



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION III
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LISLE, IL 60532-4352

November 10, 2015

Mr. Ernest Harkness
Site Vice President
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Perry Nuclear Power Plant
P. O. Box 97, 10 Center Road, A-PY-A290
Perry, OH 44081-0097

**SUBJECT: PERRY NUCLEAR POWER PLANT INTEGRATED INSPECTION
REPORT 05000440/2015003**

Dear Mr. Harkness:

On September 30, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Perry Nuclear Power Plant. On October 22, 2015, the NRC inspectors discussed this inspection with you and members of your staff. The inspectors documented the results of this inspection in the enclosed inspection report.

The NRC inspectors documented two findings of very low safety significance (Green) in this report. The findings involved violations of NRC requirements. Additionally, the NRC inspectors documented a licensee-identified violation that was determined to be of very low safety significance. The NRC is treating these violations as non-cited violations (NCVs), consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, 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 copies to the Regional Administrator, Region III; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Perry Nuclear Power Plant.

If you disagree with a cross-cutting aspect assignment 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 Perry Nuclear Power Plant.

E. Harkness

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

Docket No. 50-440
License No. NPF-58

Enclosure:
IR 05000440/2015003
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440

License No: NPF-58

Report No: 05000440/2015003

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant

Location: North Perry, Ohio

Dates: July 1 through September 30, 2015

Inspectors: M. Marshfield, Senior Resident Inspector
J. Nance, Resident Inspector
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T. Briley, Davis-Besse Resident Inspector
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Approved by: M. Kunowski, Chief
Branch 5
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

Inspection Report (IR) 05000440/2015003, 07/01/2015–09/30/2015, Perry Nuclear Power Plant; Integrated Baseline Inspection; Operability Determinations, Surveillance Testing, and Problem Identification and Resolution.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two findings were identified by the inspectors that were considered Green non-cited violations (NCVs) of the U.S. Nuclear Regulatory Commission (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 April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

NRC-Identified and Self-Revealed Violations

Cornerstone: Mitigating Systems

Green. The inspectors identified a finding of very low safety significance and associated non-cited violation (NCV) of Title 10 of the *Code of Federal Regulations* Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure as of July 8, 2015, to establish and maintain an adequate procedure for operation of the Diesel Generator Building Ventilation System (DGBVS). Specifically, the DGBVS operating procedure did not ensure that diesel room temperature would remain below limits during testing.

The failure to establish and maintain an adequate procedure was a performance deficiency and resulted in the Division 2 Diesel Generator room temperatures exceeding specified limits. The performance deficiency was more than minor, and thus a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone 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 that the finding was of very low safety significance because the finding is a deficiency affecting the design or qualification of a mitigating structure, system, and component (SSC) that maintained its operability. This finding has a cross-cutting aspect in the area of human performance, design margins, because the licensee did not incorporate the degree of redundancy specified in the Updated Safety Analysis Report for DGBVS into the applicable operating procedures (H.6). (Section 1R15)

Green. A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1., "Procedures," was self-revealed on August 5, 2015, when an unexpected isolation of the reactor core isolation cooling (RCIC) system occurred as a result of the licensee's failure to properly implement the steps outlined in TS Surveillance Procedure, SVI-E31-T5395B, "RCIC Steam Line Flow High Channel Functional for 1E31-N684B." Specifically, during performance of the surveillance, several steps were marked as not applicable that were applicable to prevent the isolation of the RCIC system. As a result, the licensee failed to lift leads as required by the procedure and the

RCIC steam supply inboard isolation valve then closed when the isolation trip signal was applied during the test. The licensee took immediate actions to restore system operability and availability and conducted a human performance event response investigation. A standing order for both Operations and Instrumentation and Controls personnel was initiated addressing interim actions for control room surveillance performance and to reinforce maintenance fundamentals and human performance behaviors.

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 equipment performance 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 because it did not represent an actual loss of function of one or more non-Technical Specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. This finding has a cross-cutting aspect in the area of human performance, avoid complacency, for failing to recognize and plan for the possibility of mistakes, and for failure to implement appropriate error reduction tools, such as proper self-checks and peer checks, which resulted in an isolation of the RCIC system (H.12). (Section 1R22)

Licensee-Identified Violation

A violation of very low safety significance was identified by the licensee and has been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking number are listed in Sections 4OA2.4 and 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

The plant began the inspection period at 100 percent power and remained at full power for the remainder of the reporting period with the exceptions of minor reductions in power to support routine surveillances and in response to meteorologically-driven de-rates caused by cooling tower heat removal limitations experienced periodically during the summer period.

1. REACTOR SAFETY

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

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:

- division 2 emergency diesel generator (EDG);
- emergency service water (ESW) system 'B';
- control room ventilation and emergency recirculation system 'B';
- standby liquid control system 'B'; and
- unit 1 startup transformer.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Safety Analysis Report (USAR), 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 five partial system walkdown samples as defined in Inspection Procedure (IP) 71111.04–05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On August 20, 2015, the inspectors performed a complete system alignment inspection of the emergency closed cooling system to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding WOs was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

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:

- Fire Zone 0FH–3, Fuel Handling Building 620' Elevation;
- Fire Zone 1CC–3B, Division 3 Switchgear 620' Elevation and Fire Zone 1DG–1B, Diesel Generator (DG) Building 620' Elevation, Division 3 DG;
- Fire Zones OCC–2A, OCC–2B, and OCC–2C, Control Complex 599' Elevation;
- Fire Zone 1AB–3B, Auxiliary Building 620' Elevation West; and
- Fire Zone 0IB–1, Intermediate Building 574' Elevation and Pipe Chase 585' Elevation.

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. 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 five quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program and Licensed Operator Performance (71111.11)

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

a. Inspection Scope

On July 27, 2015, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification training to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

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

This inspection constituted one quarterly licensed operator regualification program simulator sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

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

a. Inspection Scope

On August 19, 2015, the inspectors observed the response by the control room licensed operators to an unexpected lockup of a reactor recirculation flow control valve. The inspectors observed crew response, troubleshooting discussions, coordination of field activities, and restoration of the affected flow control valve. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

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

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

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- R14 – 120-Volt Alternating Current Vital (Inverters and Distribution);
- E31 – Leak Detection; and
- R43 – Division 2 EDG.

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

- implementing appropriate work practices;
- identifying and addressing common cause failures;

- scoping of systems in accordance with Title 10 of the *Code of Federal Regulations* (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 structure, system, and component (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 three 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)

a. Inspection Scope

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

- division 2 diesel ventilation dampers repair and post-maintenance testing;
- quarterly control rod sequence exchange and recovery of control rod 34–03;
- high pressure core spray (HPCS) second test valve to condensate storage tank Limitorque valve operator maintenance deferred due to online risk;
- cooling valves to Fuel Pool Cooling heat exchanger gaged open and required to be operable for some Emergency Operating Procedure actions; and
- reactor feed pump turbine governor valve repairs due to a sticking valve stem.

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

These maintenance risk assessments and emergent work control activities constituted five samples as defined in IP 71111.13–05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- HPCS system line venting;
- Division 2 DG ventilation damper failure;
- Division 3 ESW low flow; and
- Operational Decision-Making Issue (ODMI) for stator cooling water leak.

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 USAR 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 four samples as defined in IP 71111.15–05.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to establish and maintain an adequate procedure for operation of the Diesel Generator Building Ventilation System (DGBVS). Specifically, the DGBVS operating procedure did not ensure that diesel room temperature would remain below limits during testing.

Description: On July 8, 2015, at 11:25 am, the Division 2 EDG was started for monthly surveillance testing. Initially, both ventilation trains associated with the Division 2 EDG room started automatically when the diesel was started. At 11:47 am, operators secured one of the two ventilation trains, in accordance with the operating procedure. Subsequently however, both the outlet damper and the recirculation damper of the operating train failed, resulting in a loss of all room ventilation and increasing air temperatures in the room.

At 1:02 pm, a high temperature alarm for the EDG room was received in the main control room and an operator was dispatched to locally restart the train of DGBVS that had been secured earlier. The restarted ventilation train returned the room air temperature, which had reached 134°F, to within limits.

The inspectors noted several items when reviewing the circumstances of this problem. The USAR, Section 9.4.5.1.4.b, states the DGBVS is “to operate whenever the DGs operate,” to start “automatically whenever the DGs operate,” and is “designed to maintain the DG rooms between the temperatures given in Figure 3.11-27.” This figure specifies a maximum room temperature of 121°F during diesel testing. USAR 9.4.5.1.4.e further states that the “DGBVS is provided with multiple supply fans and multiple operating exhaust louvers so that failure of a single active component will not prevent satisfactory system operation.” The inspectors noted that procedure SOI-M43, “Diesel Generator Building Ventilation System,” inappropriately directed operators to secure one of the automatically started ventilation trains once the EDG had been started. In this configuration, air temperature in the EDG rose quickly when the operating ventilation train failed and manual operator action was required to restart the idled train. Also, the inspectors noted that the main control room alarm setpoint for the EDG room was significantly higher than the 121°F limit specified in the USAR.

The inspectors also questioned the acceptability of equipment located in the Division 2 DG Room being operated at the elevated air temperature. A prompt operability determination by the licensee determined that the building structure and components were not significantly impacted by the short time period of the high temperature excursion.

Analysis: The inspectors determined that the failure to establish and maintain an adequate procedure for the operation of the DGBVS was a performance deficiency. Using guidance in Inspection Manual Chapter (IMC) 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012, the inspectors determined that the performance deficiency was more than minor, and thus a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone 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 Significance Determination Process (SDP) in accordance with IMC 0609, Appendix A, “The Significance Determination Process for Findings At-Power,” Exhibit 2, dated June 19, 2012. The finding was determined to be very low safety significance because the inspectors answered “Yes,” to the following question under step A, “Mitigating SSCs and Functionality;” “If the finding is a deficiency affecting the design or qualification of a mitigating SSC, does the SSC maintain its operability or functionality?,” therefore the finding screened as green (very low safety significance).

The finding has a cross-cutting aspect in the area of human performance, design margins, because the licensee did not incorporate the degree of redundancy specified in the USAR for the DGBVS into applicable operating procedures (H.6).

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” requires, in part, that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances and be accomplished in accordance with these procedures.

Contrary to this, licensee procedure SOI–M43 for the operation of the ventilation system for the safety-related EDG was not appropriate to the circumstances in that it allowed the failure of one train of the ventilation system to result in EDG room temperatures above limits during operation of the EDG. The licensee entered the issue into the CAP (as Condition Report 2015–09807) and performed a Prompt Operability Determination for a Non-Conforming Condition that concluded that the length of time the air temperature in the EDG room was above the limit was not long enough to significantly degrade temperature-sensitive equipment and components in the room. Because this violation was of very low safety significance and it was entered into the licensee’s CAP, this violation is being treated as a non-cited violation (NCV) consistent with Section 2.3.2.a of the U.S. Nuclear Regulatory Commission (NRC) Enforcement Policy **(NCV 05000440/2015003–01, Inadequate Operating Procedure for Diesel Generator Building Ventilation System).**

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed the following modification(s):

- ECP 13–0717; Replace/Relocate DB–1–A UPS.

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the USAR, and the TSs, as applicable, to verify that the modification did not affect the operability or availability of the affected system. The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one permanent plant modification sample as defined in IP 71111.18–05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

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

- control complex chiller 'B' post-maintenance testing;
- division 2 diesel ventilation dampers post-maintenance testing;
- control room oxygen monitor post-replacement testing; and
- reactor feed pump turbine 'B' torque arm bushing replacement post-maintenance test.

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 USAR, 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 four post-maintenance testing samples as defined in IP 71111.19–05.

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:

- Surveillance Instruction (SVI)–P45–T2002; ESW Pump B and Valve Operability Test; Revision 35 (Inservice Testing);
- SVI–R43–T1317; DG Start and Load Division 1 (Routine);
- SVI–B21–T1035–A; Emergency Core Cooling System (ECCS)/Reactor Core Isolation Cooling (RCIC) Reactor Pressure Vessel (RPV) Low Level 1 and 2 Channel 'A' Functional For 1B21–N691A (Routine); and
- SVI–E31–T5395B; RCIC Steam Line Flow High Channel Functional for 1E31–N684B (Routine).

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

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted three routine surveillance testing samples and one inservice testing sample as defined in IP 71111.22, Sections–02 and–05.

b. Findings

Introduction: A finding of very low safety significance (Green) and associated NCV of TS 5.4.1, “Procedures,” was self-revealed on August 5, 2015, when an unexpected isolation of the RCIC system occurred. Specifically, during performance of the surveillance, steps c and d of subsection 5.1.13 were marked as not applicable. Those steps were applicable and were there to lift leads to prevent an isolation of the RCIC system. As a result of the licensee’s failure to lift the leads as required by the procedure, the RCIC steam supply inboard isolation valve (1E51–F063) closed when the isolation trip signal was applied in step 5.1.20.

Description: During performance of the surveillance, two steps were inappropriately marked as “N/A” (not applicable), which directly led to an unexpected closure of the RCIC steam supply inboard isolation valve (1E51–F063) when the isolation trip signal was applied. According to the licensee’s human performance event response investigation there were three event-free tools or defenses that should have prevented the event: the first being procedure use and adherence, which was not followed to ensure that the steps were performed properly; second, a peer check was not requested or offered for the N/A of the two steps; and third, the steps to prevent the isolation were not marked as critical steps by the supervisor, which would have required oversight by supervision. In addition to the licensee’s investigation, the inspectors noted that the two steps that were marked N/A required a concurrent verifier when they were to be performed, indicating the importance of those steps. As a result, when the isolation signal trip was applied, 1E51–F063 closed and the pathway for steam flow to the RCIC turbine was immediately isolated, which rendered RCIC unavailable, until operators restored the appropriate flow path.

Analysis: The inspectors determined that the failure to properly implement the steps in SVI–E51–T5395B was contrary to the requirements of TS 5.4.1 and was a performance deficiency warranting further review. Using the guidance in IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012, the inspectors determined that the performance deficiency was more than minor, and thus a finding, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone 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 the question, “Does the finding represent an actual loss of function of one or more non-Technical Specification Trains of equipment designated as high safety-significant in accordance with the licensee’s maintenance rule program for greater than twenty-four hours?,” therefore, the finding screened as green (very low safety significance).

This finding has a cross-cutting aspect in the area of human performance, avoid complacency, for the licensee failing to recognize and plan for the possibility of mistakes and for the failure to implement appropriate error reduction tools, such as proper self-checks and peer checks, which resulted in an isolation of the RCIC system (H.12).

Enforcement: TS 5.4.1., “Procedures,” requires in part, that written procedures/instructions be established, implemented, and maintained covering the following activities: the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, dated February 1978. RG 1.33, Revision 2, Appendix A, Section 8b, states, in part, that “Specific procedures for surveillance tests, inspections, and calibrations should be written (implementing procedures are required for each surveillance test, inspection, or calibration listed in the technical specifications.” The same section further lists “RCIC” as a system requiring procedures. Contrary to this requirement, on August 5, 2015, while performing a TS Surveillance for the testing and calibration of RCIC instrumentation, SVI–E31–T5395B – “RCIC Steam Line Flow High Channel Functional for 1E31–N684B,” Revision 6, the licensee failed to correctly implement the steps outlined in the procedure and RCIC unintendedly isolated.

Following the system isolation, the licensee took immediate actions to restore system operability and availability in accordance with SOI-E51, "Reactor Core Isolation Cooling System," Revision 33. The licensee also conducted a human performance event response investigation and generated standing orders for both Operations and Instrumentation and Controls personnel detailing interim actions for control room surveillance performance and to reinforce maintenance fundamentals and human performance behaviors. The issue was entered into the licensee's CAP as CR 2015-10501. Because this violation was of very low safety significance and it was entered into the licensee's CAP, this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy (**NCV 05000440/2015003-02, Failure to Properly Implement Steps Outlined in a Technical Specification Surveillance Procedure**).

1EP2 Alert and Notification System Evaluation (71114.02)

a. Inspection Scope

The inspectors held discussions with the Emergency Preparedness (EP) staff regarding the operation, maintenance, and periodic testing of the primary and backup Alert and Notification System (ANS) in the plume pathway Emergency Planning Zone. The inspectors reviewed monthly trend reports and siren test failure records from July 2013 through May 2015. Information gathered during document reviews and interviews was used to determine whether the ANS equipment was maintained and tested in accordance with EP commitments and procedures. Inspectors also observed a weekly test of the ANS system. Documents reviewed are listed in the Attachment to this report.

This ANS evaluation inspection constituted one sample as defined in IP 71114.02-06.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

a. Inspection Scope

The inspectors reviewed and discussed with the plant's EP staff the Emergency Plan Commitments and Procedures for Emergency Response Organization (ERO) on-shift and augmentation staffing levels. A sample of approximately 12 ERO training records of personnel assigned to key and support positions were reviewed to determine the status of their training as it related to their assigned ERO positions. The inspectors reviewed the ERO Augmentation System and activation process, the primary and alternate methods of initiating ERO activation, unannounced off-hour augmentation tests from August 2013 through May 2015, and the provisions for maintaining the plant's ERO roster.

The inspectors reviewed a sample of corrective actions related to the facility's ERO staffing and Augmentation System Program and activities from August 2013 through May 2015 to determine whether corrective actions were completed in accordance with the site's CAP. Documents reviewed are listed in the Attachment to this report.

This ERO staffing and augmentation system inspection constituted one sample as defined in IP 71114.03–06.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspectors reviewed a sample of nuclear oversight staff’s audits of the EP program to determine whether these independent assessments met the requirements of 10 CFR 50.54(t). The inspectors also reviewed critique reports and samples of CAP records associated with the 2014 biennial exercise, as well as various EP drills conducted, in order to determine that the licensee fulfilled its drill commitments and to evaluate the licensee’s efforts to identify, track, and resolve concerns identified during these activities.

The inspectors reviewed a sample of EP items and corrective actions related to the facility’s EP Program and activities from August 2013 through May 2015 to determine whether corrective actions were completed in accordance with the site’s CAP. Documents reviewed are listed in the Attachment to this report.

This correction of EP weaknesses and deficiencies inspection constituted one sample as defined in IP 71114.05–06.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on August 5, 2015, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Technical Support Center and the Simulator Control Room to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the CAP. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This EP drill inspection constituted one sample as defined in IP 71114.06–06.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Public and Occupational Radiation Safety

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

The inspection activities supplement those documented in Inspection Report (IR) 05000440/2014004, and constitute one complete sample as defined in IP 71124.06-05.

.1 Inspection Planning and Program Reviews (02.01)

Event Report and Effluent Report Reviews

a. Inspection Scope

The inspectors reviewed the radiological effluent release reports issued since the last inspection to determine if the reports were submitted as required by the Offsite Dose Calculation Manual (ODCM)/TSs. The inspectors reviewed anomalous results, unexpected trends, or abnormal releases identified by the licensee for further inspection to determine if they were evaluated, were entered in the CAP, and were adequately resolved.

The inspectors selected radioactive effluent monitor operability issues reported by the licensee as provided in effluent release reports, to review these issues during the onsite inspection, as warranted, given their relative significance and determine if the issues were entered into the CAP and adequately resolved.

b. Findings

No findings were identified.

Offsite Dose Calculation Manual and Updated Safety Analysis Report Review

a. Inspection Scope

The inspectors reviewed USAR descriptions of the radioactive effluent monitoring systems, treatment systems, and effluent flow paths so they could be evaluated during inspection walkdowns.

The inspectors reviewed changes to the ODCM made by the licensee since the last inspection against the guidance in NUREGs 1301, 1302, and 0133, and RGs 1.109, 1.21, and 4.1. When differences were identified, the inspectors reviewed the technical basis or evaluations of the change during the onsite inspection to determine whether they were technically justified and maintain effluent releases as-low-as-is-reasonably-achievable.

The inspectors reviewed licensee documentation to determine if the licensee has identified any non-radioactive systems that had become contaminated as disclosed

either through an event report or the ODCM since the last inspection. This review provided an efficient sample list for the onsite inspection of any 10 CFR 50.59 evaluations, and allowed a determination if any newly contaminated systems have an unmonitored effluent discharge path to the environment, whether any required ODCM revisions were made to incorporate these new pathways, and whether the associated effluents were reported in accordance with RG 1.21.

b. Findings

No findings were identified.

Groundwater Protection Initiative Program

a. Inspection Scope

The inspectors reviewed reported groundwater monitoring results and changes to the licensee's written program for identifying and controlling contaminated spills/leaks to groundwater.

b. Findings

No findings were identified.

Procedures, Special Reports, and Other Documents

a. Inspection Scope

The inspectors reviewed Licensee Event Reports (LERs), event reports, and/or special reports related to the effluent program issued since the previous inspection to identify any additional focus areas for the inspection based on the scope/breadth of problems described in these reports.

The inspectors reviewed effluent program implementing procedures, particularly those associated with effluent sampling, effluent monitor setpoint determinations, and dose calculations.

The inspectors reviewed copies of licensee and third party (independent) evaluation reports of the effluent monitoring program since the last inspection to gather insights into the licensee's program and aid in selecting areas for inspection review (smart sampling).

b. Findings

No findings were identified.

.2 Walkdowns and Observations (02.02)

a. Inspection Scope

The inspectors walked down selected components of the gaseous and liquid discharge systems to evaluate whether equipment configuration and flow paths align with the documents reviewed in 02.01 above and to assess equipment material condition. Special attention was made to identify potential unmonitored release points (such as open roof vents in boiling water reactor turbine decks, temporary structures butted

against turbine, auxiliary, or containment buildings), building alterations which could impact airborne or liquid effluent controls, and ventilation system leakage that communicated directly with the environment.

For equipment or areas associated with the systems selected for review that were not readily accessible due to radiological conditions, the inspectors reviewed the licensee's material condition surveillance records, as applicable.

The inspectors walked down filtered ventilation systems to assess for conditions such as degraded high-efficiency particulate air/charcoal banks, improper alignment, or system installation issues that would impact the performance or the effluent monitoring capability of the effluent system.

As available, the inspectors observed selected portions of the routine processing and discharge of radioactive gaseous effluent (including sample collection and analysis) to evaluate whether appropriate treatment equipment was used and the processing activities align with discharge permits.

The inspectors determined if the licensee has made significant changes to their effluent release points (e.g., changes subject to a 10 CFR 50.59 review or require NRC approval of alternate discharge points).

As available, the inspectors observed selected portions of the routine processing and discharging of liquid waste (including sample collection and analysis) to determine if appropriate effluent treatment equipment was being used and that radioactive liquid waste was being processed and discharged in accordance with procedure requirements and aligned with discharge permits.

b. Findings

No findings were identified.

.3 Sampling and Analyses (02.03)

a. Inspection Scope

The inspectors selected effluent sampling activities, consistent with smart sampling, and assessed whether adequate controls had been implemented to ensure representative samples were obtained (e.g., provisions for sample line flushing, vessel recirculation, composite samplers, etc.).

The inspectors selected effluent discharges made with inoperable (declared out-of-service) effluent radiation monitors to assess whether controls were in place to ensure compensatory sampling was performed consistent with the radiological effluent TSs/ODCM, and that those controls were adequate to prevent the release of unmonitored liquid and gaseous effluents.

The inspectors determined whether the facility was routinely relying on the use of compensatory sampling in lieu of adequate system maintenance, based on the frequency of compensatory sampling since the last inspection.

The inspectors reviewed the results of the inter-laboratory comparison program to evaluate the quality of the radioactive effluent sample analyses and assessed whether the inter-laboratory comparison program includes hard-to-detect isotopes as appropriate.

b. Findings

No findings were identified.

.4 Instrumentation and Equipment (02.04)

Effluent Flow Measuring Instruments

a. Inspection Scope

The inspectors reviewed the methodology the licensee used to determine the effluent stack and vent flow rates to determine if the flow rates were consistent with radiological effluent TSs/ODCM or USAR values, and that differences between assumed and actual stack and vent flow rates did not affect the results of the projected public doses.

b. Findings

No findings were identified.

.5 Dose Calculations (02.05)

a. Inspection Scope

The inspectors reviewed all significant changes in reported dose values compared to the previous radiological effluent release report (e.g., a factor of five, or increases that approached Appendix I criteria) to evaluate the factors which may have resulted in the change.

The inspectors reviewed radioactive liquid and gaseous waste discharge permits to assess whether the projected doses to members of the public were accurate and based on representative samples of the discharge path.

Inspectors evaluated the methods used to determine the isotopes that were included in the source term to ensure all applicable radionuclides were included within detectability standards. The review included the current Part 61 analyses to ensure hard-to-detect radionuclides were included in the source term.

The inspectors reviewed changes in the licensee's offsite dose calculations since the last inspection to evaluate whether changes were consistent with the ODCM and RG 1.109. Inspectors reviewed meteorological dispersion and deposition factors used in the ODCM and effluent dose calculations to evaluate whether appropriate factors were being used for public dose calculations.

The inspectors reviewed the latest Land Use Census to assess whether changes (e.g., significant increases or decreases to population in the plant environs, changes in critical exposure pathways, the location of nearest member of the public, or critical receptor, etc.) had been factored into the dose calculations.

For the releases reviewed above, the inspectors evaluated whether the calculated doses (monthly, quarterly, and annual dose) were within the Appendix I of 10 CFR Part 50 and TS dose criteria.

The inspectors reviewed, as available, records of any abnormal gaseous or liquid tank discharges (e.g., discharges resulting from misaligned valves, valve leak-by, etc.) to ensure the abnormal discharge was monitored by the discharge point effluent monitor. Discharges made with inoperable effluent radiation monitors, or unmonitored leakages were reviewed to ensure that an evaluation was made of the discharge to satisfy 10 CFR 20.1501 so as to account for the source term and projected doses to the public.

b. Findings

No findings were identified.

.6 Groundwater Protection Initiative Implementation (02.06)

a. Inspection Scope

The inspectors reviewed monitoring results of the Groundwater Protection Initiative to determine if the licensee had implemented its program as intended, and to identify any anomalous results. For anomalous results or missed samples, the inspectors assessed whether the licensee had identified and addressed deficiencies through its CAP.

The inspectors reviewed identified leakage or spill events and entries made into 10 CFR 50.75(g) records. The inspectors reviewed evaluations of leaks or spills and reviewed any remediation actions taken for effectiveness. The inspectors reviewed onsite contamination events involving contamination of groundwater and assessed whether the source of the leak or spill was identified and mitigated.

For unmonitored spills, leaks, or unexpected liquid or gaseous discharges, the inspectors assessed whether an evaluation was performed to determine the type and amount of radioactive material that was discharged by:

- assessing whether sufficient radiological surveys were performed to evaluate the extent of the contamination and the radiological source term and assessing whether a survey/evaluation had been performed to include consideration of hard-to-detect radionuclides; and
- determining whether the licensee completed offsite notifications, as provided in its Groundwater Protection Initiative implementing procedures.

The inspectors reviewed the evaluation of discharges from onsite surface water bodies that contained or potentially contained radioactivity, and the potential for groundwater leakage from these onsite surface water bodies. The inspectors assessed whether the licensee was properly accounting for discharges from these surface water bodies as part of the effluent release reports.

The inspectors assessed whether on-site ground water sample results and a description of any significant on-site leaks/spills into groundwater for each calendar year were documented in the Annual Radiological Environmental Operating Report for the radiological environmental monitoring program or the Annual Radiological Effluent Release Report for the Radiological Effluent TSs.

For significant, new effluent discharge points (such as significant or continuing leakage to groundwater that continued to impact the environment if not remediated), the inspectors evaluated whether the ODCM was updated to include the new release point.

b. Findings

No findings were identified.

.7 Problem Identification and Resolution (02.07)

a. Inspection Scope

The inspectors assessed whether problems associated with the effluent monitoring and control program were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee CAP. In addition, they evaluated the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving radiation monitoring and exposure controls.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

This inspection constituted one complete sample as defined in IP 71124.07–05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the Annual Radiological Environmental Operating Reports and the results of any licensee assessments since the last inspection to assess whether the Radiological Environmental Monitoring Program was implemented in accordance with the TSs and ODCM. This review included reported changes to the ODCM with respect to environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, Inter-Laboratory Comparison Program, and analysis of data.

The inspectors reviewed the ODCM to identify locations of environmental monitoring stations.

The inspectors reviewed the USAR for information regarding the Environmental Monitoring Program and meteorological monitoring instrumentation.

The inspectors reviewed quality assurance audit results of the program to assist in choosing inspection “smart samples.” The inspectors also reviewed audits and technical evaluations performed on the vendor laboratory if used.

The inspectors reviewed the Annual Effluent Release Report and the 10 CFR Part 61, “Licensing Requirements for Land Disposal of Radioactive Waste,” report, to determine if the licensee was sampling, as appropriate, for the predominant and dose-causing radionuclides likely to be released in effluents.

b. Findings

No findings were identified.

.2 Site Inspection (02.02)

a. Inspection Scope

The inspectors walked down select air sampling stations and dosimeter monitoring stations to determine whether they were located as described in the ODCM, and to determine the equipment material condition. Consistent with smart sampling, the air sampling stations were selected based on the locations with the highest X/Q and D/Q wind sectors, and dosimeters were selected based on the most risk-significant locations (e.g., those that have the highest potential for public dose impact).

For the air samplers and dosimeters selected, the inspectors reviewed the calibration and maintenance records to evaluate whether they demonstrated adequate operability of these components. Additionally, the review included the calibration and maintenance records of select composite water samplers.

The inspectors assessed whether the licensee had initiated sampling of other appropriate media upon loss of a required sampling station.

The inspectors observed the collection and preparation of environmental samples from different environmental media (e.g., ground and surface water, milk, vegetation, sediment, and soil) as available to determine if environmental sampling was representative of the release pathways as specified in the ODCM, and if sampling techniques were in accordance with procedures.

Based on direct observation and review of records, the inspectors assessed whether the meteorological instruments were operable, calibrated, and maintained in accordance with guidance contained in the USAR, RG 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants," and licensee procedures. The inspectors assessed whether the meteorological data readout and recording instruments in the control room and, if applicable, at the meteorological tower were operable.

The inspectors evaluated whether missed and/or anomalous environmental samples were identified and reported in the annual environmental monitoring report. The inspectors selected events that involved a missed sample, inoperable sampler, lost dosimeter, or anomalous measurement to determine if the licensee had identified the cause and had implemented corrective actions. The inspectors reviewed the licensee's assessment of any positive sample results (i.e., licensed radioactive material detected above the lower limits of detection), and reviewed the associated radioactive effluent release data for the released material.

The inspectors selected structures, systems, or components that involved or could reasonably have involved licensed material for which there was a credible mechanism for licensed material to reach groundwater, and assessed whether the licensee had implemented a sampling and monitoring program sufficient to detect leakage of these structures, systems, or components to groundwater.

The inspectors evaluated whether records, as required by 10 CFR 50.75(g), of leaks, spills, and remediation since the previous inspection were retained in a retrievable manner.

The inspectors reviewed any significant changes made by the licensee to the ODCM as the result of changes to the land census, long-term meteorological conditions (3-year average), or modifications to the sampler stations since the last inspection. They reviewed technical justifications for any changed sampling locations to evaluate whether the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

The inspectors assessed whether the appropriate detection sensitivities with respect to TS/ODCM were used for counting samples (i.e., the samples meet the TS/ODCM required lower limits of detection). The licensee uses a vendor laboratory to analyze the Radiological Environmental Monitoring Program samples so the inspectors reviewed the results of the vendor's Quality Control Program, including the Inter-Laboratory Comparison Program, to assess the adequacy of the vendor's program.

The inspectors reviewed the results of the licensee's Inter-Laboratory Comparison Program to evaluate the adequacy of environmental sample analyses performed by the licensee. The inspectors assessed whether the inter-laboratory comparison test included the media/nuclide mix appropriate for the facility. If applicable, the inspectors reviewed the licensee's determination of any bias to the data and the overall effect on the Radiological Environmental Monitoring Program.

b. Findings

No findings were identified.

.3 Identification and Resolution of Problems (02.03)

a. Inspection Scope

The inspectors assessed whether problems associated with the Radiological Environmental Monitoring Program were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP. Additionally, they assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involved the Radiological Environmental Monitoring Program.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

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

4OA1 Performance Indicator Verification (71151)

.1 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the reactor coolant system specific activity Performance Indicator (PI) for the first quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. The inspectors reviewed the licensee's reactor coolant system chemistry samples, TS requirements, issue reports, event reports, and NRC Integrated IRs 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. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one reactor coolant system specific activity (BI01) sample 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 TS/ODCM radiological effluent occurrences PI for the first quarter 2014 through the third quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. 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 TS/ODCM radiological effluent occurrences (PR01) sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise PI for the third quarter 2014 through the first quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. The inspectors reviewed the licensee's records and processes, including procedural guidance on assessing opportunities for the PI, assessments of PI opportunities during pre-designated control room simulator training sessions, performance during the 2014 Biennial Exercise, and performance during other drills associated with the PI 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 one drill/exercise performance (EP01) sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.4 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO Drill Participation PI for the third quarter 2014 through the first quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. The inspectors reviewed the licensee's records and processes, including procedural guidance on assessing opportunities for the PI, performance during the 2014 Biennial Exercise and other drills, and revisions of the roster of personnel assigned to key ERO positions, 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 one ERO drill participation sample (EP02) as defined in IP 71151-05.

b. Findings

No findings were identified.

.5 Alert and Notification System Reliability

a. Inspection Scope

The inspectors sampled licensee submittals for the ANS Reliability PI for the third quarter 2014 through the first quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. The inspectors reviewed the licensee's records and processes, including procedural guidance on assessing opportunities for the PI and results of periodic ANS operability tests, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine whether 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 one ANS system reliability sample (EP03) as defined in IP 71151-05.

b. Findings

No findings were identified.

.6 Mitigating Systems Performance Index—Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Heat Removal System PI for the third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revisions 6 and 7, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, MSPI derivation reports, and NRC IRs to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 one MSPI - Heat Removal System (MS08) sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.7 Mitigating Systems Performance Index—Residual Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Residual Heat Removal System PI for the third quarter 2014 through the second quarter 2015. To determine the

accuracy of the PI data reported, definitions and guidance contained in NEI Document 99–02, “Regulatory Assessment Performance Indicator Guideline,” Revisions 6 and 7, were used. The inspectors reviewed the licensee’s operator narrative logs, issue reports, MSPI derivation reports, event reports, and NRC IRs to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 one MSPI - Residual Heat Removal system (MS09) sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.8 Mitigating Systems Performance Index—Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Cooling Water Systems PI the third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported, definitions and guidance contained in the NEI Document 99–02, “Regulatory Assessment Performance Indicator Guideline,” Revisions 6 and 7, were used. The inspectors reviewed the licensee’s operator narrative logs, issue reports, MSPI derivation reports, event reports, and NRC IRs to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 one MSPI - Cooling Water System (MS10) sample as defined in IP 71151–05.

4OA2 Problem Identification and Resolution (71152)

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

a. Inspection Scope

As part of the various baseline IPs 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

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 discussed in Section 40A2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of January 1, 2015, through June 30, 2015, 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.

.4 Annual Follow-up of Selected Issues: Review Redundant Reactivity Control System/ Digital Feedwater Control System Corrective Actions for Scrams

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors identified that corrective action item (CR 2014-16769) documented direct and root causes for the reactor scram that occurred on November 7, 2014. The inspectors reviewed the root cause analysis and the corrective actions taken to prevent recurrence. The direct cause of the event was injection of a false feed flow runback signal, caused by the redundant reactivity control system (RRCS) self-test feature, into the digital feedwater control system (DFWCS) which caused both contacts in the 'A' and 'B' divisions to close simultaneously, thus actuating a real feedwater runback. The licensee determined that the design was not adequate to prevent this event from occurring and that the root cause of the event was a latent design flaw from the original digital upgrade design package. The latent design flaw was identified by the licensee as a violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," which requires in part, "design control measures for verifying or checking the adequacy of the design." The corrective actions, which consisted of physical modifications to plant equipment, were previously reviewed by inspections conducted during the refueling outage, March and April of 2015, and documented in Perry Integrated IR 2015-002.

The inspectors evaluated the licensee-identified violation using IMC 0612, Appendix B, "Issue Screening," and determined that the deficiency was more than minor because it was associated with the Initiating Events Cornerstone attribute of design control and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors further evaluated the issue in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012, and determined that the safety significance of this event was very low because, in accordance with the initiating events screening questions, all safety systems functioned as designed and the scram was not complicated.

This issue is also discussed in Sections 4OA3.1 and 4OA7.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

No findings were identified.

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

.1 (Closed) LER 050004402014–005–00: Loss of Feedwater Results in Automatic Reactor Protection System Actuation

a. Inspection Scope

The inspectors reviewed the plant's response to the automatic reactor scram on November 7, 2014, following a loss of feedwater (discussed previously in Section 4OA2.4). The cause of this scram was determined to be a spurious digital signal from the RRCS which erroneously indicated to the digital feedwater system that a feedwater runback was required. Interposing relays, which could have prevented this problem, were not installed between the two digital systems when they were originally installed in 1992. This was a latent design flaw not previously identified to be a potential vulnerability at Perry. Because the scram was not complicated and all safety systems responded as required, the licensee identified a Green violation of Criterion III of 10 CFR 50, Appendix B. As corrective action, the licensee installed interposing relays during the spring 2015 refueling outage. Documents reviewed as part of this inspection are listed in the Attachment to this report. This LER is closed.

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

b. Findings

A licensee-identified violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," was documented in Section 4OA2.4 in this inspection report as part of an in-depth review of licensee post-scram actions and is also discussed in Section 4OA7.

.2 (Closed) LER 050004402015–001–00: Degraded Voltage Relay Found Outside the Allowable Value

a. Inspection Scope

The inspectors reviewed the plant's response to identification of a degraded time delay relay in the load shedding circuit for the Division 3 EDG. The relay provided a four-minute delay in the event of a loss of voltage indication to the Division 3 Safety Bus with no loss-of-coolant accident signal present. The relay was outside of the TS allowable value when a routine scheduled surveillance was conducted on the relay, however, it was within the analytical limit for ensuring safety of the plant and was, therefore, not considered as a functional failure of the circuit. The relay was re-calibrated to within the acceptable band and passed all operational checks after the calibration. No findings were identified by the inspectors following review of this LER. Documents reviewed as part of this inspection are listed in the Attachment to this report. This LER is closed.

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

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 22, 2015, the inspectors presented the inspection results to Mr. E. Harkness and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The results of the EP Program inspection were discussed with Mr. D. Hamilton, Plant Manager, on July 2, 2015.
- The inspection results for the areas of radiological environmental monitoring; and Radiological Effluent TS/ODCM radiological effluent occurrences PI verification were discussed with Mr. E. Harkness, Site Vice-President, on September 4, 2015.
- The inspection results for the areas of radioactive gaseous and liquid effluent treatment and reactor coolant system specific activity PI verification were discussed with Mr. D. Hamilton, Plant Manager, on September 25, 2015.

The inspectors confirmed that none of the potential report input discussed was considered proprietary.

4OA7 Licensee-Identified Violation

The licensee identified a violation of very low safety significance (Green) in an LER that was closed in this report in Section 4OA3.1. Details of the violation and a review conducted by the inspectors are discussed in detail in Section 4OA2.4 under a Problem Identification and Resolution in-depth review inspection scope section.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

E. Harkness, Site Vice President
D. Hamilton, Site Operations Director
T. Brown, Performance Improvement Director
J. Ellis, Maintenance Director
D. Reeves, Site Engineering Director

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

- | | | |
|---------------------|-----|---|
| 05000440/2015003-01 | NCV | Inadequate Operating Procedure for Diesel Generator Building Ventilation System (Section 1R15) |
| 05000440/2015003-02 | NCV | Failure to Properly Implement Steps Outlined in a Technical Specification Surveillance Procedure (Section 1R22) |

Closed

- | | | |
|---------------------|-----|---|
| 050004402014-005-00 | LER | Loss of Feedwater Results in Automatic Reactor Protection System Actuation (Section 4OA3.1) |
| 050004402015-001-00 | LER | Degraded Voltage Relay Found Outside the Allowable Value (Section 4OA3.2) |

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.

1R04 Equipment Alignment

- Drawing (DWG) 302-0621-00000; Emergency Closed Cooling System; Revision TT
- DWG 302-0622-00000; Emergency Closed Cooling System; Revision N
- DWG 302-0623-00000; Emergency Closed Cooling Operating Data; Revision P
- DWG 302-0691-00000; Standby Liquid Control System; Revision Z
- DWG 302-0692-00000; Standby Liquid Control System; Revision V
- ELI-R24; 480 Volt MCC; Revision 32
- ELI-S11; Power Transformer; Revision 8
- SOI-C41; Standby Liquid Control System; Revision 20
- SOI-P42; Emergency Closed Cooling System; Revision 23
- VLI-C41; Standby Liquid Control System; Revision 8
- VLI-M25/26; Control Room Heating, Ventilation, and Air Conditioning (HVAC) and Emergency Recirculation System; Revision 7
- VLI-P42; Emergency Closed Cooling System; Revision 19
- VLI-P45; ESW System; Revision 19
- VLI-R45; Division 1 and 2 DG Fuel Oil System (Unit 1); Revision 5
- VLI-R46; Division 1 and 2 DG Jacket Water Systems (Unit 1); Revision 4
- VLI-R47; Division 1 and 2 DG Lube Oil; Revision 7
- VLI-R48; Division 1 and 2 DG Exhaust, Intake and Crankcase Systems
- 912-0610-00000; Control Room HVAC and Emergency Recirculation System; Revision GG
- SVI-M26-T1259-B; Control Room Emergency Recirculation Train B Operability Test; August 7, 2015
- VLI-R44; Division 1 and 2 DG Starting Air System; Revision 6

1R05 Fire Protection

- CR 2015-09023; NRC ID: Transient Combustible Permit Expired for Items That Remain in the U2 Side of FHB That Were Used During the Outage; July 2, 2015
- CR 2015-09061; Expired Transient Combustible Permits with Transient Combustibles Still in Field; July 5, 2015
- CR-2015-10919; NRC Identified Concerns with Pre-Fire Plan FPI-0CC Revision 9; August 17, 2015
- FPI-0CC; Revision 9
- FPI-0FH; Revision 4
- FPI-0IB; Revision 8
- FPI-1AB; Revision 3
- FPI-1DG; Revision 6
- NOBP-OP-0015-04; Fire Protection System Status Summary; July 10, 2015
- NOBP-OP-0015-04; Fire Protection System Status Summary; August 14, 2015
- PTI-P54-P0001; Fire Hose Station Quarterly Inspection; April 21, 2015
- PTI-P54-P0001; Fire Hose Station Quarterly Inspection; July 9, 2015
- PTI-P54-P0006; Portable Fire Extinguishers Quarterly Inspection; April 21, 2015

- PTI-P54-P0006; Portable Fire Extinguishers Quarterly Inspection; July 9, 2015

1R11 Licensed Operator Regualification Program

- ARI-H13-P680-0004; Recirc Flow Control; Revision 23
- eSOMS Narrative Logs; August 19, 2015
- NOBP-TR-1112; FENOC Conduct of Simulator Training and Evaluation; Revision 2
- NOP-OP-1002; Conduct of Operations; Revision 10
- NOP-OP-1004; Reactivity Management; Revision 13
- OTLC-3058201503_PY-SGC2-Cycle 3 2015 Evaluated Scenario C2; July 10, 2015
- SOI-B33; Reactor Recirculation System; Revision 35

1R12 Maintenance Effectiveness

- CR 2015-Problem New Inverter Transferred to Alternate During Burn-in; March 30, 2015
- NOBP-ER-3009; FENOC Plant Health Report Program; Revision 11
- Perry Nuclear Power Plant Health Report 2015-01 for System E31, Leak Detection; August 3, 2015
- Perry Nuclear Power Plant Health Report 2015-01 for System E43, Division 1/2 EDGs; August 3, 2015
- Perry Nuclear Power Plant Health Report 2015-01 for System R14, 120 VAC Vital (Inverters, and Distribution); August 3, 2015

1R13 Maintenance Risk Assessments and Emergent Work Control

- CR 2015-00560; Incorrect Assessment of Online Risk Due to an Incorrect Categorization of Availability Status; January 14, 2015.
- CR 2015-12258; Gaged ECC Valves Require Greater Than 5 Rem for Required Post-Accident Manual Operator Action; September 17, 2015
- CR 2015-12370; ODMI Trigger Point for RFPT B Deviation Alarm, N27:BSC_DEVH Received in the Control Room; September 21, 2015
- eSOMS Plant Narrative Logs; September 25, 26, 28, and 29, 2015
- Forecast On-Line Probabilistic Risk Assessment; July 6, 2015 to July 12, 2015
- Forecast On-Line Probabilistic Risk Assessment; July 27, 2015 to August 2, 2015
- Management Alignment and Ownership Meeting Packet; Monday – September 28, 2015
- NOP-OP-1007; Risk Management; Revision 21
- NOP-WM-9001; Fix-It-Now, Minor, Tool Pouch, Immediate, Urgent Maintenance; Revision 9
- On-Line Work Week Report Card; July 6, 2015 to July 12, 2015
- On-Line Work Week Report Card; July 27, 2015 to August 2, 2015
- Perry Nuclear Power Plant – Perry Work Implementation Schedule; Week 02, Period 2, Division 1, From 1200 Monday, September 28, 2015, to 1200 Tuesday, September 29, 2015
- Reactivity Plan – Perry Nuclear Power Plant – Evolution Specific Reactivity Plan; September 2015 Control Rod Sequence Exchange and Scram Timing; Revision 0, Update 0; September 23, 2015
- SOI-C11; Control Rod Drive Hydraulic (CRDH) System; Revision 24

1R15 Operability Determinations and Functionality Assessments

- 208-0160-0001; Generator Stator Cooling System; Stator Coolant Pump 'A' – C0001A; Revision L

- 208-0160-0002; Generator Stator Cooling System; Stator Coolant Pump 'B' – C0001B; Revision L
- 302-0359-00000; Division 3 Diesel Lube Oil System; Revision E
- 302-0360-00000; Division 3 Diesel Jacket Water Cooling System; Revision F
- 302-0361-00000; Generator Stator Winding Cooling Water System; Revision N
- 302-0791-00000; ESW; Revision XX
- ARI-H13-P601-0016-D1; ESW to Diesel Heat Exchanger Flow Low; Revision 18
- ARI-H13-P680-0007-D6; Emergency Room Temperature Trouble; Revision 25
- Calculation Number M42-T05; Setpoint and Setpoint Tolerances for Temperature Switch 1M43N0261C for the HPCS DG Room HVAC System; Revision 1
- CR 2015-09390; ODMI – Stator Cooling Leak; July 10, 2015
- CR 2015-11597; Potential NRC Violation Concerning Operation of the DG Ventilation Fans; September 2, 2015
- CR-2013-07243; 28 Seconds of Air Vented from HPCS Min Flow Line to Suppression Pool During SVI-E22-T1183
- CR-2014-11691; PA-PY-14-02 – Lack of Technical Rigor in ODMI for Isolation of the Number 3B Feedwater Heater; August 13, 2014
- CR-2015-08783; Air Observed During a Vent; June 27, 2015
- CR-2015-09371; Division 2 DG Outlet Damper Failed Closed; July 10, 2015
- CR-2015-09452; ESW to Diesel Heat Exchanger Low Flow Alarm During SVI-P45-T2003; July 13, 2015
- CR-2015-09806; Missed TS Action When Division 2 DG Ventilation Fan Failed During Last Performance of SVI-R43-T1318; July 20, 2015
- CR-2015-09807; Division 2 Potential Non-Conforming Condition Based on Exceeding Design Environmental Temperature Limits in the Division 2 DG Room During the Last Performance of SVI-R43-T1318; July 20, 2015
- CR-G202-2004-03470; Maximum Room Temperature Not Considered in Minimum Starting Air Pressure; July 6, 2004
- CR-G202-2009-62191; RFA: Engineering Evaluation for Air Found in Performance of SVI-E22-T1183; July 22, 2009.
- eSOMS Narrative Logs; July 8, 2015
- eSOMS Narrative Logs; July 20, 2015
- Notification 600979462; Permanent Fix for Stator Cooling Water Leak; July 5, 2015
- PTI-M43-P0006; DGBVS Damper Stroking – Division 2; Revision 6
- SOI-E22A; HPCS System; Revision 35
- SOI-M43; DGBVS; Revision 12
- SOI-N32/39/41/51; Main Turbine Generator and Turning Gear System; Revision 31
- SOI-N43; Stator Water Cooling System; Revision 17
- Summary of SVI-P45-T2003 Historic Test Data; June 10, 1999 Through May 9, 2015
- SVI-E22-T1183; HPCS Valve Lineup Verification and System Venting; Revision 14
- SVI-P45-T2003; HPCS ESW Pump and Valve Operability Test; Revision 23
- WO 200647292; Leak Stator Water Inlet to Rectifier; July 6, 2015

1R18 Plant Modifications

- CR 2013-01011; Inverter 1R14S0004 Was Found on Its Alternate Source and With the Fail Light on Following Reactor Scram; January 22, 2013
- ECP 13-0717-003; Replace/Relocate DB-1-A UPD; Revision 2; March 25, 2015
- WO 200579899; ECP 13-0717 Replace/Relocate DB-1-A UPS; April 10, 2015

1R19 Post-Maintenance Testing

- CR-2014-17881; Missed Post-Maintenance Test for Control Complex Chiller A Pump Discharge Check Valve; January 2, 2015
- CR-2015-04648; LPRM Cable Failed Its Post Maintenance Testing; April 4, 2015
- FTI-F0036; Post-Maintenance Test Manual; Revision 9
- NOP-SS-1001; FENOC Administrative Program for Computer Related Activities; Revision 11
- PTI-M43-P0006; DGBVS Damper Stroking – Division 2; Revision 6
- SOI-P47; Control Complex Chilled Water System; Revision 26
- WO 200310979; Replace Functional Cycle Timer; July 17, 2015
- WO 200481106; Replace Actuator; July 31, 2015
- WO 200481107; Replace Seal/Motor/Oil Hydromotor Division 2 Recirculation Damper; July 31, 2015
- WO 200515531; Overhaul Control Complex Chill Water 'B' Breaker EH1206; July 17, 2015
- WO 200517405; Replace Guide Vane Connector Linkage; July 17, 2015
- WO 200532314; Replace Electrical Components; July 17, 2015
- WO 200545603; Change Oil and Replace Filters for Chiller 'B'; July 17, 2015
- WO 200559904; Oxygen Deficiency Monitor/Alarm With Remote Sensor; September 21, 2015
- WO 200559905; Oxygen Deficiency Monitor/Alarm With Remote Sensor; September 21, 2015
- WO 200559906; Oxygen Deficiency Monitor/Alarm With Remote Sensor; September 21, 2015
- WO 200648108; Troubleshoot Cause of Damper Not Stroking; July 8, 2015
- WO 200648148; Replace Actuator with New; July 10, 2015
- WO 200649592; Feedwater and Feedwater Leakage Control – Relieve Binding/Replace Torque Arm Bushing; September 28, 2015

1R22 Surveillance Testing

- CR 2014-04530; 2014 CDBI NRC ID: Procedure Improvement for ESW Pump B Disch Check Valve Exercised Closed Test in SVI-P45-T2002; March 7, 2014
- CR 2015-01594; Potential Unacceptable Preconditioning of Check Valves During Performance of SVI-P45-T2002 (ESW Pump B and Valve Operability Test); February 2, 2015
- CR 2015-06342; ESW B Pump Flow Rate Is in the Alert Range Per SVI-P45-T2002; May 4, 2015
- CR 2015-10340; ESW Pump B Discharge Check Valve, 1P45F0501B Exercise Open Test for SVI-P45-T2002 Was Unsat; August 3, 2015
- CR 2015-10501; Unexpected RCIC Isolation During SVI-E31T5395B; August 5, 2015
- eSOMS Narrative Logs; August 5, 2015
- ISTP; Pump and Valve Inservice Testing Program Plan; Revision 16
- P45-075; Minimum Branch Flow Rates for P45 Surveillance Acceptance Criteria; Revision 1
- SVI-E31-T5395-B; RCIC Steam Line Flow High Channel Functional For 1E31-N684B; August 7, 2015
- SVI-E31-T5395-B; RCIC Team Line Flow High Channel Functional For 1E31-N684B; August 5, 2015
- SVI-P45-T2002; ESW Pump B and Valve Operability Test; Revisions 33, 34, and 35
- WO 200549507; SVI-E31T5395B 1 (92D) RCIC Steam Line Flow High Channel Functional For 1E31-N684B; August 7, 2015
- WO 200549677; ECCS/RCIC RPV Water Level Low, Level 1 and 2 Channel 'A' Functional for 1B21-N691A; July 31, 2015
- WO 200549910; ESW Pump B and Valve Operability Test; August 3, 2015
- WO 200636954; DG Start and Load Division 1; July 30, 2015

1EP2 Alert and Notification System Evaluation

- 2013 Evacuation Time Estimate Population Update; November 2, 2013
- 2014 Evacuation Time Estimate Population Update; November 1, 2014
- FEMA Approval of Perry Nuclear Power Plant Design Report Update; December 21, 2011
- FEMA Approval of Perry Nuclear Power Plant Prompt ANS; September 8, 1986
- Preventative and Corrective Maintenance on ANS from July 2013 to May 2015
- PSI-0021; Prompt Alert System; Revision 2
- PYBP-ERS-0028; Prompt Alert Siren System Emergency Planning Zone Testing; Revision 3

1EP3 Emergency Response Organization Staffing and Augmentation System

- CR 2015-00608; Augmentation Drill Objective Not Met; January 15, 2015
- Emergency Response Telephone Directory; June 2015
- ERO Augmentation Testing from July 2013 to May 2015
- PYBP-ERS-0033; Off-Hour Unannounced Drill Conduct; Revision 3
- SN-SA-2015-0156; ERO Augmentation Drill; January 1, 2015
- SN-SA-2015-0157; ERO Augmentation Drill; February 12, 2015
- SPI-0032; Notification of Key Plant Personnel; Revision 14

1EP5 Maintenance of Emergency Preparedness

- CR 2014-06232; Post Event Critique for Unusual Event; April 2, 2014
- CR 2014-13944; Drill, Missed Emergency Notification; September 04, 2014
- CR 2014-14851; Drill, Missed Emergency Classification; September 25, 2014
- CR 2014-17299; Required Emergency Plan Training Located Outside of Emergency Plan; November 19, 2014
- CR 2014-17349; Required Emergency Plan Information Located Outside of Emergency Plan; December 01, 2014
- CR 2014-18664; CA Closed With No Action; December 23, 2014
- Emergency Plan for Perry Nuclear Power Plant; Revision 45
- MS-C-11-11-24; Fleet Oversight Audit Report of EP; December 5, 2014
- MS-C-13-11-24; Fleet Oversight Audit Report of EP; December 10, 2013
- NOBP-LP-2022; Compliance Auditing; Revision 13
- NOBP-LP-5006; Initial Qualification and Continuing Development of Emergency Response Personnel; Revision 1
- PYBP-ERS-0029; Review of Actual Events – Unusual Event; April 2, 2014
- SN-SA-2015-0635; Pre-NRC EP Self-Assessment; June 2, 2015

1EP6 Drill Evaluation

- CR 2015-10477; Eplan - Received Multiple Phone Calls After SAE Declared; August 5, 2015
- CR 2015-10493; Reduced FileNet Capability at JIC Does Not Permit Access for Procedures/Forms; August 5, 2015
- CR 2015-10521; Dual Emergency Response Position Assignments Reduces Performance Effectiveness; August 6, 2015
- CR-2015-10528; Emergency Notification System Scenario Problems During Drill; August 6, 2015
- Emergency Drill Scenario Package; August 5, 2015
- EPI-A1; Emergency Plan Implementing Instruction; Revision 26
- ONI-C71-1; Reactor Scram; Revision 20

- ONI-D51; Earthquake; Revision 20

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

- NOBP-LP-4012-09; Reactor Coolant System Specific Activity; Revision 1; Data Reviewed From January 2014 through May 2015

2RS7 Radiological Environmental Monitoring Program (REMP) (71124.07)

- Appendix-A Inter-Laboratory Comparison Program Results; ATI Environmental, Inc. Midwest Laboratory; January Through December 2014
- CR-2014-01658; REMP Program Water Sampling Equipment Require Evaluation for Replacement; January 31, 2014
- CR-2014-04897; REMP Air Samplers Found Not Running at Time Change-Out; March 13, 2014
- CR-2014-07582; Service Water Compositor Was Found Not Running During Monthly Collection; April 25, 2014
- CR-2014-08168; Environmental Air Samplers Found Without Power; May 2, 2014
- CR-2014-11263; Chemistry Instrument Quality Control Program Deficiencies; July 2, 2014
- CR-2014-14127; Surveillance SVI-D17-T5286; Radiological Environmental Monitoring Performance Questionable; September 9, 2015
- CR-2014-14255; The REMP Master List of Sample Locations Were Not Updated as Location Requirements Change Results in Procedure Non-compliance; September 16, 2014
- CR-2014-14523; Not All Commercially and/or Recreational Important Fish; September 18, 2014
- CR-2014-15265; NOS Finding; Perry Chemistry and Environmental Program Rated Marginally Effective; October 10, 2014
- CR-2014-15584; Lost REMP Fish Samples Recovered; October 10, 2014
- CR-2015-02169; Two REMP Air Samples Not Obtained Due to Weather and Freezing Conditions; February 19, 2015
- Perry Nuclear Power Plant; Annual Environmental and Effluent Release Report 2014
- REMP-0009; Surface and Drinking Water Sampling; Revision 9
- REMP-0010; Perry Operational Manual; Radiological Environmental Monitoring Program; Milk Sampling; Revision 6
- REMP-0012; REMP Food Sampling Program; Revision 8
- REMP-0018; REMP Sample Data Review and Reporting Requirements; December 16, 2014
- REMP-0022; Processing Data from the PNPP Meteorological Tower; Revision 5
- REMP-0023; REMP-Air Sampling Collection; Revision 8
- REMP-0024; Air Sampler Maintenance and Calibration; Revision 2

40A1 Performance Indicator Verification

- CHI-0007; Attachment 3: Liquid Effluent Post-Release Dose Data Log; From November 10, 2014 Through May 2, 2015
- CR 2015-01336; Unanticipated RCIC Isolation; January 31, 2015
- CR 2015-01393; Post Event Critique for I&C Event (CR#2015-01336); February 2, 2015
- CR-2014-00018; Unplanned ODCM Entry ESW Rad Monitor Due to Decrease in the Background
- CR-2015-09402; Elevated Tritium Activity Discovered in Piezometer Tubes Under the Radwaste Building; July 10, 2015

- CR-2015-11598; Comment Made During NRC Audit REMP About Vegetation Growth and Air Sampling; September 2, 2015
- CR-2015-11611; NRC Identified Enhancement to the Radiological Environmental Monitoring Program and Annual Effluent Report; September 2, 2015
- CR-2015-11704; NRC Observation of REMP Audit About Quincy Air Sampling Location No. 5; September 4, 2015
- CR-2015-11721; Primary Calibration Data for the New Radiation Monitors was Not Documented Within the "Filenet" During D17 Digital Upgrade Project; September 4, 2015
- CR-2015-11724; NRC Inspection Onsite Multichannel Analyzer Did Not Detect Cs-134 in a Sample That Was Later Detected by GEL Lab; September 4, 2015
- CR-2015-117726; NRC Inspectors Noted That Two Calibration Sources Were Old; September 2, 2015
- CR-2015-12491; NRC RETS Inspection – NRC Questioned Gaseous Effluent Monitors Default Efficiency Contained in CHI-0006 Procedure "Alarm Set-Points;" September 23, 2015
- CR-2015-12560; During NRC RETS Inspection, NRC Expressed a Concern Regarding Housekeeping in the TB and HB Buildings Effluent Monitor Skids
- CR-2015-12575; NRC Identified That the Efficiency for Liquid Effluent Monitor (0D17-K0606) Cannot Be Located; September 24, 2015
- IMI-E02-0043; Filling and Venting RCIC Instrument Lines for 1E31-N083A and 1E31-N038B; Revision 5
- MSPI Basis Document; Revisions 8 and 9
- NEI 99-02; Regulatory Assessment PI Guideline; Revisions 6 and 7
- NOBP-LP-4012; NRC PIs; Revision 5
- NOBP-LP-4012-06; MSPI Unavailability Index (UAI) and Unreliability Index (URI) for Heat Removal System (RCIC); July 2014 to June 2015; Revision 2
- NOBP-LP-4012-07; MSPI UAI and URI for Residual Heat Removal (RHR); July 2014 to June 2015; Revision 3
- NOBP-LP-4012-15; RETS/ODCM Radiological Effluent Occurrences; Revision 0; Reviewed From January 2014 Through June 2015
- NOBP-LP-4012-19; MSPI UAI and URI for ESW; July 2014 to June 2015; Revision 2
- NOP-ER-2007; Underground Piping and Tanks Integrity Program; Revision 5
- NOP-OP-3602; Microbiologically Influenced Corrosion Monitoring Program; Revision 0
- NRC PI Data; EP – ANS Reliability; Fourth Quarter 2014 Through First Quarter 2015
- NRC PI Data; EP – Drill/Exercise Performance; Fourth Quarter 2014 Through First Quarter 2015
- NRC PI Data; EP – ERO Readiness; Fourth Quarter 2014 Through First Quarter 2015
- NUCON International Radioiodine Test Report; Radioiodine Test Report; 1M14D0001A New Charcoal per ASTM D3803-1989; September 4, 2015
- NUCON International Radioiodine Test Report; Radioiodine Test Report; 0M26D0001B New Charcoal per ASTM D3803-1989; August 31, 2015
- NUCON International Radioiodine Test Report; Radioiodine Test Report; 0M52D0001 New Charcoal per ASTM D3803-1989; September 4, 2015
- NUCON International Radioiodine Test Report; Radioiodine Test Report; 1M21D0001B New Charcoal per ASTM D3803-1989; September 4, 2015
- PDB-C0013; SVI and PTI Availability; Revision 2
- Perry Annual Environmental and Effluent Release Report 2014
- Perry ODCM; February 7, 2013
- PY-SVI-D17T8002; LRW to ESW Radiation Monitor Channel Calibration for D17-K606
- PY-SVI-D17T8031; Unit-1 Noble Gas Radiation Monitor Calibration for 1D17-K786
- PY-SVI-D17T8033; Unit-1 Vent Sampler Flow Rate Monitor 1H51-PO86 Calibration

- SVI-D17-T8031; Unit-1 Vent Noble Gas Radiation Monitor Calibration for 1D17-K86; Revision 9
- SVI-E51-T1272; RCIC System Low Pressure Operability Test; Revision 17
- SVI-G50-T5266; Liquid Radwaste Release Permit; Version 20; Permit Date for Release, November 11, 2014
- SVI-G50-T5266; Liquid Radwaste Release Permit; Version 20; Permit Date for Release, January 1, 2013

40A2 Problem Identification and Resolution

- ANSI/N45.2.10-1973; "Quality Assurance Terms and Definitions"
- CR 2015- 01192; ILO Independent Audit Written Examination Results Less Than Expected; January 28, 2015
- CR 2015-00182; TSC HVAC Backup Air Handling Unit Unable to Maintain Temperatures; January 7, 2015
- CR 2015-00239; New Fuel Receipt Bundle Bail Handle Damage; January 7, 2015
- CR 2015-00284; Potential NRC NCV for Failing to Follow Procedure During Troubleshooting Activities; January 8, 2015
- CR 2015-00344; Potential RWP Violation; January 10, 2015
- CR 2015-00483; Pilot INPO E&A 2014 Area For Improvement (FP.1-1) Fire Protection; January 13, 2015
- CR 2015-00484; Pilot INPO E&A 2014 Area For Improvement (MA.1-1) Maintenance Fundamentals; January 13, 2015
- CR 2015-00485; Pilot INPO E&A 2014 Area For Improvement (ER.1-1) Equipment Performance; January 13, 2015
- CR 2015-00490; Pilot INPO E&A 2014 Area For Improvement (CM.3-1) Design Change Processes; January 13, 2015
- CR 2015-00497; Pilot INPO E&A 2014 Area For Improvement (RS.1-1) Radiological Safety (Related to RS.1-1, 2013 and RP.1-3, 2009); January 13, 2015
- CR 2015-00499; Pilot INPO E&A 2014 Area For Improvement (EP.3-1) EP; January 13, 2015
- CR 2015-00500; Pilot INPO E&A 2014 Area For Improvement (LF.1-1) Leadership; January 13, 2015
- CR 2015-00608; Augmentation Drill Objective Not Met; January 15, 2015
- CR 2015-00619; Fuel Bundle 16P767 Stored in Free Move Location KK-24 Per Direction of FMC; January 16, 2015
- CR 2015-00633; CA-SA-PY-2014-0001; Corporate Perry Safety Culture Assessment, Area in Need of Improvement Regarding Resources. Attribute LA.1; January 16, 2015
- CR 2015-00640; CA-SA-PY-2014-0001; Corporate Perry Safety Culture Assessment, Negative Noteworthy Item, Engagement of Issue Ownership and Teamwork; January 16, 2015
- CR 2015-00680; "Clearance" "Misposition" Error During Placement of EPY-G41-0015; January 17, 2015
- CR 2015-00713; Potential Trend in Operations Section Rad Worker Practices; January 19, 2015
- CR 2015-00714; Calculation Pressure Conversion Error; January 19, 2015
- CR 2015-00752; MS-C-15-01-09; Implementation Issues Associated with Specialized Chemical Treatment Process Activities of the Fuel Pool Cooling System; January 19, 2015
- CR 2015-00765; Process to Obtain Unit 2 Transfer Item MOV Adapter Plate for Use on PY0P42F0260A Not Followed; January 20, 2015
- CR 2015-00776; MS-C-15-01-09; Temporary Modification Was Not Prepared in Support of Condensate Storage Tank (CST) Freeze Seal; January 20, 2015

- CR 2015-00933; PA-PY-15-001; Declining Trend in Protected Equipment Posting Adherence; January 22, 2015
- CR 2015-00944; MS-C-15-01-09; Finding: Special Process Implementing Procedures Do Not Ensure Personnel Performing Activities Are Qualified; January 22, 2015
- CR 2015-00955; FME Qualification of Fleet Personnel Supporting New Fuel Receipt; January 22, 2015
- CR 2015-00956; FO-SA-2014-0053; Emergent LHRA Are Not Always Challenged With Respect to Readiness; January 22, 2015
- CR 2015-00975; Operations Section Second Half 2014 IPAT Trend for Operations Worker Practices Behaviors and Administrative Procedure Compliance; January 23, 2015
- CR 2015-01002; PA-PY-15-01; Negative Trend Concerning the Control of Personnel Security Badges; January 23, 2015
- CR 2015-01031; QC Checks for Chemistry Instrumentation Did Not Meet Effectiveness Review Criteria; January 23, 2015
- CR 2015-01291; CNRB Concern – Operations Shift Managers and Superintendents Reinforcement of Standards; January 20, 2015
- CR 2015-01319; NOP-WM-4003; Warehousing, Not Followed for Removing Material From Inventory and Placing on Hold; January 30, 2015
- CR 2015-01322; PM Not Performed by the Deferral Date; January 30, 2015
- CR 2015-01356; Stop WO, Eddy Current Testing RWP 150115, Tasks 1,2,3,4,5,7, and 8; January 31, 2015
- CR 2015-01479; Unplanned LCO Entry for Division 2 DG Inoperability; February 3, 2015
- CR 2015-01531; Survey Instrumentation Identified Possible Radioactive Material in a Trash Dumpster; February 4, 2015
- CR 2015-01675; Inaccurate Use of Air Sample Results – Individual Error; February 7, 2015
- CR 2015-02015; Perry Chemistry Section Has 4 Red Pillars in the 2014 SCWE Survey; February 16, 2015
- CR 2015-02270; Unplanned LCO – Cntmt Floor Drain OTBD ISOL Failed to Stroke Closed (1G61F0170); February 22, 2015
- CR 2015-02767; PA-PY-15-01; Three FLEX Modifications Did Not Address Seismic Falldown Criteria as Part of ECP Design; March 4, 2015
- CR 2015-02830; PA-PY-15-01; Repeat Unsuccessful Freeze Seal Operations; March 5, 2015
- CR 2015-02947; Instrument Air Leak; March 7, 2015
- CR 2015-03042; IRM B Indication Is Rising With No Rise in Power; March 9, 2015
- CR 2015-03116; Stator Water Temperature Switch Failed; March 11, 2015
- CR 2015-03146; NRC ID: Procedure Non-Compliance Issue With Search Equipment Testing; March 11, 2015
- CR 2015-03262; Additional Findings Associated With Elevated Temperatures in the Upper Drywell; March 12, 2015
- CR 2015-03424; Perry Unit 2 Does Not Meet Ohio Building Codes, NFPA Fire and Life Safety Codes; March 16, 2015
- CR 2015-03498; Perry Radworkers Have Been Observed Not Adhering to the Anti-Contamination Protective Clothing Fleet Standard as Agreed Upon in Accordance with Fleet Action Items, Procedures and Communications; March 17, 2015
- CR 2015-03504; Snubber E12H0322 Failed Drag Test; March 17, 2015
- CR 2015-03553; 1E12-F558B; RHR HX B Vent Chk Vlv, Failed to Exercise Open During Surveillance Testing; March 18, 2015
- CR 2015-03662; LLRT Failure of 1P11-F545; March 19, 2015
- CR 2015-03680; NRC Question Regarding March 2, 2015 Plant Emergency Alarm Test Failure; March 19, 2015
- CR 2015-03682; Briefed Dose Rate Alarms Place Undervessel Work on Hold; March 19, 2015

- CR 2015-03743; 1R15 Trending Team: Potential Trend With Calibration of Transmitters; March 20, 2015
- CR 2015-03771; PA-PY-15-01; Issues Identified With RWP 156074 and Associated ALARA Plan; March 21, 2015
- CR 2015-03775; LPRM Detector Not Being Correctly Extracted by Undervessel Tooling; March 21, 2015
- CR 2015-03838; 1R15 LLRT: 1M17F0020 Failed As-Found LLRT; March 22, 2015
- CR 2015-03967; Non-Compliance With Fall Protection Program While Erecting Scaffold; March 24, 2015
- CR 2015-03990; PRELIMINARY – 1N62C0002B Eddy Current Examination Indications of Severe Degradation; March 25, 2015
- CR 2015-04046; New 3A Feedwater Heater South Support Configuration Was Not Installed Per ECP 03-0389-001; March 25, 2015
- CR 2015-04070; Flex Mod Work Performed on System Without Signing on to Proper Clearance; March 26, 2015
- CR 2015-04126; INPO Identified Finding; Non Compliance with NOP-OP-4106; March 26, 2015
- CR 2015-04237; LPRM Drytube Fractures During Cutting; March 28, 2015
- CR 2015-04250; Bottom Head Drain Project Fitup Issue; March 29, 2015
- CR 2015-04290; Failure of Check Valve PY-1P51F0530; March 30, 2015
- CR 2015-04334; Cooling Tower Project Worker Falls Approximately Six Feet; March 30, 2015
- CR 2015-04356; Irradiated Control Rod Blade Moved Without Move Sheet Level 5; March 31, 2015
- CR 2015-04383; SVI-M17-T9208 Local Leak Rate Test failure of Containment Vacuum Breaker M17-F0020; March 31, 2015
- CR 2015-04387; C85 Steam Bypass System Trip Logic Card 1C85K0029 Failure; March 31, 2015
- CR 2015-04396; Snubber 1N22H0127 Failed Drag Test; March 31, 2015
- CR 2015-04405; PA-PY-15-01: Adverse Trend – Observed Shortfalls in Procedure Use and Adherence, Order Placekeeping, and Turnover Quality by Westinghouse Personnel During 1R15; March 31, 2015
- CR 2015-04498; 1R15 SRV Project Scope Expansion; April 1, 2015
- CR 2015-04515; PA-PY-15-01; Organizational Shortfalls in Meeting RWP Dose Goals Challenge the 1R15 Outage Dose Goal and Dose Estimate; April 2, 2015
- CR 2015-04690; 1R15 LLRT: Check Valve 1N27F0739A Failed Exercise Open Verification; April 5, 2015
- CR 2015-04803; Indication Identified in H9 Shroud Support Plate to Reactor Vessel Wall Weld; April 7, 2015
- CR 2015-04812; While Inserting Bundle 15P476 Into the Core its Channel Fastener Was Damaged; April 7, 2015
- CR 2015-04859; MS-C-15-02-22: Inaccurate Information Provided to the NRC in LER 2013-003 Following CR 2013-09255 Leakage Evaluation; April 8, 2015
- CR 2015-04882; Trend CR Repeated Fatigue Rule Violations; April 8, 2015
- CR 2015-04993; 1R15 Trending Team: Potential Regulatory Issues (e.g., Procedure & RWP Adherence) Were Identified in CR 2015-04855; April 10, 2015
- CR 2015-05022; 1R15 LLRT; Check Valves 1B21F0029B and 1B210029C Failed SVI-B21-T2201; April 10, 2015
- CR 2015-05079; External Flooding During a Probable Maximum Flooding Event (West Side of Plant); April 12, 2015
- CR 2015-05353; FME: Suppression Pool FM Controls; April 16, 2015

- CR 2015-05515; 1R15 Trending Team: A Trend Has Been Identified in FME Practices; April 20, 2015
- CR 2015-05584; Full Scram Signal Caused By Decon Activities; April 21, 2015
- CR 2015-05654; Contractor Tailgated Through Two Security Doors; April 22, 2015
- CR 2015-05679; ANS Siren A1 Removed From Service Due to Test Failure; April 23, 2015
- CR 2015-05688; IRM a Failed Overlap Data; April 23, 2015
- CR 2015-05734; Potential Trend in Quality Control Personnel Performance During Perry's 1R15; April 24, 2015
- CR 2015-05849; Instrument Root Valves for 3A/3B Feedwater Heaters Found Out of the Required VLI (Valve Lineup Instruction) Position; April 25, 2015
- CR 2015-06344; A 5-Foot Steam Plum Was Identified Between Regenerative Heat Exchangers B and C on the Reactor Water Cleanup System; May 4, 2015
- CR 2015-07039; Reactor Water Cleanup (RWCU) Pump Seal Leaks – Recurring Issue; May 15, 2015
- CR 2015-07300; Potential Trend for EP 126 Valve Leaks; May 21, 2015
- CR 2015-07331; CR 2015-00628 Did Not Fully Evaluate NRC NCV 05000440/2014005–01 Unevaluated Preconditioning; May 21, 2015
- CR 2015-07391; 2015 Pre-NRC Fire Protection Assessment – Efforts to Resolve Fire Protection Program Issues Have Not Resulted In Acceptable Results; May 22, 2015
- CR 2015-07402; Perform Casual Evaluation of Recent Plant Status Control Events; May 22, 2015
- CR 2015-07570; New Trend for 50.59 Program -RAD Exemption 1.4 Mis-Use for Procedures Tied to ECPs; May 27, 2015
- CR 2015-07604; 1R15 Trending Results for Supplemental Personal; May 28, 2015
- CR 2015-07664; Operations SVI-R45T2001 Start Delayed, Non-Adherence to the PWIS; May 29, 2015
- CR 2015-07754; Maintenance Initial Training Program Results Review; dated June 1, 2015
- CR 2015-08048; CNRB Executive Summary ID: Leadership Focus Is Warranted on Organizational Alignment and Accountability; June 9, 2015
- CR 2015-08051; Evaluation of Response to NRC Issued NCV "Failure to Initiate a Transient Combustible Permit;" June 9, 2015
- CR 2015-08081; 1R15 Dose Goal Exceeded; June 9, 2015
- ECP 02-0078; Replace Existing Bailey 7000 Series Control System With A Digital Distributed Control System; July 2, 2004
- ECP 15-0005-001; Install Interposing Relays Between the RRCS Optical Isolators and the Field Bus Modules of the DFWCS to Eliminate False Runback Signals From Causing Loss of Feedwater; February 3, 2015
- GEI-0007A; Instructions For Cable and Wire Terminations; Revision 13
- GEK-90426, Volume I; Perry ½ RRCS; May 1, 2015
- NOBP-LP-2001; FEOC Self-Assessment/Benchmarking; Revision 21
- NOBP-LP-2003; Employee Concerns Program; Revision 4
- NOBP-LP-2008; FENOC Corrective Action Review Board; Revision 17
- NOBP-LP-2011; FENOC Cause Analysis; Revision 18
- NOP-LP-2001; CAP; Revision 36
- Perry Site Protection ID: 6 Section Clock Resets Year-to-Date Require Collective Review for Improvement/Corrective Actions; April 7, 2015
- PRA-PY1-14-054-R00; PRA Assessment of LER 2014-004 "Reactor Scram Due to Loss of Feedwater"; November 14, 2014
- PRA-PY1-14-055-R00; PRA Assessment of LER 2014-005 "Reactor Scram Due to Loss of Feedwater"; December 3, 2014
- SVI-B21-T0246-B; ATWS-RPT Logic System Functional Test for Division 2; April 10, 2015

- SVI-B21-T046-A; ATWS-RPT Logic System Functional Test for Division 1; April 9, 2015
- Vendor Manual Revision Notice; Vendor Manual Number G227; Revision 2
- WO 200557603; ATWS-RPT Logic System Functional Test For Division 1 at Least Once Per 24 Months; April 9, 2015
- WO 200557749; ATWS-RPT Logic System Functional Test For Division 2 at Least Once Per 24 Months; April 10, 2015
- WO 200629099; PY-C34 Feedwater Control; April 14, 2015

4OA3 Follow-Up of Events and Notices of Enforcement Discretion

- LER 2014-004-00; Loss of Feedwater Results in Automatic Reactor Protection System Actuation; December 17, 2014
- LER 2014-005-00; Loss of Feedwater Results in Automatic Reactor Protection System Actuation; January 6, 2015
- LER 2015-001-00; Degraded Voltage Relay Found Outside the Allowable Value; August 11, 2015
- PYBP-SITE-0019; Post Scram Restart Report Perry Nuclear Power Plant for Scram Number 1-14-01; October 22, 2014

LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Documents Access Management System
ANS	Alert and Notification System
CAP	Corrective Action Program
DFWCS	Digital Feedwater Control System
DGBVS	Diesel Generator Building Ventilation System
DG	Diesel Generator
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ERO	Emergency Response Organization
ESW	Emergency Service Water
HPCS	High Pressure Core Spray
HVAC	Heating, Ventilation, and Air Conditioning
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
MSPI	Mitigating Systems Performance Index
N/A	Not Applicable
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
ODMI	Operational Decision-Making Issue
PARS	Publicly Available Records System
PI	Performance Indicator
RCIC	Reactor Core Isolation Cooling
RG	Regulatory Guide
RPV	Reactor Pressure Vessel
RRCS	Redundant Reactivity Control System
SDP	Significance Determination Process
SSC	Structure, System, and Component
SVI	Surveillance Instruction
TS	Technical Specification
USAR	Updated Safety Analysis Report
WO	Work Order

E. Harkness

-2-

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Sincerely,

/RA/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

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