation"
- IR 1588412, "Entered DOA 10-07 Personnel Emergencies"
- DEOP 0500-03, "Alternate Water Injection Systems," Revision 22
- Drawing M-27. Diagram of Core Spray Piping
- Drawing M-51, Diagram of High Pressure Coolant Injection Piping
- IR 1586553, "Degraded Cable Feed to MOV 2-1301-1"
- IR 1598363, "NRC Followup – Historical Operability MOV 2-1301-1"
- IR 1596220, "Historical operability – Degraded Cable Feed to MOV 2-1301-1"
- IR 1593335, "Degraded Motor Power Cables"
- IR 1593423, "MOV 2-1301-1 Limit Switch Lubricant Grade 4"

1R19 Post-Maintenance Testing (71111.19)

- WO 10106190-01, "D3 22Y EQ Torus to Reactor Building Diff PT XMTR Replacement"
- DIS 1600-20, Torus to Reactor Building Differential Pressure Transmitter dPT2(3)-1622-A and -1622-B Calibration and Maintenance Inspection," Revision 15
- Dresden Operator Log, 10/6 2300-10/9 2300
- WO 1681150 IM PMT Isolation Condenser Time Relay 3-0595-117A
- Drwg 12E-3506, Schematic Diagram Primary Containment Isolation System Isolation Condenser Control Logic
- WO 1681150-03, "D3 DIS 1300-01 Unexpected Response"
- IR 1572151, "D3 DIS 1300-01 Unexpected Response"
- U3 Operator Log, 10/15/2013 0750 – 10/16/2013 0420
- IR 1584996, "Leak Rate for 2-220-58B Above Acceptance Criteria"
- IR 1584997, "Leak Rate for 2-220-62B Above Acceptance Criteria"
- WO 01623420; Contingency Repairs to the 2-0220-58B Feedwater Check Valve; Task 08
- WO 01623422; Operations Perform As Left LLRT 2-0220-62B per DOS 7000-26; Task 06
- DOS 7000-26; Local Leak Rate Testing of Unit 2 Feedwater System Valves 2-0220-58B and 2-0220-62B; Revision 7
- WO 1689458-01, "EM MCC 28-7/29-7 Did Not Transfer as Expected"
- WO 1689458-02, "OP PMT MCC 28-7/29-7, Bus Auto Transfer Per DOS 6600-07"
- DOS 6600-07, "Testing LPCI Swing Bus Protective Relays and Auto Transfer Function," Revision 27
- IR 1585176, "MCC 28-7/29-7 Did Not Transfer as Expected"
- WO 1511291-04 and -20, "D2 RFL TS Perform 10% Sample Select Criteria per DTS 0020-02"

- DTS 0020-02, "Snubber Functional performance Criteria," Revision 21
- WO 1225306, PMT Run Pump and Check Schraeder Valve for Leaks, Task 02
- DOS 1100-04, Standby Liquid Control System Quarterly/ Comprehensive Pump Test for the Inservice Testing Program, Revision 48

1R20 Outage Activities (71111.20)

D3M18:

- IR 1574501, "U3 Generator Stator Leak Identified"
- IR 1574849, "DW Closeout with NRC and Ops Results – D3M18"
- IR 1574141, "3C RFP Aux Oil Pump Trip"
- IR 1576313, "Intentially Abbreviated Maintenance"
- IR 1577047, "Main Turbine Bearing 4 Temp Trending High"
- IR 1577057, "Scram Disch Volume LS 2-0302-82L Out of Tolerance DIS 500-05"
- IR 1577142, "Failed PMT 3B MSDT Pipe Cap Leak"
- IR 1577154, "No Indication for CRD H-04 on the RWM"
- DGP 01-01, "Unit Startup," Revision 176

D2R23:

- IR 1587722, "Dresden OSHA Recordable – finger injury"
- IR 1590970, "Human Performance Alert"
- IR 1591031, "Configuration Control Alert"
- IR 1583621, "SRM 21 Fails Signal to Noise Ratio"
- IR 1584302, "NRC Identified Issue in U2 Torus Basement"
- IR 1574899, "Revise DOP 0201-04, Operation With the Potential to Drain the Reactor Vessel"
- IR 1584997, "Leak Rate for 2-220-62B Above Acceptance Criteria" (Assignment 02: "Perform Prompt Investigation IAW OP-AA-106-101-1001")
- IR 1584996, "Leak Rate for 2-220-58B Above Acceptance Criteria"
- IR 1584736, "Smoke Coming From Breaker for 2-0202-4A Valve"
- IR 1584967, "D2R23 Containment Coating Walkdown Results"
- IR 1583619, "SRM 24 Will Not Drive Out"
- IR 1583907, "Through Wall Leakage of 2B H2O2 Mon. Sys. Above DW Bulkhead"
- IR 1583889, "RBCCW Leak From 2B Recirc Pump"
- IR 1583810, "Motor Failed Borescope Inspection"
- IR 1583774, "D2R23 CRD Box Accelerometer Tripped"
- IR 1584327, "Snubber 2-3001A-42 Failed Functional Testing"
- IR 1584205, "U2 MSSV Outlet Line for PAM Found Broken"
- IR 1589349, "U2, Div II, LPCI Gas Void During Fill and Vent"
- IR 1589275, "ISO Condenser Vent Valves Unexpected Closure"
- IR 1588706, "IRM 16 Blowing Fuses and Not Stroking"
- IR 1589576, "Smoke From 2-0202-4A Breaker"
- IR 1586483, "D2R23LL: NRC Insp Identifies Garbage Blowing on West Side"
- IR 1587963, "Fatigue Assessment"
- IR 1587174, "D2R23 IVVI – Steam Dryer Hood Anomalies"
- EC 396083, Revision 0, "Evaluation of D2R23 IVVI Indications"
- IR 1591774, "2A MSDT LCV Not Open"
- IR 1591788, "Unable to Establish Flow Through U2 EHC Filters"
- IR 1591677, "U2 Main Turbine Bearing 6 Temp Trending High"
- IR 1591625, "Unacceptable Megger Readings U2 Alterex BRG #12"
- IR 1591110, "IRM 18 Range Switch Selected to Range 6"
- IR 1590714, "ENS Notification Delayed Due to Inadequate Communication"

- IR 1590910, "NRC SRI Identified Loose Items in the U2 Drywell"
- DOS 0800-01, "Refueling Interlock Checks," Revision 35
- DGP 02-01, "Unit Shutdown," Revision 153
- DOP 1900-16, "Disable Fuel Pool Cooling Pump Trips," Revision 0
- EC 395793, Revision 000, "Evaluation for DOP 1900-16 – Bypassing [Disable] Fuel Pool Cooling Pump Trips"
- EC 395793, Revision 000, "Evaluation for DOP 1900-16 – Bypassing [Disable] Fuel Pool Cooling Pump Trips"
- EC 353298, Revision 008, Design Attribute Review(DAR), "Reactor Recirculation MG Set Replacement with Adjustable Speed Drive (ASD) Units"
- EC 390657, Revision 000, Design Considerations Summary(DCS), "Addition of External Auxiliary Oil Reservoir for the Reactor Recirculation System Pump Motor Lower Oil (Both A and B)"
- EC 382479, Revision 002, DCS, "Unit 2 Automatic Voltage Regulator Replacement"
- EC 388779, Revision 002, DCS, "RAT TR22/TR86 Open Phase Detection Protective Relay Installation"
- Fatigue Assessments per LS-AA-119-1001, dated November 21, 2013 and November 20, 2013.
- WO 1685289, MM Repack Motor Operated Valve Leaking 2-1201-7"
- PORC Summary, "D2C24 Reload Package"
- Document Site Approval(DSA) Form, DOP 1500-09, "LPCI LOOP Selection Defeat Procedures," Revision 06
- DSA, OU-DR-104, Shutdown Safety Management Program," Revision 15
- IR 1454213, FASA Report, "Dresden T-3 Pre-Outage Assessment – D2R23"
- "Dresden D2R23 Shutdown Safety Review," Revision 00
- IR 1586451, ATWS Transmitter Replacements Caused and Diesel Start"
- Apparent Cause Report, IR 1586451-02, "While Performing ATWS Level Transmitter Replacements an Unexpected Low Water Level Trip was Energized Resulting in Starting Both the U2 and 2/3 EDG"
- IR 1586451-03, "PINV to IMD"
- IR 1519426, "ACIT for Design Mechanical Perform a review of actions associated with NTS 237-211-98-00801, ARs 6599 and 11753 to Determine Actions that were Taken to Resolve the Identified Findings 6 and 11"
- WO 1645248-01, "D2 11 RFL EQ Reactor Level ATWS RPT/ARI Transmitter Replacement"
- WO 1645249-01, D2 11 RFL EQ Reactor Level ATWS RPT/ARI Transmitter Replacement"
- WO 1488328-01, "D2 24 M RFL TS/EQ ATWS RPT/ARI & ECCS Level Chan CAL & EQ INS"
- Core Spray System Functional Control Diagram, Figure 7.3-1

1R22 Surveillance Testing (71111.22)

- WO 1489069, "D2 30M/RFL TS LLRT MSIV 203-1A & 203-2A Dry Test"
- DOS 7000-01, "Local Leak Rate Testing of Main Steam Isolation Valves (Dry Test)," Revision 7
- Operator logs 10/9 2300-10/10 2300
- Drwg: 203LN001-002, LPCI Initiation Logic, Revision 01
- Drwg: 203LN001-001, LPCI System and Instrumentation, Revision 01
- Drwg: 203LN001-004, LPCI Local Instrumentation, Revision 00
- WO 1429950-01, "D2 2Y EQ LPCI System XMTR Cal/Insp"
- WO 1659462, U2 Diesel Generator Cooling Water Pump Quarterly Pump and Valve Surveillance, Task 01

- DOS 6600-08, "Diesel Generator Cooling Water Pump Quarterly and Comprehensive/Preservice Test for Operational Readiness and In-Service Test (IST) Program," Revision 57
- WO 1205408, "OP D2 5Y TS Isolation Condenser Heat Removal Test"
- DOS 1300-01, "Isolation Condenser Five Year Heat Removal Capability Test," Revision 40
- DRE02-0020, "Isolation Condenser Heat Removal Capacity Test Validation," Revision 5
- IR 1586824, "OPS Schedule Hit"
- WO 1489071, "D2 2Y/RFL TS Bus 24-1 UV and ECCS Integrated Func Test"
- DOS 6600-05, "Bus Undervoltage and ECCS Integrated Functional Test for Unit 2 Diesel Generator," Revision 65
- IR 1585176, "MCC 28-7/29-7 Did Not Transfer as Expected"
- IR 1585414, "DOS 6600-05, Unit Div 2 Undervoltage Test (EDG Closure Time)"
- IR 1589988, "DOS 6600-05 Division 2 Under Voltage Testing Procedural Trac"
- WO 1506607, "D2 Rfl TS 1000 PSI Reactor Vessel System Leakage Test/Hydrostatic"
- EN# 49585
- IR 1590044, "HCU G-12 Packing Leak on the Scram Inlet Valve"
- IR 1590046, "30 DPM Leak From MOV Packing"
- IR 1590050, "Leak Identified on Unit 2 'C' ERV"
- IR 1593388, "Leakage Identified During D2R23 ASME Class 1 Leakage Test"
- IR 1590714, "ENS Notification Delayed Due to Inadequate Communication"
- IR 1592636, "U3 DW Flr Drn Isol Vlv in 'ALERT' Range During Timing"
- DOS 0201-01, "Unit 2 RPV ASME B & PV Code 1000 PSI System Leakage Test," Revision 61
- DOP 0202-08, "Recirculation Pump operation for Heating Reactor Water During ASME Hydrostatic Test or 1000 PSIG Leakage Test," Revision 20

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

- -EP-AA-1000; Standardized Radiological Emergency Plan; Revision 22 and 23
- -EP-AA-1004; Radiological Emergency Plan Annex for Dresden Station; Revision 31, 32, and 33
- -EP-AA-110-200; Dose Assessment; Revision 5
- -EP-AA-110-201; On Shift Dose Assessment; Revision 1

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

- RWP 10014902; D2R23 Drywell In Service Inspection Activities
- RWP 10014939; D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities;
- RWP 10014940; D2R23 Refuel Floor Reactor in Vessel Activities;
- RWP 10014860; D2R23 Scaffold Installation/Removal Activities (Excluding Drywell); and
- RWP 10014896; D2R23 Drywell Control Rod Drive (CRD) System Maintenance Activities
- RWP 10014922; D2R23 Turbine Building Small Scope Minor Maintenance Activities
- IR-01587670; CB&I Carpenter Received an ED Dose Rate Alarm; November 20, 2013
- IR-01586277; Nuisance Contamination from Grinding Activity; November 15, 2013
- RP-AA-203-1001; Dresden Personnel Exposure Investigation: Revision 7
- Attachment 1; Dresden Personnel Exposure Investigation: Revision 7; GAGEX9938; Unplanned ED ALARM ED No. 1908897
- Attachment 1; Dresden Personnel Exposure Investigation: Revision 7; LUDK04530; Investigate an Individual Uptake; November 15, 2013
- RP-AA-301; Radiological Air Sampling Program; Revision 6
- RP-AA-302; Determination of Alpha Levels and Monitoring; Revision 5

- RP-AA-700-1246; Operation of Air Samplers; Revision 2
- RP-AA-461; Radiological Controls for Contaminated Water Diving Operations; Revision 4
- National Source Tracking System; Confirmation Form 2013 Annual Inventory Reconciliation; January 10, 2013
- Survey 2CRDPTFM; Unit-2 Drywell CRD Platform Radiation Survey Post Decontamination; November 17, 2013
- Survey 2RXCAVITY; Unit-2 Reactor Building Reactor Cavity; November 3, 2011
- Dresden Unit-2 BRAC Dose versus Past Milestones

2RS2 Occupational ALARA Planning and Controls (71124.02)

- ALARA No. 10014902; RWP 10014902; D2R23 Drywell In Service Inspection Activities
- ALARA No. 10014939; RWP 10014939; D2R23 Refuel Floor Reactor Disassembly/Reassembly and Related Activities
- ALARA No. 10014940; RWP 10014940; D2R23 Refuel Floor Reactor in Vessel Activities
- ALARA No. 10014860; RWP 10014860; D2R23 Scaffold Installation/Removal Activities (Excluding Drywell);
- ALARA No. 10014896; RWP 10014896; D2R23 Drywell Control Rod Drive (CRD) System Maintenance Activities
- ALARA No. 10014922; D2R23 Turbine Building Small Scope Minor Maintenance Activities
- Dresden Unit-2 Refueling Outage Revised Exposure Goal to Less Than 93.450 Rem; November 22, 2013

2RS5 Radiation Monitoring Instrumentation (71124.05)

- IR-01392741; HPGE Detector Failed Multiple Performance Checks; July 27, 2012
- IR-01392819; Out of Calibration RP Instrument Found in Plant; July 25, 2012
- IR-01392532; IPM-9 at Unit-3 589' is Out-of-Service due to Faulty Power Supply; July 24, 2012
- IR-01315860; Unit-2 B Iso Condenser Radiation Monitor Downscale Alarms; January 20, 2012
- IR-01545649; Unexpected Alarm, Liquid Process Radiation Monitor Downscale; August 12, 2013
- IR-01544781; Service Water Rad Monitor Tripped While Performing Unit-2 Purge; August 8, 2013
- IR-01533818; Out of Tolerance on Dresden Unit-3 Drywell Cam; July 9, 2013
- IR-01532716; Service Water Rad Monitor Bezel Falling off; July 10, 2013
- IR-01502721; GE Chimney Rad Monitor Recorder did not Respond; April 16, 2013
- IR-01505487; Unit-3 Local TIP ARM Alarming; April 23, 2013
- IR-01505729; Unit-3 DW CAM Heat Trace Reading Low; April 23, 2013

4OA1 Performance Indicator Verification (71151)

- Monthly Floor Drain Leakage (FDL) Unidentified for Unit 2 and 3, October 2012 through September 2013
- NEI 99-02, "Regulatory Assessment Performance Indicator Guidance," Revision 6
- LS-AA-2150; Monthly Data Elements for RETS/ODCM Radiological Effluent Occurrences; Revision 5
- Attachment 1; LS-AA-2150; Monthly Data Elements for NRC RETS/ODCM Radiological Occurrences from January 2012 through September 2013

4OA2 Identification and Resolution of Problems (71152)

- IR 1581772, "Adverse Trend in SSFFS (Secondary Containment Function)
- IR 1544537, "NOS ID: Interlock Door Adverse Trend"
- IR 1533849, "2013 Midcycle Assessment New Gap (CY.1-2)"
- IR 1544251, "(EOS Trending) Weaknesses Identified in Procedure Use"
- IR 1545808, "Adverse Trend in Megger Readings on RBOC Main Hoist Motor"
- IR 1551198, "OOT Adverse Trend on 2/3-4650-33 (Non-Tech Spec)"
- IR 1552738, "Security Equipment Adverse Performance Trend"
- IR 1540710, "RP Rapid Trending: Instrument Program"
- IR 1555068, "IRS Over 30 Days Without Trending"
- IR 1555071, "IRS Over 30 Days Without Trending"
- IR 1554933, "NOS ID: SWRM Repetitive Malfunctions"
- IR 1554961, "NOS ID: U2/3 Chimney Radiation monitor Repetitive Issues"
- IR 1564014, "Issues Identified With Hyperion CAP150A Report"
- IR 1556965, "NOS ID: Adverse Trend in Work Control Meeting Attendance"
- IR 1590091, "Trending IR for MRule CM Failure AEER B Compressor"
- IR 1597528, "NOS ID: Identifying Trends in CAP Investigations"
- IR 1506235-02, "CAP Trending is NOS Area Needing Management Attention (ARMA)"
- IR 1549589, "(PI Review) Declining Trend Noted in Security"
- IR 1540273, "Adverse Trend for U2 SWC Conductivity"
- IR 1538277, "NRC Resident Informed MCR of TB/RB Door Issue"
- IR 1527498, "Fire Door 174 Not Restored within 7 Days"
- IR 1526722, "Adverse Trend (Increase) for the 2A Off-Gas SJAE Flow"
- IR 1524059, "C/O Related Issue Tracking Clearance Requested and Not Used"
- IR 1545683, "2/3 EDG Interlock Failure Troubleshooting Results"
- IR 1545576, "U2 517 RB Interlock Door #52 RB Side Needs Adjustment"
- IR 1545072, "Wiring Found Not Per Prints"
- IR 1544390, "Unit 2 Interlock Turbine Side Door Sticking Open"
- IR 1537748, "Issues During TSC HVAC Inspection"
- IR 1534762, "U2 517' RB Interlock TB Side Door Slide Arm Worn Out"
- IR 1534763, "U2 517' RB Interlock RB Side Door Slide Arm Worn Out"
- IR 1533968, "D-2 RX Bldg. Interlock Door on Turbine Side Will Not Close"
- IR 1530208, "Secondary Containment Declared Inop"
- IR 1497192, "DEOP 300-01 Entry"
- IR 1502634, "D2 TB Side Interlock Door Not Closing"
- IR 1525007, "U3 DW Temp Monitoring Shows EQ Limit Exceeded for SDC MOV"
- IR 1524292, "U2 DW Temp Monitoring Shows EQ Limit Exceeded for SDC MOV"
- IR 1505603, "2-5850-16 U2 517' TBX Interlock Door Does Not Close"
- IR 1493171, "Unexpected ALM 902-4 E-21, U2/3 Diesel Gen Intlk Doors Inop"
- IR 1469566, "2/3 Diesel Generator Room Door Malfunctioning"
- IR 1455683, "2/3 EDG Interlock Reactor Building Side Door Broken"
- IR 1451600, "2/3 EDG RB-EDG Interlock Door Broken"
- IR 1443626, "Evaluate Opening Setpoint of DW N2 Backup Supply AO"
- IR 1441090, "Bioshield Insulation in U3 Drywell Detached and Falling"
- IR 1439738, "Drywell Liner NDE-UT Exams Delayed Due to Presence of Water"
- IR 1440267, "Containment Coating D3R22 Walkdown Results"
- IR 1439093, "U3 X-Area 'A' Main Steam Line Penetration Seal Leaking"
- IR 1438801, "3B DW Vent and Purge Housing Leak"
- IR 1433386, "Unit 2 517' TB/RB TB Side Interlock Door Broken"
- IR 1428760, "Door 52 D2 RXBLDG Side Failing to Close Under Its Own Power"

- IR 1408620, "U2 517' Sec Cont TB Side Door Chronic Performance Issues"
- IR 1407809, "2-1600-X-202BB Pressure Found OOT Per DOS 1600-17"
- IR 1407811, "2-1600-X-202J Pressure Found OOT Per DOS 1600-17"
- IR 1407813, "2-1600-X-202Q Pressure Found OOT Per DOS 1600-17"
- IR 1407814, "2-1600-X-202S Pressure Found OOT Per DOS 1600-17"
- IR 1407815, "2-1600-X-202W Pressure Found OOT Per DOS 1600-17"
- IR 1407816, "2-1600-X-202E Pressure Found OOT Per DOS 1600-17"
- IR 1388316, "Unit 3 Torus LVL Increasing"
- IR 1386268, "U3 4th Floor Drywell Temp Out of Spec. High"
- IR 1384378, "OM.1 Unplanned Entries Into LCOS in Variance for June 2012"
- IR 1383424, "Sampling U2 Torus for O2"
- IR 1380352, "903-4 E-19, RX/TURB 517 INTLK Doors INOP/BYP Alarmed"
- PORC #12-031, "50.59 Eval 2012-02-001, Temporary Nitrogen Inerting Gas Supply"
- IR 1367706, "U2 DW O2 Concentration Trending Up"
- IR 1364608, "Reactor Building Interlock Door Hard to Open"
- IR 1359320, "Secondary Containment Inoperable During DOS 7500-02"
- IR 1533661, "Procedural Guidance Not Found"
- IR 1533412, "DOS 1500-02 Clarifications Requested"
- IR 1524965, "TRNG ID: Potential Revision Needed to DOS 0300-01"
- IR 1379212, "Procedure MA-AB-763-403 Lacks Sufficient Direction"
- IR 1375416, "NOS ID Site Procedure Inadequate to Perform Task"
- IR 1525670, "Procedure Deficiencies in DOP 4200-01 and DOP 4200-02"
- IR 1524595, "Procedures Deficiencies"
- IR 1529630, "DOS 1500-18: Discrepancy Between U2 and U3 and DIP 1500-04"
- IR 1533035, "Revision Needed on DOS 7900-02 Data Sheets"
- IR 1544522, "CCP: DIP 5700-02 Needs Revision, Found During Walkdown"
- IR 1523411, "Discrepancy Between DOA 5650-02 Step D.3 and D3C23 COLR"
- IR 1524856, "DOP 0010-10(Rev 59) Incorrectly Identifies PIS for DIS"
- IR 1531786, "MTU Listed Instead of STU"
- IR 1531283, "Procedure Enhancement Needed DOP 7400-01 G.2.C and G.2.D"
- IR 1524485, "Enhancement to DFP 0800-70 Attach. 1 to Exceed 100F"
- IR 1531807, "EPN Mis-Stated in DIS 0263-12"
- IR 1544522, "DIP 5700-02 Needs Revision, Found During Walkdown"
- IR 1529630, "DOS 1500-18: Discrepancy Between U2 and U3 and DIP 1500-04"
- IR 1363541, "Procedure Discrepancies"
- IR 1363865, "Procedure Walkdown Identified Typos in Checklist C"
- IR 1363901, "Need Additional Actions For Changes Per DCP 9900294"
- IR 1364430, "Apparent Inconsistency in DOS 6600-05"
- IR 1367126, "IR Written to Revise DOP 4700-01"
- IR 1367293, "Appendix X Minimum Voltage While on Alt Batteries"
- IR 1370133, "Incorrect Load Limit Guidance for Removing U2 FWHS From SERV"
- IR 1472296, "Deficiencies Noted During DOA 0010-04 Walkdown"
- IR 1475057, "DES 6600-08 Deficiencies"
- IR 1475626, "DES 0040-08 Deficiency"
- IR 1476773, "TRNG ID: DOA 0040-T1 Revision Needed"
- IR 1495652, "Procedure DOS 1500-02 Needs to Be Revised for IMD Step D.3"
- IR 1495333, "DOP 4700-01 Requires Minor Revision for Error"
- IR 1496253, "Fire Damper Procedure DFPS 4175-09"
- IR 1499943, "Error in DOA 4400-01, Circ Water System Failure, Revision 22"
- IR 1499916, "Error in DOA 3300-02, Loss of Condenser Vacuum, Revision 40"

- IR 1502246, "DOA 0300-05 Has No Direction to Unbypass RWM"
- IR 1503025, "DOS 0700-01 Needs Evaluation for Revision"
- IR 1502618, "DFPS 4195-03 in Need of Revision"
- IR 1502556, "Need Evaluation for Restart of Condensate System"
- IR 1504014, "Revise Steps in DMS 4300-02"
- IR 1505021, "DOS 0040-02 Procedure Revision Required"
- IR 1505196, "Procedure Enhancement Opportunity"
- IR 1503650, "Procedure Enhancement"
- IR 1503956, "DAN 923-6 A-6 Needs Revision"
- IR 1539259, "CCA Requested for FASA 1500706 Id'd Deficiencies"
- IR 1536006, "CDE ROP PP01 Indicator Decline"
- IR 1550087, "Station Emergent Exposure Greater Than 5% Total Exposure"

4OA3 Event Follow Up (71153)

- IR 1569652, "Unexpected Alarm 903-7, C-10 Stator CLG Panel Trouble"
- DAN 2252(3)-7 C-3, "Hydrogen Leak Rate High," Revision 00
- P&ID M-42; M-3658 Sheet 1, 245LN002-031 "Generator H2 and Co2 Supply System," Revision 2
- P&ID M-22 & M-42, 245LN002-030 "Main Generator Hydrogen Cooling, Analyzing, and Moisture Detection," Revision 2
- P&ID Stator Cooling System, Dwg. M355A
- Dwg 253LN001-001, "Stator Cooling Water System," Revision 06
- Dwg 245LN002-023, "Main Generator System Hydrogen Temperature Control," Revision 0
- Unit 3 Operator logs, 10/9/2013 0321 – 0510
- EC 395616, Revision 002, "2/3 EDG to RB Interlock Door Circuit Reconfiguration"
- Apparent Cause Report, IR 1545683, "2/3 EDG Secondary Containment Door Interlock Failures"

4OA5 Other Activities

- IR 1570162, "TRNG ID: Potential Revision to MA-DR-MM-6-0010"
- IR 1570956, "NOS ID: Potential Damage/Degradation of Flood Barrier Seal"
- IR 1539265, "Aqua Dam Flood Protection Demonstration Lessons Learned"
- Design Consideration Summary (DCS), EC 391644, Revision 003, "Reactor and Diesel Building Flood Barriers"
- DCS, EC 391643, Revision 007, "Alternate ISCO, RPV and Spent Fuel Pool Makeup Water Source"
- IR 1550960, "FASA: 95001 Flooding Strategy Pre-NRC Inspection"
- Work Planning Instructions (WPI), EC 391643, Revision 006
- DOA 0010-04, "Floods," Revision 40
- MA-DR-MM-6-00101, Revision 0, "Maintenance Activities for Site Flooding"
- Letter from G. Kaegi to US NRC dated August 28, 2013, "Supplemental Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Flooding Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident"
- Seismic Walkdown Checklist; DO2-1601-0057-V20 Pressure Suppression Drywell/Torus Nitrogen Makeup Valve
- IR 1584319; Fukushima: Light Fixture in Drywell Hanging By Its Wires
- IR 1584315; Fukushima: Loose Light Fixture In Drywell
- IR 1584325; Fukushima: 6" Diameter Fire Water Pipe Torus Catwalk With Rust Spot

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As Low As Reasonably Achievable
ASME	American Society of Mechanical Engineers
ATWS	Anticipated Transient Without a Scram
CAP	Corrective Action Program
CCSW	Containment Cooling Service Water
CFR	Code of Federal Regulations
CRD	Control Rod Drive
DRP	Division of Reactor Projects
EACE	Equipment Apparent Cause Evaluation
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EPRI	Electric Power Research Institute
ERO	Emergency Response Organization
FLS	First Line Supervisor
GE	General Electric
HPCI	High Pressure Coolant Injection
IC	Isolation Condenser
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
IR	Issue Report
ISI	In-service Inspection
LBM	Latch Bolt Monitor
LER	Licensee Event Report
LLC	Limited Liability Corporation
LPCI	Low Pressure Coolant Injection
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OOS	Out-of-service
OSP	Outage Safety Plan
PARS	Publicly Available Records System
PI	Performance Indicator
PM	Planned or Preventative Maintenance
PMT	Post-Maintenance Testing
RCS	Reactor Coolant System
RETS/ODCM	Radiological Environmental Technical Specifications/Offsite Dose Control Manual
RFO	Refuel Outage
RP	Radiation Protection
RPV	Reactor Pressure Vessel
SBGT	Standby Gas Treatment
SBLC	Standby Liquid Control
SDP	Significance Determination Process
SSC	structures, systems, and components
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order

M. Pacilio

-2-

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Sincerely,

/RA/

Jamnes Cameron, Chief
Branch 6
Division of Reactor Projects

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SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
NRC INTEGRATED INSPECTION REPORT 05000237/2013005;
05000249/2013005

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