



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
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November 14, 2016

Mr. David Hamilton  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant  
P. O. Box 97, 10 Center Road, A-PY-290  
Perry, OH 44081-0097

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INTEGRATED INSPECTION REPORT  
05000440/2016003 AND 07200069/2016001

Dear Mr. Hamilton:

On September 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Perry Nuclear Power Plant. On October 5, 2016, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The enclosed report represents the results of this inspection.

No findings were identified during this inspection.

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, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records System (PARS) component of the 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/

Billy Dickson, Chief  
Branch 5  
Division of Reactor Projects

Docket No. 50-440; 72-069  
License No. NPF-58

Enclosure:  
IR 05000440/2016003 and 07200069/2016001

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440; 72-069  
License No: NPF-58

Report No: 05000440/2016003 and 07200069/2016001

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant

Location: North Perry, Ohio

Dates: July 1 through September 30, 2016

Inspectors: E. Knutson, Senior Resident Inspector  
M. Marshfield, Senior Resident Inspector  
J. Nance, Resident Inspector  
S. Bell, Health Physicist  
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Approved by: B. Dickson, Chief  
Branch 5  
Division of Reactor Projects

Enclosure

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## **SUMMARY**

Inspection Report (IR) 05000440/2016003, 07/01/2016 – 09/30/2016, Perry Nuclear Power Plant; Routine Integrated Baseline IR.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. No findings were identified. 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," dated February 2014.

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

No findings were identified.

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

None.

## **REPORT DETAILS**

### **Summary of Plant Status**

The plant began the inspection period at full power. Throughout the quarter the plant had to reduce power periodically to maintain condensate demineralizer outlet temperatures and/or high pressure condenser circulating water outlet temperatures at or below their respective upper limits due to high outside temperatures and/or high outside humidity. These power reductions varied between 1 and 14 percent of rated thermal power and lasted from a few hours to over 4 days, in one instance. On September 23, 2016, at 9:00 p.m. the operators reduced power to 62 percent power to make a routine rod pattern adjustment and returned the plant to 100 percent power on September 24, 2016, at 5:48 p.m. The next day, September 25, 2016, at 10:41 a.m., reactor feedwater booster pump (RFBP) 'A' tripped due to a fault in the motor windings. RFBP 'B' auto started on the trip of RFBP 'A' as designed. RFBP 'B' was designated as emergency use only, so the operators lowered power to 62 percent as required by the Operational Decision Making Instruction in place at that time and then took RFBP 'B' out of service. After further evaluation the licensee placed RFBP 'B' back in service and began raising reactor power to 80 percent power on September 26, 2016, while in the process of replacing the RFBP 'A' motor. Power remained at 80 percent from 12:39 p.m. on September 27, until 9:20 a.m. on September 29, when operators again began reducing power to 62 percent due to RFBP 'B' pump seal leakage continuing to degrade. Power remained at 62 percent power. Following replacement and post maintenance testing (PMT) of the RFBP 'A' motor, operators returned reactor power to 100 percent on September 30, 2016, at 7:21 a.m. and remained at full power through the end of the quarter.

### **1. REACTOR SAFETY**

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

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

##### **.1 Readiness For Impending Adverse Weather Condition—Heavy Rainfall/External Flooding Conditions**

##### **a. Inspection Scope**

The inspectors evaluated the design, material condition, and procedures for coping with the expected heavy rainfall conditions based on predicted rainfall and rises in local river and lake levels. The evaluation included a review to check for deviations from the descriptions provided in the Updated Safety Analysis Report (USAR) for features intended to mitigate the potential for flooding. As part of this evaluation, the inspectors checked for obstructions that could prevent draining, checked that the roofs did not contain obvious loose items that could clog drains in the event of heavy precipitation, and determined that barriers required to mitigate flooding were in place and operable. Additionally, the inspectors performed a walkdown of the protected area to identify any modification to the site which would inhibit site drainage during the predicted heavy rainfall conditions or allow water ingress past a barrier. The inspectors also walked down underground bunkers/manholes subject to flooding that contained multiple train or multiple function risk-significant cables. The inspectors also reviewed the abnormal operating procedure (AOP) and compensatory measures for mitigating the expected heavy rainfall and potential on-site flooding conditions to ensure they could be implemented as written. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- division 2 emergency diesel generator (EDG);
- residual heat removal 'B';
- 125 VDC unit 1, division 2; and
- high pressure core spray and division 3 EDG.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, UFSAR, Technical Specification (TS) requirements, outstanding work orders (WOs), condition reports (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 corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On July 18, 2016, the inspectors performed a complete system alignment inspection of the emergency service water (ESW) 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)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- fire zones 0EW–1a, ESW pump house and 0EW–1b, diesel fire pump room;
- fire zones 1CC–3b, unit 1 – div. 3 switchgear 620' elevation, 1CC–3d, unit 1 – remote shutdown panel room 620' elevation, and 1DG–1B, unit 1 – division 3 DG building 620' and 646' elevations;
- fire zones 0CC–2A, 2B, and 2C, control complex elevation 599' east, northwest, and southwest;
- fire zone 0IB–1, intermediate building 574' elevation and 585' elevation pipe chase; and
- fire zone 1AB–3B, auxiliary 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.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On September 20, 2016, the inspectors observed a fire brigade activation for a simulated smoke alarm in the unit 1, division 2 cable spreading room on the control complex, elevation 638'. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies, openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were:

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

Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the USAR, engineering calculations, and AOPs 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 auxiliary building lower level and high pressure core spray and reactor core isolation cooling 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. 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.

1R07 Annual Heat Sink Performance (71111.07)

.1 Heat Sink Performance

a. Inspection Scope

The inspectors reviewed the licensee's testing of residual heat removal 'A' and 'C' heat exchangers to verify that potential deficiencies did not mask the licensee's ability to detect degraded performance, to identify any common cause issues that had the potential to increase risk, and to ensure that the licensee was adequately addressing problems that could result in initiating events that would cause an increase in risk. The inspectors reviewed the licensee's observations as compared against acceptance criteria, the correlation of scheduled testing and the frequency of testing, and the impact of instrument inaccuracies on test results. Inspectors also verified that test acceptance criteria considered differences between test conditions, design conditions, and testing conditions. Documents reviewed for this inspection are listed in the Attachment to this document.

This annual heat sink performance inspection constituted one sample as defined in IP 71111.07–05.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11)

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

a. Inspection Scope

On July 25, 2016, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

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

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

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 3, 2016, the inspectors observed control room personnel conducting testing of safety-related systems and maneuvering plant power due to xenon transients caused by reducing power and then increasing power earlier in the day due to reaching and then regaining margin to circulating water outlet temperature limits caused by changing environmental conditions. These were activities that required heightened awareness or were 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)

.1 Routine Quarterly Evaluations

a. Inspection Scope

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

- nuclear boiler system.

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

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

The inspectors performed a quality review for parts installed in safety-significant systems that were purchased as commercial grade parts but were dedicated prior to installation in a quality grade application, as discussed in IP 71111.12, Section 02.02.

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 one quarterly maintenance effectiveness samples and one quality control sample as defined in IP 71111.12–05.

b. Findings

No findings were identified.

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

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

#### a. Inspection Scope

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

- fuel handling building fuel handling bridge south drive motor shaft shear;
- fuel pool cooling and cleanup header isolation for installation of hydrolasing taps;
- emergency closed cooling pump 'A' inoperable for maintenance;
- diesel driven fire pump maintenance rescheduled due to risk; and
- leak detection system screen failure and licensee repair response.

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

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

#### b. Findings

No findings were identified.

## 1R15 Operability Determinations and Functional Assessments (71111.15)

### .1 Operability Evaluations

#### a. Inspection Scope

The inspectors reviewed the following issues:

- reactor core isolation cooling steam flow high trip units 1E31-N683A/B drifting high;
- rod control and indication system 28 volt power supply cooling fan failure;
- five division 2 hydrogen ignitors failed surveillance testing; and
- division 3 DG starting air leak following flex piping replacement.

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

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- emergency closed cooling 'A' pump motor breaker replacement post-maintenance test;
- high pressure core spray DG starting air right receiver bank outlet piping air leak post-maintenance test;
- control complex chill water chiller repair PMT;
- containment vessel chill water chiller 'C' repair PMT;
- residual heat removal heat exchanger dump valve repair PMT; and
- reactor feedwater booster pump 'A' motor replacement PMT.

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

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

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

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

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

- SVI-B21-T0190L; ECCS/HPCS Drywell Pressure High Channel Calibration For 1B21-N067L (routine);
- SVI-E12-T2002; RHR 'B' Pump & Valve Operability Test (IST);
- SVI-C61-T1200; Remote Shutdown Control Test – RCIC & RHR (routine);
- SVI-M14-T9313; Type 'C' Local Leak Rate Test of 1M14 Penetration V313 (ISO Valve); and
- SVI-E31-T0074-D; MSL High Flow Channel 'D' Functional For 1E31-N686D and 1E31-N688D (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, one in-service test sample, and one containment isolation valve sample as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on August 17, 2016, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Simulator Control Room, The Technical Support Center, and the Emergency Offsite Facility 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 emergency preparedness drill inspection constituted one sample as defined in IP 71114.06–06.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

#### .1 Radiological Hazard Assessment

##### a. Inspection Scope

The inspectors assessed the licensee's current and historic isotopic mix, including alpha emitters and other hard-to-detect radionuclides. The inspectors evaluated whether survey protocols were reasonable to identify the magnitude and extent of the radiological hazards.

The inspectors determined if there have been changes to plant operations since the last inspection that may have resulted in a significant new radiological hazard for onsite individuals. The inspectors evaluated whether the licensee assessed the potential impact of these changes and 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 as needed to verify conditions were consistent with documented radiation surveys.

The inspectors assessed the adequacy of pre-work surveys for select radiologically risk-significant work activities.

The inspectors evaluated the Radiological Survey Program to determine if hazards were properly identified. The inspectors discussed procedures, equipment, and performance of surveys with radiation protection staff and assessed whether technicians were knowledgeable about when and how to survey areas for various types of radiological hazards.

The inspectors reviewed work in potential airborne areas to assess whether air samples were being taken appropriately for their intended purpose and reviewed various survey records to assess whether the samples were collected and analyzed appropriately. The inspectors also reviewed the licensee's program for monitoring contamination which has the potential to become airborne.

These inspection activities constituted one sample as defined in Inspection Procedure (IP) 71124.01–05.

##### b. Findings

No findings were identified.



## .2 Instructions to Workers

### a. Inspection Scope

The inspectors reviewed select radiation work permits (RWPs) used to access high radiation areas and evaluated the specified work control instructions or control barriers. The inspectors also assessed whether workers were made aware of the work instructions and area dose rates.

The inspectors reviewed electronic alarming dosimeter dose and dose rate alarm setpoint methodology. For selected electronic alarming dosimeter occurrences, the inspectors assessed the worker's response to the alarm, the licensee's evaluation of the alarm, and any follow-up investigations.

The inspectors reviewed the licensee's methods for informing workers of changes in plant operations or radiological conditions that could significantly impact their occupational dose.

The inspectors reviewed the labeling of select containers of licensed radioactive material that could cause unplanned or inadvertent exposure to workers.

These inspection activities constituted one sample as defined in IP 71124.01–05.

### b. Findings

No findings were identified.

## .3 Contamination and Radioactive Material Control

### a. Inspection Scope

The inspectors observed locations where the licensee monitors material leaving the radiologically controlled area and assessed the methods used for control, survey, and release of material from these areas. As available, the inspectors observed health physics personnel surveying and releasing material for unrestricted use.

The inspectors observed workers leaving the radiologically controlled area and assessed their use of tool and personal contamination monitors and reviewed the licensee's criteria for use of the monitors.

The inspectors assessed whether instrumentation was used at its typical sensitivity levels based on appropriate counting parameters or whether the licensee had established a de facto release limit.

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 also evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with Title 10 of the *Code of Federal Regulations*, Part 20.2207.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.4 Radiological Hazards Control and Work Coverage

a. Inspection Scope

The inspectors evaluated ambient radiological conditions during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, RWPs, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage, and contamination controls. The inspectors evaluated the licensee's use of electronic alarming 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 a U.S. Nuclear Regulatory Commission approved method of determining effective dose equivalent.

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

For select airborne area RWPs, the inspectors reviewed airborne radioactivity controls and monitoring, the potential for significant airborne levels, containment barrier integrity, and temporary filtered ventilation system operation.

The inspectors examined the licensee's physical and programmatic controls for highly activated or contaminated materials stored within pools and assessed whether appropriate controls were in place to preclude inadvertent removal of these materials from the pool.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.5 High Radiation Area and Very High Radiation Area Controls

a. Inspection Scope

The inspectors observed posting and physical controls for high radiation areas and very high radiation areas to assess adequacy.

The inspectors conducted a selective inspection of posting and physical controls for high radiation areas and very high radiation areas to assess conformance with performance indicators (PIs).

The inspectors reviewed procedural changes to assess the adequacy of access controls for high and very high radiation areas to determine whether procedural changes substantially reduced the effectiveness and level of worker protection.

The inspectors assessed the controls for the high radiation areas greater than 1 rem/hour and areas with the potential to become high radiation areas greater than 1 rem/hour for compliance with TSs and procedures.

The inspectors assessed the controls for very high radiation areas and areas with the potential to become very high radiation areas. The inspectors also assessed whether individuals were unable to gain unauthorized access to these areas.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.6 Radiation Worker Performance and Radiation Protection Technician Proficiency

a. Inspection Scope

The inspectors observed radiation worker performance and assessed their performance with respect to radiation protection work requirements, the level of radiological hazards present, and radiation work permit controls.

The inspectors assessed worker awareness of electronic alarming dosimeter set points, stay times, or permissible dose for radiologically significant work as well as expected response to alarms.

The inspectors observed radiation protection technician performance and assessed whether the technicians were aware of the radiological conditions and radiation work permit controls and whether their performance was consistent with training and qualifications for the given radiological hazards.

The inspectors observed radiation protection technician performance of radiation surveys and assessed the appropriateness of the instruments being used, including calibration and source checks.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified.

.7 Problem Identification and Resolution

a. Inspection Scope

The inspectors assessed whether problems associated with radiological hazard assessment and exposure controls were being identified at an appropriate threshold and were properly addressed for resolution. For select problems, the inspectors assessed the appropriateness of the corrective actions. The inspectors also assessed the licensee's program for reviewing and incorporating operating experience.

The inspectors reviewed select problems related to human performance errors and assessed whether there was a similar cause and whether corrective actions taken resolve the problems.

The inspectors reviewed select problems related to radiation protection technician error and assessed whether there was a similar cause and whether corrective actions taken resolve the problems.

These inspection activities constituted one sample as defined in IP 71124.01–05.

b. Findings

No findings were identified

3. **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 Mitigating Systems Performance Index—Heat Removal Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Heat Removal System PI for the third quarter 2015 through the second quarter 2016. 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 7, dated August 31, 2013, 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 systems (MS08) sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—Residual Heat Removal Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Residual Heat Removal System PI for the third quarter 2015 through the second quarter 2016. To determine the

accuracy of the PI data reported, definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, 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 systems (MS09) sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index—Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Cooling Water Systems PI for the third quarter 2015 through the second quarter 2016. To determine the accuracy of the PI data reported, definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, 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 systems (MS10) sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

a. Inspection Scope

As 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, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Some minor issues were entered into the licensee's CAP as a result of the inspectors' observations; however, they are not discussed in 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.

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 CR 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 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of January 1, 2016, through June 30, 2016, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the 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 review inspection sample as defined in IP 71152.

b. Findings

No findings were identified.

.4 Annual Follow-up of Selected Issues: Follow-up Actions for Preconditioning Events

a. Inspection Scope

In October 2014, the inspectors identified a finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's unevaluated preconditioning of ESW pump discharge motor-operated valves and check valves prior to as-found inservice testing (NCV 05000440/2016005-01). The inspectors documented a number of preconditioning examples that an evaluation was not performed prior to testing. As a result of the finding, the licensee performed an evaluation related to the specific examples that the inspectors identified and concluded that it was acceptable preconditioning. The licensee also reinforced the procedure requirement that a CR should be written and the condition evaluated if it was suspected that an activity may involve preconditioning. Unlike some other nuclear power, Perry Nuclear Power Plant does not have a comprehensive work management tool that contains the necessary logic tie for surveillance and maintenance activities to prevent preconditioning. Essentially, the licensee would evaluate preconditioning issue on a case-by-case basis.

Throughout 2015, the inspectors continued to question licensee about preconditioning cases. In November 2015, the licensee performed an apparent cause evaluation for a Division 2 DG preconditioning concern brought up by the inspectors. As a result of the apparent cause evaluation, the licensee established a cross-disciplinary preconditioning monitoring team composed of representatives from work management, operations, engineering and maintenance to create an action plan to address preconditioning. In the interim, the Inservice Testing program owner would evaluate each surveillance test and maintenance WO in the upcoming work week for preconditioning.

The licensee determined that the long-term corrective action was to create a pre-evaluated matrix that compares all surveillances against each other to prevent preconditioning. A matrix to compare surveillances against preventive maintenances would be completed at a later date. The work management software would be used to document the result of the evaluation and to provide work group supervisors guidance of what work activities sequence should be performed to avoid preconditioning. The first phase of the project, however, is not expected to be completed until the spring of 2017.

The inspectors determined that this project was a reasonable approach to address the preconditioning issue at Perry. However, the interim action to have the Inservice Testing program owner reviewing work activities is a stop-gap measure that represents a vulnerability in determining safety equipment operability. The licensee understood this vulnerability, and they are working expeditiously to complete the evaluation.

b. Findings

No findings of significance was identified.

.5 Annual Follow-up of Selected Issues: Reviewed Licensee Corrective Actions for Fire Barrier Deficiencies in DC Switchgear Rooms Which Had Been Previously Identified by a Non-Cited Violation

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized corrective action items for CR 2015–16959 that documented the licensee's response to one of two issues the inspectors identified as fire barrier deficiencies in the Unit 2 DC switchgear rooms in December 2015. The corrective actions identified in the CR were never completed, and the CR was closed. The licensee identified the need to bring the Unit 2 DC switchgear rooms into compliance with its licensed requirements as stated in its USAR, created CR 2016–08737 to document and track its repair of the fire barriers in both rooms and issued a WO to do so. Furthermore the licensee identified that it needed to continue with the compensatory measures put into place when the nonconforming condition was originally identified. The licensee completed the repairs to the Unit 2 DC switchgear rooms in September 2016, thus bringing both switchgear rooms into compliance with its licensing requirements and then secured the hourly fire watches that had been in place since discovery in December 2015. The inspectors reviewed the corrective actions taken and determined that the licensee's actions were acceptable.

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

b. Findings

No findings were identified.

.6 Annual Follow-up of Selected Issues: Reviewed Licensee Corrective Actions for Reactor Thermal Power Exceeding Licensed Thermal Limit for greater than the 30-minute average on four occasions from January 1, 2016, through August 29, 2016, contrary to established procedures

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized corrective action items for CR 2016–10645, that documented the licensee's repeated failure to operate the reactor in accordance with IOI–3, Power Changes, and procedural requirements. The inspectors had identified that on four occasions between January 1, 2016, and August 29, 2016, the licensee exceeded its licensed thermal limit for more than the 30-minute average. IOI–3 states, in part, that "for a sustained 15–minute average reactor power indication above 3758MWth, action shall be taken as required to restore the 15-minute average indication of core thermal power below 3758 MWth." The licensee took prompt action to ensure that all licensed operators understood the requirements for monitoring and maintaining licensed thermal power within the limits established in IOI–3, via face-to-face meetings and through an operations night order. The inspectors reviewed the corrective actions taken, observed operating crew actions and determined that the licensee actions were acceptable.

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



b. Findings

No findings were identified.

4OA5 Other Activities

.1 (Closed) Unresolved Item 05000440/2015007-01: ASME Code Pressure Tests of Reactor Vessel Flange Seal Leak-Off Line Were Not Performed

During review of the licensee's evaluation of generic communication Information Notice (IN) 2014-02, Failure To Properly Pressure Test Reactor Vessel Flange Leak-Off Lines, the inspectors identified an unresolved item (URI) concerning the licensee's failure to properly classify the reactor vessel flange seal leak-off line and perform the pressure tests in accordance with the applicable editions of the American Society of Mechanical Engineers (ASME) Code, Section XI. Specifically, the inspectors identified that the licensee had determined that the pressure testing requirements described in IN 2014-02, did not apply to the reactor vessel seal leak-off line because this line was not part of the reactor coolant pressure boundary, and therefore, the licensee continued to exclude this line from ASME pressure testing requirements for Code Class 2 components. The inspectors questioned the licensee's interpretation that the seal leak-off line was not reactor coolant pressure boundary, and the inspectors were concerned that excluding this line from pressure testing requirements could potentially impact the continued structural integrity of this leak-off line.

Based upon discussions with NRC staff, the inspectors determined that the reactor vessel flange seal leak-off line was not reactor coolant pressure boundary and, therefore, is not required to meet the ASME Code pressure testing requirements for Code Class 2 components.

This URI is closed.

.2 Operation of an Independent Spent Fuel Storage Installation at Operating Plants (60855.1)

a. Inspection Scope

The inspectors reviewed documents, interviewed plant personnel, and performed in-field observations to assess the licensee's performance as it relates to the operation of the independent spent fuel storage installation (ISFSI). The inspectors evaluated whether changes made to the programs and procedures since the last inspection were consistent with the license or Certificate of Compliance, and did not reduce the effectiveness of the program. The inspectors also reviewed whether changes were evaluated in accordance with the requirements stated in 10 CFR 72.212(b), 10 CFR 50.59, and 10 CFR 72.48. The inspectors independently assessed whether dry cask storage activities were performed in a safe manner and in compliance with approved procedures. The inspectors verified that the licensee has identified each fuel assembly placed in the ISFSI, has recorded the parameters and characteristics of each fuel assembly, and has maintained a record of each fuel assembly as a controlled document.

Specifically, the inspectors observed the licensee perform the following activities: remove the transfer cask from the spent fuel pool; remove water from the cask; decontaminate the cask; perform closure welding operations; conduct vacuum drying; perform helium backfill; and perform cask transfer operations. The inspectors also

reviewed the following documents: periodic radiological surveys; environmental monitoring reports that demonstrate radiological conditions were in accordance with the TSs and 10 CFR 72.104 limits; and records of fuel assemblies and physical inventories.

A review of corrective action reports written since the last ISFSI inspection indicated that the licensee was effectively identifying and correcting conditions adverse to quality.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 5, 2016, the inspectors presented the inspection results to Site Vice President, Mr. D. Hamilton, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the Radiation Safety Program review with Mr. D. Hamilton, Site Vice President, on July 15, 2016; and
- The results of the ISFSI inspection were presented on August 19, 2016, to Mr. D. Hamilton and other members of the licensee's management and staff. The licensee personnel acknowledged the information presented

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee and Contractor Employees

E. Harkness, Site Vice-President  
D. Hamilton, Site Operations Director  
T. Brown, Performance Improvement Director  
J. Ellis, Maintenance Director  
T. Kledzik, Regulatory Compliance Engineer  
S. Lee, Health Physicist  
J. Majewski, Dry Cask Project Manager  
M. Ogrinc, Dry Cask Pool to Pad Manager  
D. Reeves, Site Engineering Director  
B. Spiesman, Fleet Licensing

#### U.S. Nuclear Regulatory Commission

B. Dickson, Chief, Reactor Projects Branch 5

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Closed

05000440/2015007-01	URI	ASME Code Pressure Tests of Reactor Vessel Flange Seal Leak-Off Line Were Not Performed
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### Discussed

None

## 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

- PAP-0102; Interface with the Transmission System Owner; Revision 15
- ONI-ZZZ-1; Tornado or High Winds; Revision 26
- NOP-WM-4008; Material Handling; Revision 2
- NOP-MS-4001; Warehousing; Revision 10
- PAP-1924; Risk-Informed Safety Assessment and Risk Management; Revision 8

### 1R04 Equipment Alignment

- VLI-P45; Emergency Service Water System; Revision 19
- CR 2016-03020; Discharge Strainer Blowdown Valve Displays "Dual" Position; dated March 3, 2016
- CR 2016-08221; 1P45F0040A, Discharge Strainer Blowdown Valve Indicates Dual Position; dated June 27, 2016
- CR 2016-03022; ESW 'B' Discharge Strainer Blowdown Valve 1P45F040B has Dual Indication; dated March 3, 2016
- CR 2016-03493; Emergency Service Water Pump Discharge Strainer Blowdown Valve Hydramotor; dated March 15, 2016
- VLI-R44; Division 1 and 2 Diesel Generator Starting Air System (Unit 1); Revision 6
- VLI-R45; Division 1 and 2 Diesel Generator Fuel Oil System (Unit 1); Revision 5
- VLI-R46; Division 1 and 2 Diesel Generator Jacket Water Systems (Unit 1); Revision 4
- VLI-R47; Division 1 and 2 Diesel Generator Lube Oil; Revision 7
- VLI-R48; Division 1 and 2 Diesel Generator Exhaust, Intake, and Crankcase Systems; Revision 6
- SOI-R44; Division 1 and 2 Diesel Generator Starting Air System; Revision 19
- VLI-E12; Residual Heat Removal System; Revision 14
- SOI-E12; Residual Heat Removal System; Revision 67
- ELI-R42; DC Systems: Batteries Chargers Switchboards; Revision 8
- SOI-E22A; High Pressure Core Spray System; Revision 36
- SOI-E22B; Division 3 Diesel Generator; Revision 31
- VLI-E22A; High Pressure Core Spray; Revision 10
- VLI-R44/E22B; Division 3 Diesel Generator Starting Air System; Revision 10
- VLI-R45/E22B; Division 3 Diesel Generator Fuel Oil System (Unit 1); Revision 3
- VLI-R46/E22B; Division 3 Diesel Generator Jacket Water System; Revision 6
- Dwg 302-0356-00000; HPCS Diesel Generator Fuel Oil System; Revision U
- Dwg 302-0359-00000; Division 3 Diesel Lube Oil System; Revision E
- Dwg 302-0358-00000; Div. 3 Diesel Starting Air/Air Dryer Diagram; Revision G
- Dwg 302-0360-00000; Div. 3 Diesel Jacket Water Cooling System; Revision G
- Dwg 302-0701-00000; High Pressure Core Spray System; Revision KK

#### 1R05 Fire Protection

- FPI-0EW; Emergency Service Water Pump House; Revision 6
- FPI-0CC; Control Complex; Revision 10
- FPI-1DG; Diesel Generator Building; Revision 8
- FPI-0IB; Intermediate Building; Revision 9
- FPI-1AB; Auxiliary Building Unit 1; Revision 3
- FPI-A-B02; Fire Brigade Drills; Revision 8
- Fire Drill Planning Guide; Scenario # FDUM-092016; dated September 20, 2016
- Fire Drill Critique; Drill Scenario FDUM-1075-092016; dated September 20, 2016

#### 1R06 Flooding

- Dwg D-101-0021; Auxiliary Building Floor Plan 568'/574' Level; Revision F
- PRA-PY1-FP-R0b; Perry Nuclear Power Plant – Internal Flooding Notebook Probabilistic Risk Assessment; dated December 20, 2012
- EOP-03; Secondary Containment Control and Radioactive Release Control; Revision 5

#### 1R07 Annual Heat Sink Performance

- WO 200594871; RHR Heat Exchangers 'A' and 'C' Performance Testing; dated June 16, 2016
- PTI-E12-P0002; RHR Heat Exchangers A and C Performance Testing; dated June 16, 2016

#### 1R11 Licensed Operator Regualification Program

- OTLC-3058201609 PY-SGC1-Cycle 9 2016 Evaluated Scenario C1; Revision 0
- CR 2016-09138; Simulator Host Computer Stopped Running during the Out of the Box Simulator Exam. 15 Minutes of Training Time was Lost; dated July 25, 2016
- eSOMS Plant Narrative Log; dated August 3 – 4, 2016

#### 1R12 Maintenance Effectiveness

- Perry Nuclear Power Plant, Plant Health Report 2016-01-B21-Nuclear Boiler
- CR 2016-01866; Manual Reactor SCRAM based on Suppression Pool Temperature of 95 Degree F due to Open SRVs SCRAM 1-16-02; dated February 8, 2016
- CR 2016-09031; Nuclear Boiler (B21) System Health Report rated Yellow for the 1<sup>st</sup> Half of 2016; dated July 21, 2016
- Safety Valve Test Data; Valve 160884; dated March 31, 2015
- Safety Valve Test Data; Valve 160861; dated March 31, 2015
- Safety Valve Test Data; Valve 160854; dated March 31, 2015
- Safety Valve Test Data; Valve 160850; dated April 1, 2015
- Safety Valve Test Data; Valve 160853; dated April 1, 2015
- Safety Valve Test Data; Valve 160866; dated April 1, 2015
- Safety Valve Test Data; Valve 160848; dated April 4, 2015
- Safety Valve Test Data; Valve 160873; dated April 4, 2015
- LSS-A0003; Procurement; Revision 10
- LSS-A007; Inspection and Testing; Revision 5
- LSS-A008; Records; Revision 10
- LSS-B0057; Electrical Dedication Testing (Capacitor, Lamp, Tape, and Wire Insulation); Revision 2;
- LSS-B0059; Electrical Dedication Testing (Diode, Heat Shrink, Fuse, & Heater Coil); Revision 1

- NOP-CC-7002; Procurement Engineering; Revision 13
- NOP-ER-3001; Problem Solving and Decision Making; Revision 6
- NOP-LP-2001; Corrective Action Program; Revision 38
- NOP-MS-1002; Inventory Management; Revision 7
- NOP-MS-2001; Procurement of Materials and Services; Revision 13
- NOP-MS-4001; Warehousing; Revision 10
- NOP-WM-1005; Work Management Order Testing Process; Revision 3

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

- eSOMS Plant Narrative Log; dated July 20, 2016
- CR 2016-08988; Fuel Handling Bridge Drive Shaft Failure; dated July 20, 2016
- WO 200619265; Contingency T/S FHB Bridge for SFDS #3
- OAI-0201; Operations Night Order, FLEX Strategy – Alternate Method during Maintenance; dated June 14, 2016
- CR 2016-07715; Alternate Closed Loop Containment Cooling FLEX Strategy Not Available; dated June 13, 2016
- Forecast On-Line Probabilistic Risk Assessment, Period 5 Week 6 July 25<sup>th</sup>, 2016 to July 31<sup>st</sup>, 2016; Revision 2
- eSOMS Plant Narrative Log; dated July 26, 2016
- CR 2016-08449; FLEX Closed Loop Containment Cooling Unavailability Extended due to Hydrolaser Malfunction; dated July 3, 2016
- CR 2016-08945; FME Barrier Blocking Spent Fuel Pool FLEX Emergency Makeup System; dated July 19, 2016
- WO 200469514; Install Hydrolasing Taps
- Management Alignment and Ownership Meeting Package; dated July 26, 2016
- eSOMS Plant Narrative Logs; dated August 25, 2016
- Perry Work Implementation Schedule; Week 13, Period 5, Division Non – From 1200 Thursday, 09/15/16 to 1200 Friday, 09/16/16
- Forecast On-Line Probabilistic Risk Assessment; Period 5 Week 13 September 12, 2016 to September 18, 2016; Revision 0
- CR 2016-09813; Unable to Turn On Division 1 NUMAC Leak Detection Monitor Display Screen; dated August 12, 2016
- CR 2016-09853; Crew Performance During Division 1 Leak Detection NUMAC Failure; dated August 14, 2016

#### 1R15 Operability Determinations and Functionality Assessments

- CR 2016-09381; RCIC Steam Flow-High Trip Units 1E31N683A/B Drifting High; dated July 31, 2016
- SVI-E31-T0123-A; RCIC Steam Line Flow High and Timer Channel Functional For 1E31-N683A; Revision 8
- PRI-TSR; Technical Specification Rounds; Revision 37
- Management Alignment and Ownership Meeting Package; dated August 26, 2016
- CR 2016-10235; Hydrogen Igniter failer(sp); dated August 25, 2016
- CR 2016-09473; Power supply fan for Rod Control and Information System (RC&IS) Panel 1H51-P680 Failure; dated August 3, 2016
- CR 2016-09528; Compensatory Measures Installed for Rod Control and Information System Cooling Fan (1C11K0105) Power Supply without Required 50.59 Documentation; dated August 4, 2016
- eSOMS Plant Narrative Log; dated August 3, 2016

- CR 2016-10424; Air Leak at Discharge of Div 3 Diesel Generator Right Bank Air Receiver; dated August 31, 2016
- CR 2016-10476; Div. 3 Starting Air Leak; dated September 2, 2016

#### 1R19 Post-Maintenance Testing

- WO 200515397; Replacement of Breaker EF1B04 – Emergency Closed Cooling Pump ‘A’
- CR 2016-10424; Air Leak at Discharge of Div 3 Diesel Generator Right Bank Receiver; dated August 31, 2016
- CR 2016-10476; Div. 3 Starting Air Leak; dated September 2, 2016
- WO 200691719; Repair Air Leakage on the Threaded Connection on the Upstream Side of 1E22D5013A; dated September 2, 2016
- WO 200617252; Control Complex Chill Water Chiller ‘A’, Repair Leak at Tube to Tubesheet Interface; dated September 1, 2016
- SOI-P47; Control Complex Chilled Water System; Revision 27
- GMI-0095; Instructions for the Use and Control of On-line Leak Sealing; Revision 7
- WO 200326741; Containment Vessel Chilled Water System – Chill water Chiller ‘C’ Motor Temperature Module High Bearing / Discharge Temperature Module Repair/Replacement; dated September 19, 2016
- WO 200693832; RHR ‘A’ HX Dump Valve 1E12F0011A Failed to Close using the Control Switch in the Control Room; dated September 28, 2016
- CR 2016-11452; RHR ‘A’ Hx Dump Valve Failed to Close Using the Control Switch; dated September 27, 2016
- WO 200693431; Replace RFBP ‘A’ Motor; dated September 30, 2016

#### 1R22 Surveillance Testing

- SVI-B21-T0190L; ECCS/HPCS Drywell Pressure High Channel Calibration For 1B21-N067L; dated July 13, 2016
- CR 2016-08734; Transmitter Found Out of Calibration Measured Maintenance Data (MMD); dated July 13, 2016
- eSOMs Plant Narrative Log; dated July 13, 2016
- SVI-E12-T2002; RHR ‘B’ Pump & Valve Operability Test; dated August 4, 2016
- SOI-E12; Residual Heat Removal System; Revision 67
- SVI-C61-T1200; Remote Shutdown Control Test – RCIC & RHR; dated July 27, 2016
- SVI-M14-T9313; Type ‘C’ Local Leak Rate Test of 1M14 Penetration V313; dated August 3, 2016
- SVI-E31-T0074-D; MSL High Flow Channel ‘D’ Functional for 1E31-N686D and 1E31-N688D; dated August 25, 2016

#### 1EP6 Drill Evaluation

- Perry ERO Dry Run Scenario Guide; August 17, 2016
- EOP-03 Chart; Chart – Secondary Containment Control; Revision E
- EOP-03; Secondary Containment Control and Radioactive Release Control; Revision 5
- ONI-C11-3; Control Rod Drop; Revision 5
- ONI-C51; Unplanned Change in Reactor Power or Reactivity; Revision 27
- ONI-C51 Flowchart; Unplanned Change in Reactor Power or Reactivity; Revision L
- ONI-C71-1; Reactor Scram; Revision 21
- ONI-P54; Fire; Revision 20
- ONI-D17; High Radiation Levels Within Plant; Revision 18



- ONI-J11-1; Gross Fuel Cladding Failure; Revision 11

## 2RS1 Radiological Hazard Assessment and Exposure Controls

- Self Assessment Pre NRC Radiological Hazards and Exposure Control; dated May 6, 2016
- NOBP-OP-4008; Response to Radiological Events; Revision 4
- NOP-OP-4101; Access Controls for Radiologically Controlled Areas; Revision 11
- NOP-OP-4102; Radiological Postings, Labeling and Marking; Revision 10
- NOP-OP-4104; Job Coverage; Revision 6
- NOP-OP-4107; Radiation Work Permit (RWP); Revision 15
- NOP-OP-4502; Control of Radioactive Material; Revision 4
- NOP-OP-4703; Determination of Alpha Monitoring Levels; Revision 3
- HPI-E0016; Operation of the Eberline AMS-4 Air Monitoring System; Revision 1
- HPI-F0006; Radionuclide Source Term Distribution; Revision 3
- SVI-E31-T5190; Sealed Source Leak Test and Inventory; Revision 7
- Electronic Dosimetry Alarm Logs; April 1, 2015 through May 31, 2016
- Electronic Dosimeter Dose Rate Alarm Records; Various Records.
- RWP 160091; Dry Cask Storage Project; Revision 0
- RWP 160118; LHRA- 1N25F0290B Actuator Repair; Revision 1
- RWP 165214; B33 Reactor Recirculation 1B33F0067A Replacement; Revisions 0-3
- Letter; LHRA/VHRA Key Authorization; dated March 1, 2016
- Unit 2 Cooling Tower Suction Bay Silt Radioactive Content Analysis; Undated
- National Source Tracking System 2016 Annual Inventory Reconciliation; January 28, 2016
- Periodic Barrier / Barricade Surveillance; dated July 3, 2016
- Alpha Area Level Assessment; dated May 18, 2015
- Radioactive Source Leak Tests; dated February 15, 2016
- Small Article Monitor (SAM) Calibration Records; Various Records
- Radiological Air Sample Analysis; Various Records
- Radiation Surveys; Various Records
- Unconditional Release Volumetric Analysis; dated March 21, 2016
- CR 2015-12976; Radiation Protection Cycle 15 Source Term Report not Completed; dated September 30, 2015
- CR 2015-15374; ONI-ZZZ-5 Entry Due to Resin on the Floor in the Waste Collector Filtrate Filter room, RW 646'; dated November 10, 2015
- CR 2015-16021; LHRA Gate will not Open; dated November 25, 2015
- CR 2016-00467; Routine Annual RP Survey; dated January 12, 2016
- CR 2016-01305; MG Dose Alarm Received by Worker; dated January 29, 2016
- CR 2016-04734; Elevated Dose Rate Found on Clean Dumpster in the Protected Area During Verification Survey; dated April 6, 2016
- CR 2016-08746; NRC Identified – No basis for NOP-OP-4102 Section 4.5.6.1.a; dated July 13, 2016

## 4OA1 Performance Indicator Verification

- MSPI Basis Document; Revisions 9
- NEI 99-02; Regulatory Assessment PI Guideline; Revisions 7
- NOBP-LP-4012; NRC Performance Indicators; Revision 5
- PYBP-DES-0011; Mitigating Systems Performance Index; Revision 3
- NOBP-LP-4012-06; MSPI Unavailability Index (UAI) and Unreliability Index (URI) for Heat Removal System (RCIC); July 2015 to June 2016; Revision 2

- NOBP-LP-4012-07; MSPI UAI and URI for Residual Heat Removal (RHR); July 2015 to June 2016; Revision 3
- NOBP-LP-4012-19; MSPI UAI and URI for Emergency Service Water (ESW); July 2015 to June 2016; Revision 2
- CR 2016-01640; 1E51-N0636A, Master Trip Unit, Found Outside Tech Spec Allowable Value; dated February 3, 2016
- PDB-C0013; SVI and PTI Availability; Revision 3
- CR 2015-15734; Stem Nut Found to be Worn on Sluice Gate 0P45C0004A when Performing Order 200593556; dated November 19, 2015
- SOI-P45/49; Emergency Service Water and Screen Wash Systems; Revision 29

#### 4OA2 Problem Identification and Resolution

- CR 2012-17739; NRC Question on IOI-3 P&L on Thermal Power Limits; dated November 8, 2012
- IOI-3; Power Changes; Revision 61
- Perry Nuclear Power Plant – Core Thermal Power 30 Minute Average from January 1, 2016 through August 29, 2016
- CR 2016-10645; NRC ID – Reactor Thermal Power >3758MWth on 30 Minute Average; dated September 8, 2016
- CR 2016-01866; Manual Reactor SCRAM Based on Suppression Pool Temperature of 95 Degrees F due to Open SRVs SCRAM 1-16-02; dated February 8, 2016
- CR 2016-01071; Reactor Recirc Loop 'A' Pump Discharge Valve Vent Line Leakage; dated January 24, 2016
- CR 2016-02533; February 2016 CNRB Finding: Breaker Preventive Maintenance Planning; dated February 23, 2016
- CR 2016-03678; Plant Computer DAS Failure; dated March 21, 2016
- CR 2016-01305; MG Dose Alarm Received by Worker; dated January 29, 2016
- CR 2016-03996; Computer Interface Module Error Results in Inability to Run an Automatic Periodic Log; dated March 27, 2016
- CR 2016-08059; Employee Suffers Laceration to Right Knee; dated June 23, 2016
- CR 2016-05106; Unexpected Gross Fail Alarm was Received for Master Trip Unit, 1B21N0678D; dated April 12, 2016
- CR 2016-03223; NRC ID: Security Baseline Inspection, Sodium Hypochlorite Left Uncontrolled; dated March 9, 2016
- CR 2016-05268; Developing Theme in NRC Cross-Cutting Aspect H.12 – Human Performance, Avoid Complacency; dated April 14, 2016
- CR 2016-08158; Main Steam Line Drain Piping Flange Break; dated June 26, 2016
- CR 2016-01530; Aux Bldg Ventilation Supply Damper Closed Tripping Off Aux Bldg. Supply Fans; dated February 1, 2016
- CR 2016-07439; Total Residual Chlorine at Discharge Outfall was Elevated; dated June 5, 2016
- CR 2016-08189; The 6B Heater Level Appears to be Controlling with the Alternate Controller; dated June 27, 2016
- CR 2016-00278; 2015 INPO E&A Area for Improvement PI.1-1, Performance Monitoring; dated January 8, 2016
- CR 2016-03862; ERO Drill: Objective F6 Not Met – Dose Assessment; dated March 24, 2016
- CR 2016-03471; NRC ID 2016 SIT: Inconsistent Documentation of Panels 1H1P1432B and "D" Fill and Venting Tasks; dated March 15, 2016
- CR 2016-06953; RCIC Valve and Bubbler Found Out of Position; dated May 20, 2016
- CR 2016-05009; Unexpected Half Scram RPS B/D; dated April 10, 2016

- CR 2016-00109; 2015 INPO E&A Area for Improvement OF.2-1, Operational Risk; dated January 5, 2016
- CR 2016-00110; 2015 INPO E&A Area for Improvement ER.1-2, Equipment Performance; dated January 5, 2016
- CR 2016-00112; 2015 INPO E&A Area for Improvement OR.2-1, Manager Fundamentals; dated January 5, 2016
- CR 2016-00452; Multiple Deficiencies Identified with Implementation of Cyber Security Program; dated January 12, 2016
- CR 2016-01063; Reactor SCRAM on RPV Level 8 – SCRAM No 1-16-01; dated January 24, 2016
- CR 2016-02048; Loss of EH11 Divisional Bus Results in a Loss of Shutdown Cooling; dated February 11, 2016
- CR 2016-05118; Recent Events at Perry Should be Reviewed for Common Cause or other Aggregate Review; dated April 12, 2016
- CR 2016-05906; PA-PY-16-02: Elevation of Fleet Oversight Concerns with Maintenance Performance; dated April 26, 2016
- CR 2016-07542; Inadvertent Initiation of Iso-Phase Bus Duct 'A' Deluge / Unplanned Fire Impairment; dated June 8, 2016
- CR 2016-07592; Incidental Spill of Sodium Hypochlorite in the SWPH; dated June 9, 2016
- CR 2016-07619; NRC ID: Potential Green NCV for Inoperable LRW to ESW Rad Monitor; dated June 9, 2016
- CR 2016-08105; N32 EHC System Oil – Fyrquel Leak; dated June 24, 2016
- CR 2016-08139; Reactor Recirc Pump 'B' Tripped; dated June 25, 2016
- CR 2016-00111; 2015 INPO E&A Area for Improvement RS.1-1, Radiological Safety; dated January 5, 2016
- CR 2016-02156; Recirc Pump 'A' did not Transfer to Fast Speed; dated February 14, 2016
- CR 2016-06991; Through Wall Leak on Piping from 0P42-F0544C Control Complex Chiller 'C' ECC Flow Instrument Root to Flow Element; dated May 22, 2016
- CR 2016-06450; Div 2 DG Abnormal Indications on Start; dated May 6, 2016
- CR-2016-02041; MS-C-16-01-13: Backup SEPOs Not Fully Qualified for Core Engineering Programs; dated May 6, 2016
- CR-2016-02421; Potential Unacceptable Preconditioning of SVI-R44-T2001 in Relation to Div 2 Diesel Generator Run; dated February 19, 2016
- CR-2016-02495; Div 1 DG Prestart Roll Performed 24 Hours Ahead of the PWIS to Support Preconditioning Evaluation Results from Engineering; dated February 22, 2016
- CR-2016-02721; Unacceptable Preconditioning Identified in Cycle 16 , Period 03, Week 11 Schedule; dated February 26, 2016
- CR-2016-03131; Preconditioning Evaluation of CR-2016-02957, SVI-B21-T0252B Conducted 03/02/2016; dated March 7, 2016
- CR-2016-04511; Potential Unacceptable Preconditioning of Airlock Door Seal Check Valves; 4/4/2016; dated April 4, 2016
- CR-2016-07146; Potential Preconditioning – WO #200532360, Cy-16 Per-04 Wk-11; dated May 26, 2016
- CR-2016-07147; Potential Preconditioning – WO #200656523, Cy-16 Per-04 Wk-11; dated May 26, 2016
- CR-2016-07149; Potential Preconditioning – WO #200325228, Cy-16 Per-04 Wk-11; dated May 26, 2016
- CR-2016-07367; Potential Unacceptable Preconditioning – WO #200516883, #200516884, Cy-16 Per-04 Wk-12; dated June 2, 2016

- CR-2016-07368; Potential Unacceptable Preconditioning – WO #200625655, #200661813, Cy-16 Per-04 Wk-12; dated June 2, 2016
- CR-2016-07408; NRC Question as to the Acceptability of Preconditioning Cy-16 Per-02 Wk-11, 200572609 Div 2 Diesel Generator 24 Hour Run via 200407147 Replacing the Recirc Air Damper Actuator; dated June 3, 2016
- CR-2016-07409; PA-PY-16-03: Late Identification of Potential Preconditioning Resulted in Additional Risk for I&C Scheduled Work; dated June 3, 2016
- CR-2016-07745; PA-PY-16-03: Preconditioning Evaluation Reviews/Approval Process Gap; dated June 14, 2016
- CR-2016-07972; Potential Preconditioning – Unit 1 Div 2 Battery Charger, Cy-16 Per-05 Wk-03; dated June 21, 2016
- CR-2016-08023 PA-PY-16-03: Forced Outage Scope – Preconditioning Evaluation Process Gap; dated June 22, 2016
- CR-2016-09774; PA-PY-16-04: Containment Vessel Drywell Purge LLRT's May be Performed More Frequently than Necessary; dated August 11, 2016
- CR-2016-09871; Performed SVI-M17T0410A Early and Needs to be Evaluated for Preconditioning; dated August 15, 2016
- CR-2015-15368; NRC ID: NRC Resident Inspector Identified Preconditioning Concern for Division 2 Diesel Generator; dated August 11, 2016
- CR-2014-15759; NRC ID: Question about Division 3 DG Run Prior to ESW "C" SVI Testing; dated November 14, 2014
- NORM-ER-2001; Preconditioning Structures, Systems and Components; Revision 1
- Preconditioning Screening Implementation Plan
- ER-2015-15368-01; Interim Effectiveness Review
- CR 2015-16959; NRC ID: Hole in Barrier Between Unit 2 Div 1 and Div 2 DC Switchgear Rooms; dated December 18, 2015
- CR 2016-08737; NRC ID: Control Complex 638' Elevation Fire Barrier Wall Non-Compliance; dated July 13, 2016
- Shift Manager Face to Face Agenda 8/31/2016
- Operations Night Order; Core Thermal Power Limitations; dated September 6, 2016

#### 4OA5 Operation of an ISFSI at Operating Plants

- 10 CFR 72.212 Evaluation Report; Revision 8
- 10 CFR 72.48 Screenings and Evaluations; 2015-2016
- Dry Cask Storage and B5B Fuel Selection Package; dated March 29, 2016
- Dry Cask Storage Training Records
- GMI-0210; Multi-Purpose Canister Loading; Revision 14
- GMI-0213; Multi-Purpose Canister Sealing; Revision 17
- GMI-0215; Spent Fuel Dry Storage Response to Abnormal Conditions; Revision 8
- GMI-0221; Hi-Storm Movement; Revision 14
- GMI-0221; Multi-Purpose Canister Transfer; Revision 17
- HPI-D0005; RP Monitoring Requirements for Dry Fuel Storage Loading Operations; Revision 11
- ISFSI and Fuel Handling Building Corrective Action Program Reports; 2015-2016
- MS-C-15-03-30; Fleet Oversight Audit Report – ISFSI; dated April 14, 2015
- NDE Report Form – Lift Bracket; dated March 25, 2016
- NDE Report Form – Lift Links; dated March 25, 2016
- NDE Report Form – Lift Lock; dated March 25, 2016
- NDE Report Form – Lift Yoke Extension; dated March 25, 2016
- NDE Report Form – Lift Yoke; dated March 25, 2016

- NDE Report Form – Trunnions; dated March 25, 2016
- PAP-1313; Control of Lifting Operations; Revision 17
- PAP-1910; Fire Protection Program; Revision 37
- Perry Third Dry Cask Storage Loading Campaign - Readiness Assessment; Revision 0
- PMI-0089; Examination of Lifting Devices; Revision 5
- Radiation Work Permit 160091; Dry Cask Storage Project; Revision 0
- Review of 72.48 and 72.2212 Assessments and Operation of an ISFSI; Revision 0
- WO 200626728; Inspect Dry Cask Storage Concrete Areas; dated June 25, 2016

## LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AOP	Abnormal Operating Procedure
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
CR	Condition Report
DG	Diesel Generator
DNMS	Division of Nuclear Materials Safety
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ESW	Emergency Service Water
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ISFSI	Independent Spent Fuel Storage Installation
MCID	Materials Control, ISFSI, and Decommissioning
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U. S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PI	Performance Indicator
PMT	Post Maintenance Testing
RFBP	Reactor Feedwater Booster Pump
RWP	Radiation Work Permit
SSC	Structures, Systems and Components
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
USAR	Updated Safety Analysis Report
WO	Work Order

Mr. David Hamilton  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant  
P. O. Box 97, 10 Center Road, A-PY-290  
Perry, OH 44081-0097

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INTEGRATED INSPECTION REPORT  
05000440/2016003 AND 07200069/2016001

Dear Mr. Hamilton:

On September 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Perry Nuclear Power Plant. On October 5, 2016, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The enclosed report represents the results of this inspection.

No findings were identified during this inspection.

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, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records System (PARS) component of the 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/

Billy Dickson, Chief  
Branch 5  
Division of Reactor Projects

Docket No. 50-440; 72-069  
License No. NPF-58

Enclosure:  
IR 05000440/2016003 and 07200069/2016001

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Letter to D. Hamilton from B. Dickson dated November 14, 2016

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INTEGRATED INSPECTION REPORT  
05000440/2016003 AND 07200069/2016001

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