



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

August 7, 2013

Mr. Vito Kaminskas  
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FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant  
P. O. Box 97, 10 Center Road, A-PY-A290  
Perry, OH 44081-0097

**SUBJECT: PERRY NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000440/2013003**

Dear Mr. Kaminskas:

On June 30, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Perry Nuclear Power Plant, Unit 1. The enclosed inspection report documents the inspection results which were discussed on July 11, 2013, with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No NRC-identified or self-revealed findings were identified during this inspection. However, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest this NCV, you should provide a response with 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Perry Nuclear Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, 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 Document Access and Management System (ADAMS).

V. Kaminskas

-2-

ADAMS is accessible from the NRC Web site at [http://www.nrc.gov/reading\\_rm/adams.html](http://www.nrc.gov/reading_rm/adams.html)  
(the Public Electronic Reading Room).

Sincerely,

*/RA/*

Michael Kunowski, Chief  
Branch 5  
Division of Reactor Projects

Docket No. 05000440  
License No. NPF-58

Enclosure: Inspection Report 05000440/2013003  
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: 05000440/2013003

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant, Unit 1

Location: Perry, Ohio

Dates: April 1, 2013 through June 30, 2013

Inspectors: M. Marshfield, Senior Resident Inspector  
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Approved by: Michael Kunowski, Chief  
Branch 5  
Division of Reactor Projects

Enclosure

## TABLE OF CONTENTS

SUMMARY OF FINDINGS .....	1
REPORT DETAILS .....	2
Summary of Plant Status.....	2
1. REACTOR SAFETY .....	2
1R01 Adverse Weather Protection (71111.01).....	2
1R04 Equipment Alignment (71111.04) .....	4
1R05 Fire Protection (71111.05Q) .....	5
1R06 Flooding (71111.06).....	6
1R11 Licensed Operator Requalification and Licensed Operator Performance (71111.11Q).....	6
1R12 Maintenance Effectiveness (71111.12Q).....	7
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13) .....	8
1R15 Operability Determinations and Functionality Assessments (71111.15).....	9
1R18 Plant Modifications (71111.18) .....	10
1R19 Post-Maintenance Testing (71111.19).....	10
1R20 Outage Activities (71111.20).....	11
1R22 Surveillance Testing (71111.22).....	12
2. RADIATION SAFETY .....	14
2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01) .....	14
2RS2 Occupational ALARA Planning and Controls (71124.02) .....	19
4. OTHER ACTIVITIES.....	21
4OA1 Performance Indicator Verification.....	21
4OA2 Problem Identification and Resolution (71152) .....	23
4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153) .....	25
4OA6 Meetings .....	25
4OA7 Licensee-Identified Violations .....	25
SUPPLEMENTAL INFORMATION .....	1
KEY POINTS OF CONTACT.....	1
LIST OF ITEMS OPENED, CLOSED AND DISCUSSED .....	1
LIST OF DOCUMENTS REVIEWED.....	2
LIST OF ACRONYMS USED .....	9

## SUMMARY OF FINDINGS

Inspection Report (IR) 05000440/2013003, 04/01/2013 – 06/30/2013; Perry Nuclear Power Plant. Routine Integrated Inspection Report.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated January 28, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

### **A. NRC-Identified and Self-Revealed Findings**

No findings were identified.

### **B. Licensee-Identified Violations**

One violation of very low safety significance was identified by the licensee and 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 Section 4OA7 of this report.

## REPORT DETAILS

### Summary of Plant Status

The plant was in shutdown for refueling outage (RFO) 1R14 at the beginning of the quarter. On May 11, 2013, at 10:23 a.m., the plant was placed in startup mode and achieved criticality at 1:03 p.m. the same day. The plant synchronized to the grid on May 16 at 1:08 p.m. and reached 100 percent power on May 19. On June 8, reactor power was reduced to 74 percent for fuel suppression testing based on chemistry indications of minor fuel pin leakage. Following unsuccessful leak detection efforts, reactor power was restored to maximum achievable power, 99 percent, on June 11, 2013, at 11:40 p.m. On June 14, at 7:00 p.m., a reactor power reduction to 8 percent commenced to allow a drywell entry to determine the source of elevated unidentified leakage, 0.3 gallons per minute higher than prior to the RFO and continuing to rise slowly. The plant was disconnected from the grid at 7:57 a.m. on June 15. A subsequent determination of reactor boundary leakage required a full reactor shutdown in accordance with plant Technical Specifications and the plant was shut down at 2:12 a.m. on June 16. Plant restoration to power operations following the completion of repairs commenced at 3:54 p.m. on June 20 and the reactor reached criticality at 8:21 p.m. on the same day. The plant synchronized to the grid on June 21 at 6:28 p.m. and reached 100 percent power on June 25 at 5:52 a.m. The plant remained at full power for the remainder of the quarter.

### 1. REACTOR SAFETY

#### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

#### 1R01 Adverse Weather Protection (71111.01)

##### .1 Readiness of Offsite and Alternate AC Power Systems

##### a. Inspection Scope

The inspectors verified that plant features and procedures for operation and continued availability of offsite and alternate alternating current (AC) power systems during adverse weather were appropriate. The inspectors reviewed the licensee's procedures affecting these areas and the communications protocols between the transmission system operator (TSO) and the plant to verify that the appropriate information was being exchanged when issues arose that could impact the offsite power system. Examples of aspects considered in the inspectors' review included:

- the coordination between the TSO and the plant during off-normal or emergency events;
- the explanations for the events;
- the estimates of when the offsite power system would be returned to a normal state; and
- the notifications from the TSO to the plant when the offsite power system was returned to normal.

The inspectors also verified that plant procedures addressed measures to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system prior to or during adverse weather conditions. Specifically, the inspectors verified that the procedures addressed the following:

- the actions to be taken when notified by the TSO that the post-trip voltage of the offsite power system at the plant would not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply;
- the compensatory actions identified to be performed if it would not be possible to predict the post-trip voltage at the plant for the current grid conditions;
- a re-assessment of plant risk based on maintenance activities which could affect grid reliability, or the ability of the transmission system to provide offsite power; and
- the communications between the plant and the TSO when changes at the plant could impact the transmission system, or when the capability of the transmission system to provide adequate offsite power was challenged.

Documents reviewed are listed in the Attachment to this report. The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into the CAP in accordance with station corrective action procedures.

This inspection constituted one sample for readiness of offsite and alternate AC power systems as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings were identified.

.2 Summer Seasonal Readiness Preparations

a. Inspection Scope

The inspectors performed a review of the licensee's preparations for summer weather for selected systems, including conditions that could lead to an extended drought.

During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Safety Analysis Report (USAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Specific documents reviewed during this inspection are listed in the Attachment to this report. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into the corrective action program in accordance with station corrective action procedures. The inspectors' reviews focused specifically on the following plant systems:

- steam tunnel cooling system;
- heater bay ventilation system;
- containment vessel cooling system;
- radwaste control room heating, ventilation, and air conditioning system, and;
- turbine building chilled water system.

This inspection constituted one seasonal adverse weather sample as defined in IP 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- 'B' emergency service water (ESW) system;
- 'B' emergency closed cooling system; and
- 'A' standby liquid control system.

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, USAR, Technical Specification (TS) requirements, outstanding work orders (WOs), condition reports (CRs), 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 CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On April 22-24, 2013, the inspectors performed a complete system alignment inspection of the high-pressure core spray system and the Division 3 emergency diesel generator (EDG) 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 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 (71111.05Q)

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; 1AB-2 (Auxiliary Building 599' Elevation);
- Fire Zone; 1CC-1C (Control Complex 574' Elevation Fire Zone 1 a,b,c);
- Fire Zone; 1CC-3A, 3B, 3C (Control Complex 620' Elevation Fire Zone 3 a,b,c) and 1DG-1B (Diesel Generator Building 620' Elevation Fire Zone 1 b);
- Fire Zone; 0IB-2 (Intermediate Building 599' Elevation); and
- Fire Zone; 0FH-3 (Fuel Handling Building 620' 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.

Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP.

Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the USAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. The specific documents reviewed are listed in the Attachment to this report. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the CAP to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the Auxiliary Building 599' and 574' elevations, including low-pressure core spray and high-pressure core spray rooms, to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments. Specific documents reviewed during this inspection are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

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

.1 Resident Inspector Quarterly Review of Licensed Operator Regualification

a. Inspection Scope

On May 28, 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 conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

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

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

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk

a. Inspection Scope

On May 11, the inspectors observed licensed operation's personnel during plant startup from RFO 1R14. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated licensed operator performance in the following areas:

- crew's clarity and formality of communications;
- ability to take timely conservative actions;
- prioritization, interpretation, and verification of trends/alarms;
- correct use and implementation of procedures;
- control board/component manipulations;
- oversight and direction from supervisors;
- ability to identify and implement appropriate TS actions and emergency operating procedures, actions, and notifications;
- documentation of activities; and
- pre-activity and post-activity briefs and use of human error prevention techniques.

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 (71111.12Q)

a. Inspection Scope

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

- nuclear instrumentation system – C51; and
- generator excitation and auxiliaries – N41/42

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

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

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

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

b. Findings

No findings were identified.

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

a. Inspection Scope

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

- local power range monitor transfer from undervessel to spent fuel pool;
- use of alternate decay heat removal (ADHR) to support shutdown defense-in-depth;
- reactor recirculation pump 'B' emergent seal replacement;
- main steam line drain and main steam isolation valve bypass outboard isolation valve repair;
- condensate transfer system containment inboard isolation valve replacement; and
- main generator exciter circuit repair.

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. Specific documents reviewed during this inspection are listed in the Attachment to this report.

These maintenance risk assessments and emergent work control activities constituted six 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:

- ADHR functionality assessment for Mode 4 and 5;
- source range monitor (SRM) 'A' operability determination with noisy cable;
- intermediate range monitor 'G' operability determination with spiking counts; and
- containment penetration P108 operability determination for overheating.

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 TSs 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.

These operability inspections constituted four samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed the modification for ADHR system completion and testing.

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(s). 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 in the course of this inspection 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 the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Division 2 EDG outage post-maintenance test;
- ESW 'A' outage post-maintenance test;
- emergency close cooling 'A' outage post-maintenance test;
- ESW residual heat removal (RHR) 'A' heat exchanger outlet valve post-maintenance test;
- SRM 'A' cable replacement post-maintenance test;
- Division 1 EDG post-maintenance test;
- RHR 'A' system outage post-maintenance test; and
- ESW RHR 'A' heat exchanger outlet valve 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 eight post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for Perry's Unit 1 RFO, which began on March 18, 2013, and continued to May 16, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

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

- refueling activities, including fuel handling and sipping to detect fuel assembly leakage;
- startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block emergency core cooling system suction strainers, and reactor physics testing; and
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed during the inspection are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Other Outage Activities

a. Inspection Scope

The inspectors evaluated outage activities for a forced outage that began on June 16 and continued through June 21, 2013. The inspectors reviewed activities to ensure that the licensee considered risk in developing, planning, and implementing the outage schedule.

The inspectors observed or reviewed the reactor shutdown and cooldown, outage equipment configuration and risk management, electrical lineups, selected clearances, control and monitoring of decay heat removal, control of containment activities, personnel fatigue management, startup and heatup activities, and identification and resolution of problems associated with the outage. The outage was required by technical specifications after a determination of reactor coolant system boundary leakage during a drywell entry to identify a source of increased unidentified drywell leakage. Two sources of leakage were identified and repaired during the outage and an extent of condition was conducted to review potential similar weld failure site possibilities in the reactor coolant system. Additional work items were also completed while the reactor was shut down to minimize dose to maintenance personnel.

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

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

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



- ESW 'A' pump and valve inservice testing;
- drywell floor drain sump and equipment drain sump flow monitoring system channel calibration for 1E31-N093 and 1E31-N094 reactor coolant system (RCS) leakage surveillance;
- 1B21F0019 main steam line drain and main steam isolation valve bypass outboard containment isolation valve local leak rate test
- reactor core isolation cooling (RCIC) system low-pressure routine operability test; and
- main steam isolation valve closure channel routine functional test.

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 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 two routine surveillance testing samples, one inservice testing sample, one RCS leakage sample, and one isolation valve test sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

**2. RADIATION SAFETY**

**Cornerstone: Occupational Radiation Safety**

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

This inspection constituted one complete sample as defined in IP 71124.01-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

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

b. Findings

No findings were identified.

.2 Radiological Hazard Assessment (02.02)

a. Inspection Scope

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

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

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas to evaluate material conditions and performed independent radiation measurements to verify conditions.

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

- reactor disassembly;
- refueling; and
- reactor reassembly.

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

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

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

b. Findings

No findings were identified.

.3 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors selected various containers holding non-exempt licensed radioactive materials that may cause unplanned or inadvertent exposure of workers, and assessed whether the containers were labeled and controlled in accordance with 10 CFR 20.1904, "Labeling Containers," or met the requirements of 10 CFR 20.1905(g), "Exemptions To Labeling Requirements."

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

- RWP 2013-6018; Reactor Disassembly;
- RWP 2013-6019; Refueling; and
- RWP 2013-6021; Reactor Reassembly.

For these radiation work permits, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each radiation work permit were clearly identified. The inspectors evaluated whether electronic personal dosimeter alarm setpoints were in conformance with survey indications and plant policy.

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

For work activities that could suddenly and severely increase radiological conditions, the inspectors assessed the licensee's means to inform workers of changes that could significantly impact their occupational dose.

b. Findings

No findings were identified.

.4 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

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

The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material. The inspectors evaluated whether there was guidance on how to respond to an alarm that indicated the presence of licensed radioactive material.

The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters. The inspectors assessed whether or not the licensee has established a de facto "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high-radiation background area.

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

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

b. Findings

No findings were identified.

.5 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated ambient radiological conditions (e.g., radiation levels or potential radiation levels) during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, radiation work permits, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage (including audio and visual surveillance for remote job coverage), and contamination controls. The inspectors evaluated the licensee's use of electronic personal dosimeters in high noise areas as high radiation area monitoring devices.

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

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

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

- RWP 2013-6018; Reactor Disassembly;
- RWP 2013-6019; Refueling; and
- RWP 2013-6021; Reactor Reassembly.

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

The inspectors examined the licensee's physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools. The inspectors assessed whether appropriate controls (i.e., administrative and physical controls) were in place to preclude inadvertent removal of these materials from the pool.

The inspectors examined the posting and physical controls for selected high radiation areas and very high radiation areas to verify conformance with the occupational performance indicator.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors discussed with the radiation protection manager the controls and procedures for high risk high radiation areas and very high radiation areas. The inspectors discussed methods employed by the licensee to provide stricter control of very high radiation area access as specified in 10 CFR 20.1602, "Control of Access to Very High Radiation Areas," and Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas of Nuclear Plants." The inspectors assessed whether any changes to licensee procedures substantially reduced the effectiveness and level of worker protection.

The inspectors discussed the controls in place for special areas that have the potential to become very high radiation areas during certain plant operations with first-line health physics supervisors (or equivalent positions having backshift health physics oversight authority). The inspectors assessed whether these plant operations require communication beforehand with the health physics group, so as to allow corresponding timely actions to properly post, control, and monitor the radiation hazards including re-access authorization.

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

b. Findings

No findings were identified.

.7 Radiation Worker Performance (02.07)

a. Inspection Scope

The inspectors observed radiation worker performance with respect to stated radiation protection work requirements. The inspectors assessed whether workers were aware of the radiological conditions in their workplace and the radiation work permit controls/limits in place, and whether their performance reflected the level of radiological hazards present.

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

b. Findings

No findings were identified.

.8 Radiation Protection Technician Proficiency (02.08)

a. Inspection Scope

The inspectors observed the performance of the radiation protection technicians with respect to all radiation protection work requirements. The inspectors evaluated whether technicians were aware of the radiological conditions in their workplace and the radiation work permit controls/limits, and whether their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

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

b. Findings

No findings were identified.

.9 Problem Identification and Resolution (02.09)

a. Inspection Scope

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

b. Findings

No findings were identified.

2RS2 Occupational ALARA Planning and Controls (71124.02)

The inspection activities supplement those documented in NRC Inspection Report 05000440/2012003 and constitute a partial sample as defined in IP 71124.02-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed pertinent information regarding plant collective exposure history, current exposure trends, and ongoing or planned activities in order to assess

current performance and exposure challenges. The inspectors reviewed the plant's 3-year rolling average collective exposure.

The inspectors reviewed the site-specific trends in collective exposures and source term measurements.

The inspectors reviewed site-specific procedures associated with maintaining occupational exposures ALARA (As-Low-As-Is-Reasonably-Achievable), which included a review of processes used to estimate and track exposures from specific work activities.

b. Findings

No findings were identified.

.2 Radiological Work Planning (02.02)

a. Inspection Scope

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

- reactor disassembly;
- refueling; and
- reactor reassembly.

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

The inspectors assessed whether the licensee's planning identified appropriate dose mitigation features; considered alternate mitigation features; and defined reasonable dose goals. The inspectors evaluated whether the licensee's ALARA assessment had taken into account decreased worker efficiency from use of respiratory protective devices and/or heat stress mitigation equipment (e.g., ice vests). The inspectors determined whether the licensee's work planning considered the use of remote technologies (e.g., teledosimetry, remote visual monitoring, and robotics) as a means to reduce dose and the use of dose reduction insights from industry operating experience and plant-specific lessons-learned. The inspectors assessed the integration of ALARA requirements into work procedure and radiation work permit documents.

The inspectors compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in the licensee's ALARA planning for these work activities. The inspectors compared the person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements, and evaluated the accuracy of these time estimates. The inspectors assessed the reasons (e.g., failure to adequately plan the activity, failure to provide sufficient work controls) for any inconsistencies between intended and actual work activity doses.



The inspectors determined whether post-job reviews were conducted and if identified problems were entered into the licensee's CAP.

b. Findings

No findings were identified.

.3 Radiation Worker Performance (02.05)

a. Inspection Scope

The inspectors observed radiation worker and radiation protection technician performance during work activities being performed in radiation areas, airborne radioactivity areas, or high radiation areas. The inspectors evaluated whether workers demonstrated the ALARA philosophy in practice (e.g., workers were familiar with the work activity scope and tools to be used, workers used ALARA low-dose waiting areas) and whether there were any procedure compliance issues (e.g., workers were not complying with work activity controls). The inspectors observed radiation worker performance to assess whether the training and skill level was sufficient with respect to the radiological hazards and the work involved.

b. Findings

No findings were identified.

.4 Problem Identification and Resolution (02.06)

a. Inspection Scope

The inspectors evaluated whether problems associated with ALARA planning and controls were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP.

b. Findings

No findings were identified.

**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures performance indicator (PI) for the second quarter of 2012 through the first quarter of 2013. To determine the accuracy of the PI data reported, definitions and guidance contained in Nuclear Energy Institute (NEI) document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's operator logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports, and NRC Inspection Reports

(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 and one issue was identified which will be corrected in the second quarter 2013 data submittal in July 2013. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index - Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Emergency AC Power System PI for the second quarter of 2012 through the first quarter of 2013. To determine the accuracy of the PI data reported, definitions and guidance contained in NEI 99-02 were used. The inspectors reviewed the licensee's operator narrative logs, MSPI derivation reports, issue 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 emergency AC power system sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index – High-Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI – High-Pressure Injection Systems PI for the second quarter of 2012 through the first quarter of 2013. To determine the accuracy of the PI data reported, definitions and guidance contained in NEI 99-02 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 high-pressure injection system sample as defined in IP 71151-05.

b. Findings

No findings were identified.

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

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

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.3 Selected Issue Follow-Up: Rosemont Trip Unit/Transmitter Replacement Plan

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item--CR 2012-10238, "Part 21 Event Number 48042: Reliability Degradation of Resistors in Trip Units and Readout Assemblies," dated June 25, 2012--- documenting actions completed and planned for the Rosemont Trip Unit/Transmitter Replacement Plan. A follow-up of this issue formed an in-depth review of the corrective actions completed, in-progress, and planned over the past year. The inspectors reviewed the original Prompt Operability Determination (POD), the Action Plan to Rework/Replace the more than 114 Rosemont Trip Units in the 10 CFR 21 population, the Rosemont Trip Unit Drift tracking spreadsheet, and the Operations Restart Readiness Review Indicators for the post-1R14 outage reactor restart as part of their review of the licensee's progress in resolving this issue. Several corrective action (CA) items in the plan have been documented as completed; however, even though WOs have been created for all 114 Rosemont Trip Units that need to be reworked/replaced in plant systems, those WOs have yet to be scheduled, even though the plan states in CA #9, to "Schedule the nuclear maintenance orders to rework/replace the trip units in accordance with approved Work Management procedures," with a planned finish date for this activity of September 15, 2012. Furthermore, CA #9 states, "The rework of the 114 installed trip units is necessary to close the POD, which is normally expected at the first available opportunity and within the current operating cycle." The inspectors determined that no WOs were scheduled to rework/replace any of the 114 installed Rosemont Trip Units during the 1R14 RFO and that the evaluation for the need to extend the closure of the POD into cycle 15, which was required in the action plan, was never performed, nor were additional action steps added to the Action Plan to track order implementation. The inspectors discussed their concerns with licensee management. Based on those discussions, licensee management documented the inspectors' concerns in the licensee's CAP in two separate CRs so as to be able to track the progress in resolving these issues and completing the CAs for reworking/replacing the affected Rosemont Trip Units in a timely manner.

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

b. Findings

No findings were identified.

.4 Selected Issue Follow-Up: RCIC Maintenance Actions and Improvements

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized two CA items documenting RCIC maintenance actions and improvements associated with the licensee's System Health Report from the fourth quarter of 2012. A follow-up of

these two issues formed an in-depth review of the licensee's short term improvement actions for the RCIC system over the past year.

The inspectors discussed the evaluations and associated corrective actions with licensee personnel.

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)

(Closed) Licensee Event Report (LER) 05000/2013-002-00, Condition Prohibited By Technical Specifications Due to Scram Discharge Volume Level Switch Isolation

This event, which was identified by licensee troubleshooting on March 25, 2013, occurred on February 18, 2013, during the performance of a channel functional and calibration check on that date. A finding with an associated NCV was previously identified in Perry IR 05000440/2013002. The original error was documented in CR 2013-04452 and immediate actions were taken by the licensee at the time to correct the error and prevent recurrence. No additional findings were identified by the inspectors following review of the 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.

4OA6 Meetings

.1 Quarterly Exit Meeting

On July 11, 2013, the inspectors presented the inspection results to the Site Vice-President, Mr. Vito Kaminskas, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

.2 Interim Exit Meetings

On April 19, 2013, the inspection results for the areas of radiological hazard assessment and exposure controls, and occupational ALARA planning and controls were presented to the site Vice-President, Mr. Vito Kaminskas, and members of his staff. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

4OA7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- License Condition 2.C(6) requires the licensee to implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, as amended, and as approved through Safety Evaluation Report (NUREG-0887) dated May 1982, and supplement numbers 1 through 10. Section 9A of Perry's USAR describes the approved fire protection program. Section 9A.5.B.5.(b) of the USAR states, in part, "Drills will be conducted according to procedures and instructions sub-tier to Perry Administrative Procedure (PAP)-1910, Fire Protection Program, which requires as a minimum, one drill per quarter per shift, and at least one annual drill with local fire department participation." In PAP-1910, Section 4.5.3 "Member Training," the instruction states, in part, "The fire brigade must be properly trained (qualified), receive routine updates and undergo requalification to ensure the team is prepared to combat fires." Further in PAP-1910 it states in subparagraph 2, "The scheduling of fire brigade drills in accordance with Fire Protection Instruction (FPI)-A-B02, Fire Brigade Drills, is assigned to the fire protection staff to administer." In Section 1.0 of FPI-A-B02 under "Purpose," the instruction states, in part, that "This instruction identifies drills involving a credible simulated emergency that requires personnel to perform emergency response operations for the purpose of evaluating the effectiveness of the training and education programs and the competence of personnel in performing required response duties and functions." Similarly, Section 5.1 of FPI-A-B02 "Fire Drills," the instruction states, in part, "A fire drill is an exercise designed to evaluate the response actions of the fire brigade, Reactor Operator, Unit Supervisors, Shift Managers, Supervisor Nuclear Security Operations, Secondary Alarm Station Operators, and other support personnel to fire alarms and simulated fire emergencies." Further, Section 6.3 "Drill Assessment," states, in part, that the drill assessment will, "Assess the fire alarm effectiveness..., Member's Knowledge..., Fire Fighting Methods..., Simulated Actions..., Brigade Leader's Response/Actions... and Organization Response/Actions..." Contrary to the above, between December 6, 2011, and December 13, 2012, the licensee took credit for a fire response conducted outside the plant at the plant training center and, on at least five occasions, the licensee also took credit for fire responses when the fire brigade was "toned out" or "activated" for other activities, but not for actual fires.

The finding was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because the finding was associated with the Mitigating Systems Cornerstone attribute of Protection Against External Factors for Fire and adversely impacted the cornerstone objective of ensuring the reliability and capability of the fire brigade to respond to initiating events to prevent undesirable consequences. The finding was evaluated using IMC 0609, Significance Determination Process (SDP), Attachment 0609.04, "Initial Characterization of Findings, dated June 19, 2012. Because the finding involved the Fire Brigade, Table 3, SDP Appendix Router, Section E.1, Fire Protection, directed NRC staff to use IMC 0609, Appendix A, The SDP for Findings At-Power, dated June 19, 2012. Exhibit 2 of IMC 0609, the

Mitigating Systems Screening Questions, Section D.1.a, Fire Brigade, was checked “yes” because the finding involved the Fire Brigade training and qualification requirements. The first condition under D.1.a., “The fire brigade demonstrated the ability to meet the required times for fire extinguishment for the drill scenarios,” was applicable and the finding did not significantly affect the ability of the fire brigade to respond to a fire, so the finding was determined to be of very low safety significance (Green).

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

V. Kaminskas, Site Vice-President  
J. Grabnar, Site Operations Director  
H. Hanson, Performance Improvement Director  
D. Reeves, Site Engineering Director  
J. Tufts, Operations Manager  
J. Veglia, Maintenance Director  
T. Veitch, Director, Regulatory Compliance

#### NRC

L. Kozak, Senior Reactor Analyst  
M. Kunowski, Branch Chief

### **LIST OF ITEMS OPENED, CLOSED AND DISCUSSED**

#### Closed

05000440/2013-002-00	LER	Condition Prohibited By Technical Specifications Due to Scram Discharge Volume Level Switch Isolation (Section 4OA3)
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## LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### 1R01 Adverse Weather Protection

- ONI-ZZZ-1; Tornado or High Winds; Revision 19
- ONI-SPI F-2; Yard Inspection; Revision 2
- ONI-S11; Hi/Low Voltage; Revision 9
- ONI-R10; Loss of AC Power; Revision 11
- PAP-0102; Interface with the Transmission System Owner; Revision 10
- IOI-15; Seasonal Variations; Revision 21
- NOP-WM-2001; Work Management Scheduling, Assessment and Seasonal Readiness Processes; Revision 14
- Summer Work List Spreadsheet; dated May 23, 2013
- Summer Work List Spreadsheet; dated June 3, 2013
- Summer Work List Spreadsheet; dated June 5, 2013
- CR 2013-08538; One Summer Prep Work Item Did Not Complete by June 1<sup>st</sup>; dated June 3, 2013
- CR 2013-08474; Grid Perturbation Due to 345 kV Transformer Trip at the Eastlake Plant; dated June 1, 2013
- CR 2013-08492; 345 kV Breaker Trip on the Grid Resulting in Grid Perturbation and Control Room Alarm; dated June 1, 2013

### 1R04 Equipment Alignment

- SOI-E22A; High-Pressure Core Spray System, System Operating Instruction; Revision 33
- SOI-E22B; Division 3 Diesel Generator, System Operating Instruction; Revision 29
- VLI-E22A; High-Pressure Core Spray, Valve Lineup Instruction; Revision 10
- VLI-R47/E22B; Division 3 Diesel Generator Lube Oil System (Unit 1), Valve Lineup Instruction, Revision 4
- VLI-R44/E22B; Division 3 Diesel Generator Starting Air System, Valve Lineup Instruction; Revision 9
- VLI-R45/E22B; Division 3 Diesel Generator Fuel Oil System (Unit 1), Valve Lineup Instruction; Revision 3
- VLI-R46/E22B; Division 3 Diesel Generator Jacket Water System, Valve Lineup Instruction; Revision 6
- VLI-P45; Emergency Service Water System Valve Lineup Instruction; Revision 12
- Drawing 302-0791-00000; Emergency Service Water System; Revision VV
- Drawing 302-0792-00000; Emergency Service Water System; Revision NN
- VLI-P42; Emergency Closed Cooling System Valve Lineup Instruction; Revision 16
- VLI-C41; Standby Liquid Control System Valve Lineup Instruction; Revision 8

### 1R05 Fire Protection

- FPI-1AB; Pre-Fire Plan Instruction – Auxiliary Building Unit 1; Revision 3
- FPI-0CC; Pre-Fire Plan Instruction – Control Complex; Revision 9

- FPI-1DG; Pre-Fire Plan Instruction – Diesel Generator Building; Revision 6
- Drawing 221-0024-00000; Plant Security and Fire Conduit Layout; Revision J
- FPI-0IB; Pre-Fire Plan Instruction – Intermediate Building; Revision 7
- FPI-0FH; Pre-Fire Plan Instruction – Fuel Handling Building; Revision 4

#### 1R06 Flooding

- PRA-PY1-FP-R0b; Perry Nuclear Power Plant PRA Model IF-001 – Internal Flooding Notebook; dated December 20, 2012
- PRA-PY1-FP-R0b; Perry Nuclear Power Plant PRA Model QU-001 – Quantification Notebook; dated December 20, 2012

#### 1R11 Licensed Operator Requalification Program

- NOP-OP-1002; Conduct of Operations; Revision 7
- IOI-1; Cold Startup; Revision 37
- IOI-3; Power Changes; Revision 50
- Reactivity Plan – Perry Nuclear Power Plant; Evolution Specific – Beginning of Cycle 15 – Startup 119 – 0 to 37% RTP; Revision 0; dated May 4, 2013
- Simulator Exercise Guide OTLC-3058201302\_PY-SGC1; Cycle 2 2013 Evaluated Scenario C1; Revision 0; dated May 24, 2013

#### 1R12 Maintenance Effectiveness

- CR 2012-13556, Reactor Mgmt Committee – Potential Low Level Trend with LPRM Failure Rates; dated September 4, 2012
- ALARA Plan 13-6013, 1R14 Undervessel Activities, Revision 2
- VSDS Survey Maps for Drywell Elevations 576', 583', and 599'
- IMI-E02-0027, Power Range Detector Assembly Installation and Removal; Revision 14
- NOP-OP-4502, Control of Radioactive Material; Revision 2
- NOP-WM-1001, Order Planning Process; Revision 19
- WO 200464433, Replace LPRM Detectors During RFO14
- CR 2013-09463; PTI-N41P0004 (RO) Main Generator Excitation Control Adjustment (Generator Energized) Not Performed in 1R14; dated June 19, 2013
- CR 2013-07525; Main Turbine Trip on Startup; dated May 13, 2013
- Operating Decision Making Issue Summary Sheet to Continue Low Power Operations While Troubleshooting Main Generator Regulator for CR 2013-07525; dated May 16, 2013
- CR 2013-07757; Turbine Problem Solving Team Efficiency Improvements; dated May 17, 2013
- CR 2013-08973; Generator System (N41) Exceeded Maintenance Rule Performance Criteria; dated June 10, 2013
- Perry Nuclear Power Plant Health Report 2012-04, Section on System N41; dated February 7, 2013

#### 1R13 Maintenance Risk Assessments and Emergent Work Control

- Assessment PA-PY-2013-0021-091, Risk Assessment of LPRM Cask Movement
- NOP-OP-1007, Risk Management; Revision 16
- NOP-OP-4010, Determination of Radiological Risk; Revision 5
- NOP-OP-4010, Determination of Radiological Risk; Revision 6

- Prompt Functionality Assessment for Alternate Decay Heat Removal System; dated April 25, 2013
- NUMARC 91-06; Guidelines for Industry Actions to Assess Shutdown Management; dated December 1991
- 1R14 Shutdown Defense-in-Depth Report; Revision 5; dated May 7, 2013
- Daily Defense-in-Depth Analysis for April 29, 2013
- Daily Defense-in-Depth Analysis for May 6, 2013
- Calculation G40-009; Determination if ADHR HX Can Support Decay Heat Removal During 1R14; dated April 25, 2013
- Technical Specification Bases Change Request No. 06-004; dated July 30, 2008
- PAP-1925; Shutdown Defense in Depth Assessment and Management; Revision 14
- ODMI from CR 2013-07240; Pressure Seal External Leakage on 1B21F0019, Which Is Observable When the Valve Is Open; dated May 8, 2013
- eSOMS Narrative Logs; dated May 8, 2013
- eSOMS Narrative Logs; dated May 14, 2013
- Prompt Functionality Assessment from CR 2013-07511 for Condensate Transfer System Piping and Valves; Revision 0; dated May 14, 2013
- NOBP-OP-0007; Conduct of Infrequently Performed Tests or Evolutions; Revision 5
- IPTE; 1R14 Start-up (119) and Low-Pressure Turbine Testing; dated May 10, 2013
- OTLC-JITTSTARTUP\_PY-SG2 Attachment 1; pages 1-7; updated
- CR 2013-07525; Main Turbine Trip on Startup; dated May 13, 2013
- CR 2013-07645; Main Turbine Manually Tripped with Volts to Hertz in Alarm; 3<sup>rd</sup> Trip of Turbine; dated May 15, 2013
- CR 2013-07665; Field Wiring Did Not Match the Drawing 209-0158-00003 for the "AT" Junction Box in the Generator Alterex Cabinet; dated May 16, 2013
- CR 2013-07642; Crew Performance Critique – Turbine Trip During Startup; dated May 15, 2013

#### 1R15 Operability Determinations and Functionality Assessments

- CR 2013-06220; Acceptance Criteria for ADHR Flow in TXI-0377 Does Not Match Design Basis Calculation Value and TXI Test Flows Obtained Did Not Meet the Required Minimum Flow; dated April 19, 2013
- Prompt Functionality Assessment for Alternate Decay Heat Removal System; dated April 25, 2013
- CR 2013-06238; SRM 'A' Spiking, Requiring Suspension of Core Alterations; dated April 20, 2013
- WO 200559993; SRM 'A' Counts Spiking; dated April 20, 2013
- CR 2013-06780; IRM 'G' Spiking; dated April 30, 2013
- Notification 600831516; IRM 'G' Inop-Spiking / CR 2013-06780; dated April 30, 2013
- CR 2013-06218; ADHR TXI-0378 Section 5.1.2 Results/Issues; dated April 19, 2013
- EPI-A1; Emergency Action Levels; Revision 25
- Calculation G40-005; Thermal Analysis of Alternate Decay Heat Removal (ADHR) System Capabilities; Revision 1
- CR 2013-05725; ADHR Pump Didn't Start During TXI-0377; dated April 13, 2013
- NLOC-201301\_PY-ADHR; Initial Operator Training Slides for Alternate Decay Heat Removal
- OTLC-3058200901A\_PY-ADHR; Operator Training Slides for Alternate Decay Heat Removal G40 Flowpath Overview
- OTLC-JITTADHRPREOP\_PY-SG1; Just In Time Training Scenario for Use of Alternate Decay Heat Removal to Support Shutdown Defense-in-Depth, Modes 4 and 5 of 1R14
- Drawing 302-0672-00000; Reactor Water Cleanup System; Revision KK

- Drawing 302-0102-00000; Condensate Transfer and Storage System; Revision NN
- Prompt Operability Determination from CR 2013-07483 for Containment Penetration P108, the Condensate Transfer System Containment Inboard Isolation Check Valve (1P11F0545), and the Condensate Transfer System Containment Outboard Isolation Valve (1P11F0060); Revision 0; dated May 14, 2013
- Prompt Functionality Assessment from CR 2013-07511 for Condensate Transfer System Piping and Valves; Revision 0; dated May 14, 2013

#### 1R18 Plant Modifications

- Engineering Change Package 05-4712-000; Alternate Decay Heat Removal (ADHR); Revision 1
- TXI-0377; Alternate Decay Heat Removal System (G40) Pre-Operational Testing; Revision 6; Completed April 23, 2013
- SOI-G41 (FPCC) Section 1.0; Fuel Pool Cooling and Cleanup System; Revision 34
- CR 2013-06191; ADHR HX SW Outlet Radiation Monitor Hi/Low Flow Annunciator is a Control Room Distraction; dated April 19, 2013
- CR 2013-06240; High Differential Pressure Across the ADHR Heat Exchanger; dated April 20, 2013
- CR 2013-06172; Discrepancy Exists in ADHR Calculations Relative to Heat Load Applied to TBCC Heat Exchangers During ADHR Operation; dated April 19, 2013
- CR 2013-06220; Acceptance Criteria for ADHR Flow in TXI-0377 Does Not Match Design Basis Calculation Value and TXI Flows Obtained Did Not Meet the Required Minimum Flow; dated April 19, 2013
- SOI-G40 (ADHR); Alternate Decay Heat Removal; Revision 0
- ARI-H13-P906-0001; Common Process and Area Radiation Monitoring; Revision 5
- CR 2013-05527; ADHR Temperature Control Valve Flow Is Reversed; dated April 10, 2013
- CR 2013-05779; Screws Fell Out of Handwheel (ADHR Supply Valve); dated April 14, 2013
- CR 2013-05787; ADHR Service Water TXI-378 High dP Alarm Locked-in; dated April 14, 2013
- CR 2013-05783; Two Potential Challenges to ADHR System Design Identified; dated April 14, 2013

#### 1R19 Post-Maintenance Testing

- CR 2013-05714; Jacket Water Leak Div 2 DH Left Bank Turbo; dated April 12, 2013
- WO 200552705; Division II Emergency Diesel Generator, Jacket Water Leakage, dated April 17, 2013
- WO 200455578; Emergency Closed Cooling System 'A' Pump; dated April 13, 2013
- SVI-P42-T2001A; Emergency Closed Cooling System 'A' Pump and Valve Operability Test; dated April 13, 2013
- CR 2013-05387; Bearing Temperatures Increased for Installation; dated April 8, 2013
- FTI-F-0039; Pump Performance Data Collection; Revision 4
- WO 200454397; ESW Pump 'A' and Valve Operability Test; dated April 17, 2013
- WO 200552705; Division II Emergency Diesel Generator; dated May 1, 2013
- SVI-P45-T2001; ESW Pump 'A' and Valve Operability Test; Revision 24; dated April 16, 2013
- WO 200401187; SRM 'A' Detector and Drive Mechanism Under Vessel Cable 1C51R301A Replacement; dated April 22, 2013
- SOI-C51(SRM); Source Range Monitoring System; Revision 6
- WO 200560082; 1P45F0068A Valve Disc Appears to be Disconnected / CR 2013-06034; dated April 20, 2013

- MOV Testing – Field Data Sheet Valve: 1P45F0068A, Work Order 200560082; dated April 20, 2013
- SVI-P45-T2001; ESW Pump 'A' and Valve Operability Test, Revision 24; dated April 20, 2013
- WO 200453870; RHR A Pump and Valve Operability Post-Maintenance Test for RFO-14; dated April 13, 2013
- WO 200530867; Diesel Generator Start and Load Division 1 Post-Maintenance Test for RFO-14; dated April 12, 2013
- WO 200364116; Division 1 Remove/Inspect Pistons and Rods; dated April 11, 2013
- WO 200494180; DG Break-In Runs/Hot Web Deflections/Firing Pressures; dated April 15, 2013
- WO 200563495; Condensate Transfer and Storage Containment Supply Header Inboard Check Valve; dated May 15, 2013
- SVI-P11-T9108; Type C Local Leak Rate Test of 1P11 Penetration P108; dated May 15, 2013

#### 1R20 Refueling and Other Outage Activities

- CR 2013-04945, Near Miss Event Occurred Due to Heater Bay Air Box Coming Loose; dated April 1, 2013
- Quick Human Error Response Checklist for CR 2013-04945
- EGM 11-003; Enforcement Guidance Memorandum 11-003, Revision 1, Dispositioning BWR Noncompliance with Technical Specification Containment Requirements During Operations with a Potential for Draining the Reactor Vessel; Revision 1
- CR 2013-09261; Perry Drywell Unidentified Leakage Inspection Results 6/15/2013; dated June 15, 2013
- CR 2013-09255; Perry Drywell Unidentified Leakage Inspection Results 6/15/2013; dated June 15, 2013
- CR 2013-09258; SJAЕ 12-inch Suction Valve 1N62-F140B Flange in Leakage; dated June 15, 2013
- CR 2013-09244; Data Faults on Channel One Associated with Control Rod 30-15; dated June 15, 2013
- CR 2013-09274; RGDS Analyzer Shutdown During Plant Shutdown; dated June 16, 2013
- CR 2013-09346; PA-PY-13-02 – Protected Train Postings for 2013 Drywell Leakage Forced Outage Have Not Been Walked Down by an Operations Supervisor; dated June 17, 2013
- CR 2013-09254; Drywell Inner Door Stuck Shut; dated June 15, 2013
- CR 2013-09261; Perry Drywell Unidentified Leakage Inspection Results 6/15/2013; dated June 15, 2013
- CR 2013-09284; Drywell Floor Drains on the 583' Level Will Not Drain; dated June 16, 2013
- CR 2013-09288; Overflow of Drywell Purge Funnel; dated June 16, 2013
- CR 2013-09228; Seal Vent Line Is Thin Walled; dated June 14, 2013
- CR 2013-09275; Leak Identified from CRDM 30-15; dated June 15, 2013
- CR 2013-09505; Tip Tubing Bent Undervessel; dated June 19, 2013
- CR 2013-09534; IRM A Reading Drifted from One Reading to the Next and Is Reading Higher than the Other IRMs; dated June 19, 2013
- CR 2013-09548; Snubber 1B21H0453 Failed Visual Inspection Performed per NQI-1042; dated June 20, 2013
- CR 2013-09306; Source Range Monitor C Drive Tube Bent; dated June 17, 2013
- CR 2013-09262; Three MSR (Main Steam Reheater) Drain Tank Manway Doors Identified as Leaking During Walkdown; dated June 15, 2013
- CR 2013-09353; Damage Found on Flange of CRDM 30-15; dated June 17, 2013
- CR 2013-09341; APRM F Upscale Thermal Trip Out of Allowable Value; dated June 17, 2013
- CR 2013-09279; Digital Feedwater Alarm Locked In; dated June 16, 2013

- CR 2013-09280; Shutdown Range Reference Leg Temperature Is Tracking Approximately 300 Degrees Fahrenheit Higher than Other Reference Legs; dated June 16, 2013

#### 1R22 Surveillance Testing

- SVI-P45-T2001; ESW Pump 'A' and Valve Operability Test; Revision 24; dated April 17, 2013
- SVI-E31-T0376; Drywell Floor Drain Sump and Equipment Drain Sump Flow Monitoring System Channel Calibration for 1E32-N093 and 1E31-N094; Revision 9; dated April 17, 2013
- SVI-E31-T0375; Drywell Floor Drain Sump Flow Monitoring System Channel Functional for 1E31-K606; Revision 9; dated May 4, 2013
- SVI-E51-T1272; RCIC System Low-Pressure Operability Test; Revision 17; dated May 12, 2013
- WO 200497776; 1R14 Contingency to Work Seat Leakage; dated May 11, 2013
- Pneumatic Leak Test Data Sheet (Leak Rate Monitor / FENOC Leak Rate Monitor) for WO 200497776; 1B21F0019 Main Steam Line Drain and Main Steam Isolation Valve Bypass Outboard Isolation Valve; dated May 11, 2013
- SVI-C71-T0039; MSIV Closure Channel Functional; Revision 7; dated June 10, 2013

#### 2RS1 Radiological Hazard Assessment and Exposure Controls

- CR 2013-02993; Whole Body Counter Issues; dated February 27, 2013.
- CR 2013-03880; Off Gas Leak During Performance of Helium Leak Testing; dated March 16, 2013
- HPI-C0014; Radlock Key Issue; Revision 01
- NOBP-OP-4008; Response to Radiological Events; Revision 04
- NOP-OP-4002; Conduct of Radiation Protection; Revision 05
- NOP-OP-4101; Access Controls for Radiologically Controlled Areas; Revision 09
- NOP-OP-4102; Radiological Postings, Labeling, Markings; Revision 09
- NOP-OP-4104; Job Coverage; Revision 04
- NOP-OP-4107; Radiation Work Permit; Revision 11
- Perry Nuclear Power Plant Fleet Oversight Trimester Report - Third Trimester 2012; dated January 21, 2013
- PYBP-RPS-0016; Radiation Protection Response to Changing Plant Conditions; Revision 12
- RWP 2013-6018; Reactor Disassembly
- RWP 2013-6019; Refueling
- RWP 2013-6021; Reactor Reassembly

#### 2RS2 Occupational ALARA Planning and Controls

- HIST-20 RWP Summary Report for All Currently Active RWPs; dated March 18, 2013
- NOBP-OP-3501; Source Term Reduction Committee; Revision 02
- NOBP-OP-4111; 5 Year Exposure Reduction Plan; Revision 01
- NOP-OP-4005; ALARA Program; Revision 03
- Perry Chemistry RF14 Shutdown Strategy Narrative; dated January 22, 2013
- Perry Nuclear Power Station; RFO-13 Outage ALARA Report; undated
- Radiological Protection Action Plan and 5 Year Exposure Reduction Plan; dated September 21, 2012
- RFO-14 Alpha Monitoring Plan; dated March 19, 2013
- RFO-14 Dose Graphs; Various dates 2013
- Source Term Reduction Meeting Minutes; Source Term Reduction 1R14 Valve Status; Selected dates 2012

#### 4OA1 Performance Indicator Verification

- NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 6
- NOBP-LP-4012-08 Rev 02; Safety System Functional Failures Data Sheets; April 2012 through March 2013
- NOBP-LP-4012-04 Rev 03; Mitigating Systems Performance Index (MSPI) Unavailability Index (UAI) and Unreliability Index (URI) for Emergency AC Systems; April 2012 through March 2013
- NOBP-LP-4012-05 Rev 02; Mitigating Systems Performance Index (MSPI) Unavailability Index (UAI) and Unreliability Index (URI) for High Pressure Injection System (HPICS) & High Pressure Emergency Diesel Generator (EDG); April 2012 through March 2013
- Mitigating Systems Performance Index Basis Document, Revision 7

#### 4OA2 Problem Identification and Resolution

- CR 2012-10238; Part 21 Event Number 48042: Reliability Degradation of Resistors in Trip Units and Readout Assemblies; dated June 25, 2012
- CR 2013-09441; NRC ID: POD 2012-10238 for Rosemont Trip Units Have Not Been Scheduled for Replacement and POD Review During 1R14 Lacked Sufficient Basis for Extension Into Cycle 15; dated June 18, 2013
- Action Plan to Rework/Replace Rosemont Trip Units in 10CFR21 Population; dated July 31, 2012
- Prompt Operability Determination from CR 2012-10238 for Part 21 Event Number 48042: Reliability Degradation of Resistors in Trip Units and Readout Assemblies; Revision 0; dated June 28, 2012
- Restart Readiness Review Indicators; Operations; dated May 10, 2013
- Rosemont Drift Spreadsheet for Rosemont Trip Units; current as of June 19, 2013
- CR 2013-09821; NRC ID: Rosemont Trip Unit Drift Trending Incomplete; dated June 26, 2013
- CR 2012-01657; Sealtight Found to be Damaged for 1E51F0068; dated February 1, 2012
- CR 2012-02399; RCIC Pump Suction Pressure High Alarm; dated March 15, 2012

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

- LER 05-440/2013-002-00; Condition Prohibited by Technical Specification Due to Scram Discharge Volume Level Switch Isolation; dated May 23, 2013

#### 4OA7 Licensee-Identified Violations

- CR 2013-09402; Inappropriate Credit Given for Fire Brigade Drills; dated June 18, 2013
- CR 2013-09376; Fire Drill Critique Lacks Performance Criteria; dated June 18, 2013
- PAP-1910; Fire Protection Program; Revision 29
- FPI-A-B02; Fire Brigade Drills; Revision 7

## LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Document Access Management System
ADHR	Alternate Decay Heat Removal
ALARA	As-Low-As-Is-Reasonably-Achievable
CA	Corrective Action
CAP	Corrective Action Program
CR	Condition Report
CFR	<i>Code of Federal Regulations</i>
EDG	Emergency Diesel Generator
ESW	Emergency Service Water
FPI	Fire Protection Instruction
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSP	Outage Safety Plan
PAP	Perry Administrative Procedure
PI	Performance Indicator
POD	Prompt Operability Determination
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RFO	Refueling Outage
RHR	Residual Heat Removal
SDP	Significance Determination Process
SRM	Source Range Monitor
TS	Technical Specification
TSO	Transmission System Operator
USAR	Updated Safety Analysis Report
WO	Work Order



V. Kaminskas

-2-

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Sincerely,

*/RA/*

Michael Kunowski, Chief  
Branch 5  
Division of Reactor Projects

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