UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, ILLINOIS 60532-4352

February 12, 2019

Mr. David B. Hamilton
Site Vice President
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
Reg Affairs–A210
10 Center Road, P.O. Box 97
Perry, OH 44081–0097

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INTEGRATED INSPECTION REPORT 05000440/2018004 AND 07200069/2018001

Dear Mr. Hamilton:

On December 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Perry Nuclear Power Plant. On January 10, 2019, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

Based on the results of this inspection, the NRC has identified two issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that two violations are associated with these issues. Because the licensee initiated condition reports to address these issues, these violations are being treated as Non-Cited Violations (NCVs), consistent with Section 2.3.2 of the Enforcement Policy. These NCVs are described in the subject inspection report. Further, inspectors documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating this violation as an NCV consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC Resident Inspector at the Perry Nuclear Power Plant.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001; with copies to the Regional Administrator, Region III; and the NRC resident inspector at the Perry Nuclear Power Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Dariusz Szwarc, Acting Chief
Branch 2
Division of Reactor Projects

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

Enclosure:
IR 05000440/2018004; 07200069/2018001

cc: Distribution via LISTSERV®

Letter to David Hamilton from Dariusz Szwarc dated February 12, 2019

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INTEGRATED INSPECTION REPORT 05000440/2018004 AND 07200069/2018001

DISTRIBUTION:
Michael McCoppin
RidsNrrPMPerry Resource
RidsNrrDorlLpl3
RidsNrrDirsIrib Resource
Darrell Roberts
John Giessner
Jamnes Cameron
Allan Barker
DRPIII
DRSIII
ROPreports.Resource@nrc.gov

ADAMS Accession Number: ML19044A622

OFFICE	RIII						
NAME	DSzwarc:bw						
DATE	2/12/2019						

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50–440; 72–069
License No:	NPF–58
Report No:	05000440/2018004; 07200069/2018004
Enterprise Identifier:	I–2018–004–0020
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Perry Nuclear Power Plant
Location:	North Perry, Ohio
Dates:	October 1 through December 31, 2018
Inspectors:	J. Steffes, Senior Resident Inspector J. Nance, Resident Inspector N. Peterka, Acting Resident Inspector G. Roach, Senior Operations Engineer J. Seymour, Operations Engineer S. Bell, Health Physicist M. Learn, Reactor Engineer G. Hansen, Senior Emergency Preparedness Inspector
Approved by:	D. Szwarc, Acting Chief Branch 2 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee's performance by conducting an integrated quarterly inspection at Perry Nuclear Power Plant in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information. Findings and violations being considered in the NRC's assessment are summarized in the table below. Licensee-identified non-cited violations are documented in report section: 71124.01

List of Findings and Violations

Failure to Perform Preventative Maintenance on Non-safety Structures, Systems and Components (SSCs)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000440/2018004–01 Closed	None	71111.12
The inspectors identified a Green finding and associated Non-Cited Violation (NCV) of 10 CFR 50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plant," for the licensee's failure to perform, monitor and assess the condition of SSCs in accordance with procedure NOP–ER–3004, "FENOC Maintenance Rule Program," Revision 5. Specifically, the licensee revised the preventative maintenance schedule for the control room laundry and emergency core cooling system (ECCS) room sump switches to a frequency of "as required" and thus were not performing preventative maintenance to ensure that they remained capable of performing their intended function.			

Failure to Follow Procedures Results in Inoperable Division 1 Diesel Generator			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000440/2018004–02 Closed	[H.12] – Avoid Complacency	71111.22
A self-revealed Green finding and associated NCV of Technical Specification 5.4.1, "Procedures," was identified for the licensee's failure to implement the established surveillance procedure for diesel generator (DG) testing. Specifically, during the scheduled surveillance run of the Division 1 DG on September 26, 2018, a reactor operator closed the Division 1 DG output breaker EH1102 at the wrong time to synchronize the generator to the grid. This resulted in the DG attempting to synchronize to the grid approximately 60 degrees out of phase and resulted in the DG being declared inoperable for inspection and repairs for seven days.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000440/2018004–03	Fit Testing of SCBA Repirators	71124.03	Open

TABLE OF CONTENTS

PLANT STATUS

The plant began the inspection period at rated thermal power. On October 13, 2018, reactor power was lowered to 72 percent to perform a rod pattern adjustment. The unit was returned to rated thermal power on October 14, 2018. On November 2, 2018, reactor power was lowered to 59 percent to perform a rod sequence exchange. The unit was returned to rated thermal power on November 3, 2018. On November 16, 2018, reactor power was lowered to 72 percent to perform a rod sequence exchange. The unit was returned to rated thermal power on November 17, 2018. The unit remained at, or near, rated thermal power with the exception that on several occasions, power was reduced to maintain condensate demineralizer outlet temperature and/or high condenser circulating water outlet temperatures at or below their respective upper limits due to environmental conditions. The power reductions varied between 1 and 14 percent of rated thermal power and lasted from a few hours to several days. On November 27, 2018, the unit entered into coastdown operations to refueling outage 1R17. The plant was at 89 percent power on December 31, 2018.

On April 25, 2018, FirstEnergy Solutions (FES) / FirstEnergy Nuclear Operating Company (FENOC) notified the U.S. Nuclear Regulatory Commission (NRC) that they intend to shut down all four of their operating nuclear power plants (ADAMS Accession Number ML18115A007). Perry Nuclear Power Plant, Unit 1, is scheduled to be shut down May 31, 2021. On March 31, 2018, FES, FirstEnergy Nuclear Generation (FENGEN), and FENOC filed for bankruptcy. The NRC continues to maintain focus on public health and safety and the protection of the environment. This will include a continuous evaluation by inspectors to determine whether the licensee's financial condition is impacting safe operation of the plant.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515 Appendix D, "Plant Status" and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01—Adverse Weather Protection

Impending Severe Weather (1 Sample)

The inspectors evaluated readiness for impending adverse weather conditions for high winds on November 6, 2018.

External Flooding (1 Sample)

The inspectors evaluated readiness to cope with external flooding on November 14, 2018.

71111.04—Equipment Alignment

Partial Walkdown (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) “B” train of emergency service water on November 1, 2018;
(2) Control room heating, ventilation and air conditioning and emergency recirculation system on November 23, 2018;
(3) “B” train of residual heat removal system on November 27, 2018; and
(4) “B” train of motor control center, switchgear and miscellaneous electrical equipment area heating, ventilation and air conditioning system on November 28, 2018.

71111.05AQ—Fire Protection Annual/Quarterly

Quarterly Inspection (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

(1) Diesel generator building hallway fire zone 1DG–1d on November 9, 2018;
(2) Control complex and division 3 switchgear 620 foot elevation fire zone 3B/D on November 13, 2018;
(3) Auxiliary building 620 foot elevation fire zone 1AB–3b on December 13, 2018;
(4) Intermediate building 654/665 and 682 foot elevations fire zones 0IB–4 and 0IB–5 on December 13, 2018; and
(5) Turbine building 577 foot elevation fire zone TP–577 on December 13, 2018.

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated an operations crew-evaluated scenario in the plant training simulator on November 28, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated operations crew performance during plant manipulations for a rod pattern adjustment on October 13 through 14, 2018.

Operator Exams (1 Sample)

The inspectors reviewed and evaluated requalification examination results on December 10, 2018.

Operator Requalification Program (1 Sample)

The inspectors evaluated the operator requalification program from November 26, 2018 through December 7, 2018.

71111.12—Maintenance Effectiveness

Routine Maintenance Effectiveness (4 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

(1) Reactor core isolation cooling system on November 26 through December 16, 2018;
(2) Emergency service water system on November 26 through December 16, 2018;
(3) Reactor recirculation system on December 11, 2018 through December 18, 2018; and
(4) Miscellaneous and liquid radwaste sump systems on December 12 through 21, 2018.

71111.13—Maintenance Risk Assessments and Emergent Work Control (2 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

(1) Reactor core isolation cooling system minimum flow valve failed to stroke on October 22 through 24, 2018; and
(2) Work risk assessment to include emergency service water diving activities, fuel pool diving activities, diesel fire pump emergent work and “A” control room emergency recirculatioin inoperability on November 17, 2018.

71111.15—Operability Determinations and Functionality Assessments (1 Sample)

The inspectors evaluated the following operability determinations and functionality assessments:

(1) Annulus exhaust gas treatment system “A” air radiation monitor low flow alarm out of service on October 2, 2018.

71111.19—Post Maintenance Testing (5 Samples)

The inspectors evaluated the following post maintenance tests:

(1) Division 1 emergency diesel generator post maintenance run following generator repairs on October 3, 2018;
(2) “B” train of emergency service water non-destructive testing following patch plate welding on October 18 through 19, 2018;
(3) Upper containment airlock in between the seals test following seal replacement on November 8, 2018;
(4) Post maintenance test of the division 2 emergency diesel generator intercooler following repairs on December 17, 2018; and
(5) Division 2 emergency diesel generator test following extended maintenance window on December 27, 2018.

71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (4 Samples)

(1) SVI–R43–T1317; Diesel Generator Start and Load Division 1 on October 3, 2018;
(2) SVI–C85–T1314; Turbine Bypass Valve Operability Test on October 14, 2018;
(3) SVI–E22–T1319; Diesel Generator Start and Load Division 3 on November 8, 2018; and
(4) SVI–E22–T2001; HPCS [high pressure core spray] Pump and Valve Operability Test on November 9, 2018.

71114.04—Emergency Action Level and Emergency Plan Changes (1 Sample)

The inspector completed the evaluation of submitted Emergency Action Level and Emergency Plan changes on November 11, 2018. This evaluation does not constitute NRC approval.

71114.06—Drill Evaluation

Drill/Training Evolution (1 Sample)

The inspectors observed a simulator evolution for licensed operators on November 28, 2018, which required emergency plan implementation and included in the licensee's performance indicator for drill and exercise performance.

RADIATION SAFETY

71124.03—In-Plant Airborne Radioactivity Control and Mitigation

Self-Contained Breathing Apparatus for Emergency Use (1 Sample)

The inspectors evaluated the licensee's self-contained breathing apparatus program.

71124.05—Radiation Monitoring Instrumentation

Walk Downs and Observations (1 Sample)

The inspectors evaluated radiation monitoring instrumentation during plant walkdowns.

Calibration and Testing Program (1 Sample)

The inspectors evaluated the licensee's calibration and testing program.

OTHER ACTIVITIES – BASELINE

71151—Performance Indicator Verification (4 Samples)

The inspectors verified licensee performance indicators submittals listed below:

(1) BI01: RCS Specific Activity – 1 Sample (October 1, 2017 – September 30, 2018);
(2) OR01: Occupational Exposure Control Effectiveness – 1 Sample (October 1, 2017 – September 30, 2018);
(3) PR01: RETS/ODCM Radiological Effluent Occurrences – 1 Sample (October 1, 2017 – September 30, 2018); and
(4) BI02: RCS Leak Rate Sample – 1 Sample (October 1, 2017 – September 30, 2018).

OTHER ACTIVITIES—TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855.1—Operation of an Independent Spent Fuel Storage Installation

The inspector evaluated the licensee's operation of the independent spent fuel storage installation from November 14 to November 15, 2018. Specifically, the inspector evaluated:

(1) the material, thermal, and radiological condition of the independent spent fuel storage installation and loaded storage casks through independently observing the structural condition, reviewing records of the operational storage surveillance procedure No. PRI-TSR, and both performing independent radiological surveys and reviewing the licensee's radiological surveys; and
(2) changes to the 72.212 report.

Evaluation of Perry Safety Condition in Light of Financial Conditions

The licensee's parent company, FirstEnergy Solutions, was under bankruptcy protection/reorganization during the inspection period. As such, NRC Region III conducted special reviews of processes at Perry. Using the flexibilities in the baseline inspection program, the inspectors evaluated several aspects of the licensee's operations to assess whether any identified plant performance issues could be related to the station's financial condition. The factors reviewed included: (1) impact on regulatory-required plant staffing; (2) corrective maintenance backlog; (3) changes to the planned maintenance schedule; (4) corrective action program implementation; and (5) reduction in outage scope, including risk-significant modifications. In particular, the inspectors verified that licensee personnel continued to identify problems at an appropriate threshold and enter these problems into the corrective action program for resolution. The inspectors also verified that the licensee continued to develop and implement corrective actions commensurate with the safety significance of the problems identified.

The review of processes at Perry included continuous reviews by the Resident Inspectors, as well as the specialist-led baseline inspections completed during the inspection period which are documented previously in this report.

INSPECTION RESULTS

71111.12—Maintenance Effectiveness

Failure to Perform Preventative Maintenance on Non-Safety Structures, Systems and Components			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000440/2018004–01 Closed	None	71111.12

Introduction:

The inspectors identified a Green finding and associated Non-Cited Violation (NCV) of 10 CFR 50.65(a)(2), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plant," for the failure to perform, monitor and assess the condition of SSCs in accordance with NOP–ER–3004, "FENOC Maintenance Rule Program," Revision 5. Specifically, the licensee revised the preventative maintenance schedule for the control room laundry and ECCS room sump switches to a frequency of "as required" and thus were not performing preventative maintenance to ensure that they remained capable of performing their intended function.

Description:

Licensee calculation JL–083, "Flooding Analysis of CCB [Control Complex Building], IB [Intermediate Building], and FHB [Fuel Handling Building] – Floor Elevation 574 [foot]-10 [inches]," Section 8.6 stated, in part, that, "the Control Room will be alerted to a potential flooding condition by the Control Room Laundry sump level switches 0G61–N0510A/B." The flooding analysis further stated in Section 8.6 that, "it is conservatively assumed that the [Service Water] system will leak for five minutes prior to the actuation of the [Control Room Laundry] sump alarm alerting the Control Room Staff of a problem. A period of 60 minutes after the onset of the control room alarm is assumed for the operator to identify the issue and secure the Service Water pumps."

The control room laundry sump switches are part of maintenance rule system G60/61 – "Miscellaneous and Liquid Radwaste Sump." The maintenance rule system basis document for system G60/61 stated, under function G61–04, that the ability of the control room laundry sump level switches to annunciate high water level in the control complex basement for internal flooding mitigation was a monitored function. The basis document further established a value of less than, or equal to, two maintenance preventable functional failures per three-year rolling average, taking in to consideration historical performance, a level of performance expectation, the opportunities to detect failures, and significance of failures.

During an internal flooding inspection of the CCB basement, the inspectors requested the latest control room laundry sump level switches functional check. On August 29, 2018, the inspectors determined that the last functional check had been performed on June 11, 2003, and that in 2003 the preventative maintenance schedule for the control room laundry sump level switches was once every six years. The inspectors concluded that in 2008, the task had been revised to once every eight years and in 2014 the preventative maintenance frequency was revised to "as required" based upon the recommendation of the non-critical component stratification project and the responsible system engineer. The non-critical component

stratification project was an effort that targeted preventative maintenance frequency reductions based on non-critical classification and component performance history. The inspectors were not provided evidence of alternate methods to ensure sump switch functionality, such as visual examination or functional checks. Without a functional check the shifting of the preventative maintenance frequency to "as required" would not reveal sump switch failures.

The licensee determined, as part of an extent of condition review, that 25 plant level switches credited for flooding awareness had their preventative maintenances set to "as required", which included safety-related ECCS room sump switches for the residual heat removal pump systems, high pressure core spray system, reactor core isolation cooling system, and the low pressure core spray system which are credited for emergency operating procedure (EOP–3) Secondary Containment Control entry criteria. The inspectors determined these examples further represented the same programmatic discrepancy.

Procedure NOP–ER–3004, "FENOC Maintenance Rule Program," Revision 5, Section 4.6.1.1 stated that, "the performance of paragraph (a)(2) SSCs will be monitored against plant level and specific performance criteria." The inspectors discussed with the licensee that changing the preventative maintenance frequency to "as required" or, in other words, "run to failure" would not provide adequate opportunity to identify and correct failures prior to an internal flooding event.

Corrective Actions: The licensee changed the preventative maintenance for all the sump switches identified in the extent of condition from "as required" to a 10–year frequency. Additionally the licensee tested sump switches that were outside the 10–year frequency to include the control room laundry sump level switches. All sump switches tested satisfactorily.

Corrective Action Reference: CR 2018–07735, "NRC ID: Sump Level Monitoring Switches Credited for Flooding Analysis JL–083 are Not Functionally Checked on a Regular Basis."

Performance Assessment:

Performance Deficiency: The inspectors determined the licensee's failure to perform, monitor and trend the performance of preventative maintenance on the control room laundry and ECCS room sump switches in accordance with NOP–ER–3004, "FENOC Maintenance Rule Program," Revision 5, Section 4.6.1.1, was a performance deficiency. Specifically, the licensee revised the preventative maintenance schedule for the sump switches to a frequency of "as required" and thus would not be performing preventative maintenance to ensure that they remained capable of performing their intended function.

Screening: The inspectors determined the performance deficiency was more than minor because the issue was programmatic in nature and if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the licensee's failure to functionally test the sump switches could result in an unrecognized switch degradation and lead to an unannounced internal flooding condition that could challenge safety-related equipment.

Significance: The inspectors assessed the significance of the finding using Significance Determination Process (SDP) Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions." The finding screened as having very low safety significance (Green) because the finding was a deficiency

affecting the qualification of mitigating SSCs, however, the SSCs maintained their functionality.

Cross-Cutting Aspect: No cross-cutting aspect was assigned to this finding because the performance deficiency occurred in 2014, as part of the non-critical component stratification project, and therefore was not indicative of current licensee performance.

Enforcement:

Violation: Title 10 CFR 50.65(a)(1), requires, in part, that the holders of an operating license shall monitor the performance or condition of SSCs within the scope of the rule as defined by 10 CFR 50.65(b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended functions.

Title 10 CFR 50.65(a)(2) states, in part, that monitoring as specified in 10 CFR 50.65(a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended functions.

Contrary to the above, since 2014, the licensee failed to demonstrate that the performance or condition of the control room laundry and ECCS sump switches were being effectively controlled through the performance of preventative maintenance such that the SSCs remained capable of performing their intended functions. Specifically, the licensee revised the periodic functional test to "as required," or run to failure, and failed to perform preventative maintenance activities on the control room laundry sump switches and document the results.

Disposition: "This violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy."

71111.22—Surveillance Testing

Failure to Follow Procedures Results in Inoperable Division 1 Diesel Generator			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000440/2018004–02 Closed	[H.12] – Avoid Complacency	71111.22

Introduction:

A self-revealed Green finding and associated NCV of Technical Specification 5.4.1, "Procedures," was identified for the licensee's failure to implement the established surveillance procedure for DG testing. Specifically, during the scheduled surveillance run of the Division 1 DG on September 26, 2018, a reactor operator closed the Division 1 DG output breaker EH1102 at the wrong time to synchronize the generator to the grid. This resulted in the DG attempting to synchronize to the grid approximately 60 degrees out of phase and resulted in the DG being declared inoperable for inspection and repairs for seven days.

Description:

On September 26, 2018, reactor operators performed the monthly surveillance for the Division 1 DG in accordance with SVI–R43–T1317, "Diesel Generator Start and Load Division 1." During Section 5.1.2.4.c of the procedure which directs the operator to synchronize

the DG with the grid with the synchroscope needle rotating slowly in the fast direction at approximately 2 minutes to midnight or the 12 o'clock position, the reactor operator in fact closed the output breaker EH1102 at approximately the 10 o'clock position. This resulted in the DG and the grid attempting to synchronize approximately 60 degrees out of phase. Immediately after the breaker closed, multiple relays actuated including DG Trip Protect Relay Lockout and DG Trip Diff Relay Lockout which opened breaker EH1102 and shutdown the DG.

Corrective Actions: Troubleshooting was performed and the DG inspected for damage following the out of phase synchronization. The diesel engine prime mover was inspected and no damage was found. The generator portion was inspected and the licensee discovered that the stator portion of the generator had shifted such that the air gap between the stator and rotor were no longer within the manufacturer's tolerances. The generator was repaired and the DG returned to service on October 3, 2018, following a maintenance and surveillance run. The reactor operator involved was removed from licensed duties and received remedial training to include the areas of conduct of operations and human performance techniques. Additionally, an operations specific stand-down was conducted with the event being discussed and a focus on human performance techniques.

Corrective Action Reference: CR 2018–08510, "Division 1 DG Trip While Paralleling to the Grid."

Performance Assessment:

Performance Deficiency: The inspectors determined that the licensee's failure to ensure that procedure SVI–R43–T1317, "Diesel Generator Start and Load Division I" was implemented properly was a performance deficiency that was reasonably within the licensee's ability to foresee and should have been prevented. Specifically, failure to follow Section 5.1.2.4.c of the procedure resulted in the DG output breaker being closed early resulting in the Division 1 DG tripping and subsequently being inoperable for seven days in order to perform repairs.

Screening: The inspectors determined the performance deficiency to be more than minor because it was related to the Mitigating Systems Cornerstone attribute of Equipment Performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to properly follow procedure SVI–R43–T1317 resulted in the Division 1 DG being inoperable for seven days.

Significance: The inspectors assessed the significance of the finding using SDP Appendix A, "The Significance Determination Process (SDP) for Findings at Power," Exhibit 2, "Mitigating Systems." The inspectors answered questions in paragraph A.1 through A.4 "No" and the issue screened as having very low safety significance (i.e., Green).

Cross-Cutting Aspect: The finding had a cross-cutting aspect in the Avoid Complacency component of the Human Performance cross-cutting area, which states that the licensee will recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, the individuals involved did not recognize and plan for the possibility of mistakes and did not implement appropriate error reduction tools. The reactor operator involved had performed synchronizing the DG to the grid multiple times while on-shift and during simulator training, but stated that he was concerned about picking

up load following closing the breaker and had misplaced his focus away from the task at hand resulting in the preemptive closure of the breaker. (H.12)

Enforcement:

Violation: Technical Specification Section 5.4.1states, in part, that "written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978." NRC Regulatory Guide 1.33, Appendix A, Section 8 addresses "Procedures for Control of Measuring and Test Equipment and Surveillance Tests, Procedures, and Calibrations." Section 8.b states, in part, that, "implementing procedures are required for each surveillance test inspection, or calibration listed in the technical specifications."

Procedure SVI–R43–T1317, "Diesel Generator Start and Load Division 1," Revision 22 Step 5.1.2.4.c directed the operator to synchronize the diesel generator with the synchroscope needle rotating in the fast direction at approximately 2 minutes to midnight or the 12 o'clock position.

Contrary to the above, on September 26, 2018, the licensee failed to implement Step 5.1.2.4.c of procedure SVI–R43–T1317. Specifically, the licensee Reactor Operator closed breaker EH1102 with the synchroscope moving slow in the fast direction at approximately the 10 o'clock position resulting in the generator attempting to synchronize with the grid approximately 60 degrees out of phase and the DG protective relays actuating.

Disposition: This violation is being treated as a NCV consistent with Section 2.3.2 of the Enforcement Policy.

71124.01—Radiological Hazard Assessment and Exposure Controls

Licensee Identified Non-Cited Violation

This violation of very low safety significant was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy.

Enforcement:

Violation: Technical Specification (TS) 5.4.1 required in part, that written procedures/instructions be established, implemented and maintained for activities recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Revision 2, Appendix A Section 7.e.(1) addresses Radiation Protection Procedures for Access Control to Radiation Areas Including a Radiation Work Permit System.

Licensee procedure PYBP–RPS–0016, "Radiation Protection Response to Changing Plant Conditions", Revision 16, addresses access controls to radiation areas. Steps 4.4.2 and 4.4.3 require the licensee to perform actions as specified in the applicable attachments after notification by plant operations.

Procedure PYBP–RPS–0016, Revision 16, Attachment 7 – "RWCU Transfers", provides instructions for reactor water cleanup transfers, and requires, in part:

> Step 3.a, "Verify that all scaffolding that allows access to the transfer line have an installed ladder guard with a RP lock."

Step 3.e, “Verify that there is no scaffolding that allows access to the transfer line that does not have a ladder guard and RP lock.”

Contrary to the above, on September 19, 2018, the licensee failed to perform Steps 3.a and 3.e of PYBP–RPS–0016, Revision 16, Attachment 7, which is a procedure required by TS 5.4.1. Specifically, after notification of an upcoming reactor water cleanup transfer, the licensee failed to verify that all scaffolding that allowed access to the transfer line had an installed ladder guard with a RP lock and that there was no scaffolding that allowed access to the transfer line that did not have a ladder guard and RP lock. One scaffold that could provide access to the transfer line did not have an installed ladder guard with a RP lock.

Significance/Severity Level: The inspectors determined the performance deficiency was more than minor because it adversely affected the Program and Process attribute of the Radiation Safety – Occupational Cornerstone and its objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The inspectors assessed the significance of the finding using SDP Appendix C and concluded the violation was of very low safety or security significance (Green).

Corrective Action Reference: CR–2018–08229, “Non-Compliance with PYBP-RPS-0016, Radiation Protection Response to Changing Plant Conditions, resulted in a Locked High Radiation Area Access Control Concern.”

71124.03—In-Plant Airborne Radioactivity Control and Mitigation

Unresolved Item (Open)	Fit Testing of SCBA Respirators 05000440/2018004–03	71124.03

Description:

The inspectors identified a potential performance deficiency and associated violation of NRC requirements. Specifically, 10 CFR 20.1703(c)(6) requires licensees to perform fit testing for all tight fitting respirators to ensure the employees receive the appropriate protection by the respirator. The inspectors observed that the licensee used two styles of respirators, having two different harnesses with the same face pieces. The inspectors noted that that quantitative fit tests were only performed using respirators with a rubber harness attached to the face piece at five adjustable points, while the self-contained breathing apparatus (SCBAs) found in the field used a Kevlar harness, with only four adjustment points. Each style of respirator required an initial fit test and annual retests to meet the requirements contained in 10 CFR 20.1703(c)(6).

The licensee provided the inspector with its evaluation of the two styles of respirators, which included fit testing comparisons between the two styles.

Planned Closure Action: The NRC will review the available information to determine if this performance deficiency is minor or more than minor.

Licensee Action: The licensee is eliminating the rubber harness style that will result in one quantitative fit test to represent the respirator that will used in the field.

Corrective Action Reference: CR 2018–09900; “NRC Identified: Preliminary debrief of a Green Non-Cited Violation, for the failure to fit test respirator masks with differing harness configurations.”

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect from public disclosure. No proprietary information was documented in this report.

- On November 2, 2018, and January 9, 2019, the inspector presented the radiation protection program inspection results to Mr. D. Hamilton, Site Vice President, and other members of the licensee staff.
- On November 15, 2018, the inspectors presented the independent spent fuel storage installation inspection results to Mr. F. Payne, Plant Manager and other members of the licensee staff.
- On November 29, 2018, the inspectors presented the emergency preparedness program inspection results to Mr. N. Conicella, Site Emergency Preparedness Manager.
- On December 7, 2018, the inspectors presented the licensed operator requalification program inspection results to Mr. D. Hamilton, Site Vice President, and other members of the licensee staff.
- On January 10, 2019, the inspectors presented the quarterly integrated inspection results to Mr. D. Hamilton, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.01—Adverse Weather Protection

- Advance Change Notice 13–0802–006; Door Barriers; 04/22/2016
- CR 2018–11165; NRC ID: Degraded Flood Barriers in Unit 2 Interbus Alley; 12/21/2018
- Engineering Change Package No. 15–0212–000; Site Flooding Compensatory Measures TM 15–0121; Revision 3
- ONI–ZZZ–1; Tornado or High Winds; Revision 30

71111.04—Equipment Alignment

- Drawing 912–0609–00000; MCC Switchgear and Misc. Electrical Areas HVAC System and Battery Room Exhaust; Revision DD
- SOI–M23/24; MCC; Switchgear; and Miscellaneous Electrical Equipment Area HVAC System; Revision 15
- SVI–P42–T2003–A; Emergency Service Water to Unit 2 Emergency Closed Cooling Loop A Valve Operability Test; Revision 4
- SVI–P45–T1254; Emergency Service Water System Valve Position Verification; Revision 9
- VLI–M23/24, MCC, Switchgear and Miscellaneous Electrical Equipment Area HVAC System; 11/28/2018
- VLI-M25/26; Control Room HVAC and Emergency Recirculation System; Revision 07
- VLI-E12; Residual Heat Removal System; Revision 14

71111.05AQ—Fire Protection Annual/Quarterly

- FPI–0IB; Intermediate Building; Revision 10

- FPI–1AB; Auxiliary Building Unit 1; Revision 4
- FPI–1DG; Diesel Generator Building; Revision 9
- FPI–1TB; Turbine Building Unit 1; Revision 0
- FPI–0CC; Control Complex; Revision 11

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

- 100% Steady State Test; 04/10/17
- 100% Steady State Test; 06/28/18
- 41% Steady State Test; 06/28/18
- 43% Steady State Test; 04/10/17
- 75% Steady State Test; 06/28/18
- 76% Steady State Test; 04/10/17
- B2.2.1.1 Transient Testing; Manual Scram; 05/29/18
- B2.2.1.10 Transient Testing; Main Steam Isolation Valve Closure with One Safety Relief Valve Stuck Open; 05/04/17
- B2.2.1.2 Transient Testing; Trip All Reactor Feed Pump Turbines; 05/04/17
- B2.2.1.3 Transient Testing; Main Steam Isolation Valve Closure; 05/29/18
- B2.2.1.4 Transient Testing; Simultaneous Trip of All B33 Recirc Pumps; 05/29/18
- B2.2.1.5 Transient Testing; Trip Single B33 Recirc Pump; 05/04/17
- B2.2.1.7 Transient Testing; Maximum Rate Power Ramp (100% to 75% to 100%) Using Flow Control Valves; 05/04/17
- B2.2.1.9 Transient Testing; Main Steam Line Rupture in Drywell; 05/29/18
- CR 2016–11931; 2016 NRC Triennial Heat Sink: The ADHR System may have been Inappropriately Credited as the Available Alternate Decay Heat Removal System Following a Loss of Shutdown Cooling; 10/05/16
- CR 2017–00098; Untimely Event Notification Made to the NRC Operations Center; 01/04/17
- CR 2017–04868; Unexpected Main Turbine #1 Bypass Valve Opening; 04/30/17
- CR 2017–05022; Several Loss of Safety Function Missed Reports at Perry in the Recent Past; 05/06/17
- CR 2017–05808; Trend Review-Missed Fire Protection and Loss of Safety Function Requirements; 05/21/17
- Credit for Position Report: BOP Operator; 01/01/17 – 12/31/17
- Credit for Position Report: BOP Operator; 01/01/18 – 12/31/18
- Credit for Position Report: Reactor Operator-ATC; 01/01/17 – 12/31/17
- Credit for Position Report: Reactor Operator-ATC; 01/01/18 – 12/31/18
- Credit for Position Report: Shift Engineer; 01/01/17 – 12/31/17
- Credit for Position Report: Shift Engineer; 01/01/18 – 12/31/18
- Credit for Position Report: Shift Manager; 01/01/17 – 12/31/17
- Credit for Position Report: Shift Manager; 01/01/18 – 12/31/18
- Credit for Position Report: Unit Supervisor; 01/01/17 – 12/31/17
- Credit for Position Report: Unit Supervisor; 01/01/18 – 12/31/18
- Crew Performance Improvement Plan; Various
- Cycle 17 Beginning of Life Core Installation Testing; 03/15/17
- Cycle 17 Middle of Life Core Installation Testing; 03/18/18
- Evolution Specific Reactivity Plan; November 2018 Pattern Adjustment; 10/29/2018
- Evolution Specific Reactivity Plan; October 2018 Pattern Adjustment; 10/02/2018
- NOBP–TR–1271 Attachment 2: Inactive License Retraining Program Records; Various
- NOBP–TR–1271; Operator License Administration; Revision 7
- NOP–OP–1013; Control of Time Critical Operator Actions; Revision 3
- NOP–TR–1200–06; Qualification Revocation; Revision 1

- NOP–TR–1210–01; Training Needs Analysis, Performance Gap Analysis, and Training Effectiveness Evaluation Worksheet; 01/05/18
- NOP–TR–1240–06; Remediation Training; Revision 0
- NOP–TR–1280; Simulator Configuration Management; Revision 2
- Operator Remediation Plan; Various
- OT–3070–003–RP1C; Simulator Scenario Guide RP1C; 11/28/2018
- OT–3070–004–PC5B; Simulator Scenario Guide PC5B; 11/28/2018
- OT–3070–PC1A; Biennial Requal Exam Operating Test Scenario, Week 7
- OT–3070–RP1A; Biennial Requal Exam Operating Test Scenario, Week 7
- OT–3070–RP2C; Biennial Requal Exam Operating Test Scenario, Week 5
- OT–3070–RP6C; Biennial Requal Exam Operating Test Scenario, Week 7
- OT–3701–ADM_311SRO; SRO Admin Job Performance Measure (JPM), Week 7
- OT–3701C11_014SRO; SRO Admin JPM, Week 5
- OT–3701C11_505RO; Simulator JPM, Week 7
- OT–3701C11_513RO; Simulator JPM, Week 6
- OT–3701E12_004RO; Simulator JPM, Week 3
- OT–3701E22A_006RO; In Plant JPM, Week 7
- OT–3701G42_004RO; In Plant JPM, Week 6
- OT–3701M15_501RO; Simulator JPM, Week 7
- OT–3701P50_001RO; RO In Plant JPM, Week 7
- OT–3701P54_002RO; In Plant JPM, Week 7
- PA–PY–17–01; Assessment of Operations Performance; 07/24/17
- PA–PY–17–03; Assessment of Operations Performance; 12/28/17
- PA–PY–17–04; Assessment of Operations Performance; 03/06/18
- PA–PY–18–01; Assessment of Operations Performance; 05/04/18
- PA–PY–18–02; Assessment of Operations Performance; 08/01/18
- PA–PY–18–03; Assessment of Operations Performance; 10/31/18
- Plant Narrative Logs; 07/28/18
- PYBP–POS–0029; Time Critical Operator Action Validation; Revision 4
- PYBP–PTS–0033; Simulator Configuration Control; Revision 13
- RO Biennial Requal Exam 2018, Week 7; Exam #2018-13
- SA–BN–2018–0886; Snap Shot Assessment - NRC 71111.11b Inspection Preparations
- Scenario Based Testing for Simulator Lesson Plan OTLC–3058201810_PY–SGF; 09/25/18
- Simulator Work Order #14–0036; ED09B Should be Loss of ED1B but Brings in Div 1 Alarms; 08/07/14
- Simulator Work Order #15–0019; Change Modeling for RPS Alarms; 09/25/15
- Simulator Work Order #15–0020; Service Water Pump C Was Replaced and no Longer has a Seal Water Start Permissive; 09/25/15
- Simulator Work Order #15–0023; Div 1 and 2 Start Logic Needs to be Corrected; 09/25/15
- Simulator Work Order #16–0004; Removal of Breaker S–662 and S–622; 05/05/16
- Simulator Work Order #16–0005; Simulator vs Plant Comparison for Pressure Transient with Two SRVs Opening; 08/19/16
- Simulator Work Order #16–0009; THOR Abort During NRC Exam; 12/19/16
- Simulator Work Order #17–0004; Install New Cycle 17 BOL Core Files for Use by Training; 02/24/17
- Simulator Work Order #17–0008; MSR Alarms Not Received in Simulator Like They are in the Plant; 05/16/17
- Simulator Work Order #17–0009; Improve Modeling of TU07 Malfunction for Turbine Vibrations; 05/16/17
- Simulator Work Order #17–0024; Implement ECP 16–0096 Seismic Mod in the Simulator; 07/14/17

- Simulator Work Order #17–0027; THOR Abort on Cell 1321; 08/01/17
- Simulator Work Order #17–0035; Changes to Analog Input Signals Ranges Required for New Style NUS Controllers; 12/15/17
- Simulator Work Order #17–0043; Replace Existing N41R0110 Recorder with New Digital Yokogawa Paperless Model; 03/05/18
- Simulator Work Order #18–0015; Fix Problem Identified During ILO Exam Development; 03/07/18
- Simulator Work Order #18–0019; Correct Coding for Static Scram Rod Positions; 03/21/18
- Simulator Work Order #18–0029; Cell 1329 High Pressure Caused a THOR Abort; 06/06/18
- Simulator Work Order #18–0034; Malfunction Does Not Work as Expected; 12/02/12
- Special Maneuver Control Rod Movement Sheet; 10/02/2018
- SRO Biennial Requal Exam 2018, Week 7; Exam #2018-14
- Time Critical Operator Actions Time Validation-Summary Sheet; DBA LOCA Shift LPCI to Suppression Pool Cooling; 07/01/15
- Time Critical Operator Actions Time Validation-Summary Sheet; SLC Initiation Within Two Minutes of an ATWS Event; 08/26/15
- Time Critical Operator Actions Time Validation-Summary Sheet; Station Black Out Pump CST to the SP Using HPCS; 10/09/15

71111.12—Maintenance Effectiveness

- Calculation JL–083; Flooding Analysis of CCB, IB, and FHR - Floor Elevation 574'–10"; Revision 3
- CR 2014–10411; HPU 'A' Flow Control Valve Lockup; 06/15/2014
- CR 2017–08602; Prompt Operability Determination of Pinhole Leak could not be Assured; 08/19/2017
- CR 2018–05504; ESW A Through-Wall Pipe Leak at RHR A HX Outlet Piping Aux 574' E; 06/13/2018
- CR 2018–06590; RCIC Min Flow Valve Slow to Open during the Performance of SVI-E51-T2001; 07/24/2018
- CR 2018–06921; Emergency Service Water Pump B Motor Oil Leakage; 08/04/2018
- CR 2018–07735; NRC ID: Sump Level Monitoring Switches Credited for Flooding Analysis JL– 083 are not Functionally Checked on a Regular Basis; 08/29/2018
- CR 2018–09322; Motor Control Center PY–1R42S0015–OOE, Possible Contactor Issue Affects RCIC Valve; 11/21/2018
- Cycle 17 Reactor Recirculation System Improvement Plan 1st Period 2018
- Failure Mode Analysis; Reactor Recirculation Flow Control Valve (FCV) 'A,' Unexpectedly Locked Up; 11/17/18
- Maintenance Rule Evaluation Form; CR 2016–01071; B33; 01/24/16
- Maintenance Rule System Basis Document System G60/G61; Revision 1
- Perry Nuclear Power Plant Plant Health Report; 2018–1
- Perry Reactor Recirculation System Drain Appendage Removal Management Risk Evaluation; 09/24/18
- Plant Health Committee P45 Update – Emergency Service Water System
- Problem Solving Plan; Reactor Recirculation Flow Control Valve 'A' Unexpectedly Locked Up (CR 2018–10489); Revision 6
- Technical Evaluation from Preventative Maintenance Review 600936099

71111.13—Maintenance Risk Assessments and Emergent Work Control

- CR 2018–06788; NRC ID: SVI–E51–T2001 Valve Stroke Timing of the SP Suction Valve 1E51F0031 – Precaution and Limitation 15 not Initially Followed; 07/30/2018

- CR 2018–06950; RCIC Min Flow Valve Slow to Open during the Performance of SVI-E51-T2001; 07/24/2018
- CR 2018–09322; Motor Control Center PY–1R42S0015–OOE, Possible Contactor Issue Affects RCIC Valve; 11/21/2018
- CR 2018–10299; Diesel Driven Fire Pump Overspeed FCMS Alarm Not Received; 11/18/2018
- CR 2018–10398; Misposition of the Fire Service Jockey Pump Control Panel Switch; 11/21/2018
- FTI–F0016; Motor Operated Valve Diagnostic Testing; Revision 9
- NOP–OP–1007; Risk Management; Revision 28
- NOP–WM–1001; Order Planning Process; Revision 29
- PAP–1924; Risk-Informed Safety Assessment and Risk Management; Revision 9
- SVI–E51–T2001; RCIC Pump and Valve Operability Test; Revision 42

71111.15—Operability Determinations and Functionality Assessments

- ARI–H13–P800–0001; Heating Ventilation and Air Conditioning Control Panel; Revision 7
- CR 2018–08574; Annulus Exhaust Gas Treatment System ‘A’ Victoreen Flow Alarm will not Clear; 09/28/2018

71111.19—Post Maintenance Testing

- SVI–R43–T1317; Diesel Generator Start and Load Division 1; 10/03/2018
- SVI–R43–T1318; Diesel Generator Start and Load Division 2; 12/17/2018
- WO 200767679; Post Patch UTT Exams of ESW B Outlet; 10/30/2018
- WO 200769495–0150; SVI–P53–T7312; Upper Containment Airlock Pneumatic System Leak Test, Pen #312; 11/09/2018
- WO 200769495–0160; SVI–P53–T6312; Upper Primary Containment Air Lock (Penetration P312), In Between the Seals Test; 11/09/2018
- WO200774443; In-Service Leak Test/Check Drain Following Repair of Division II DG Right Bank Turbocharger Combustion Air Intercooler; 12/17/2018

71111.22—Surveillance Testing

- SVI–C85–T1314; Turbine Bypass Valve Operability Test; Revision 8
- SVI–E22–T2001; HPCS Pump and Valve Operability Test; Revision 31
- SVI–E22–T1319; Diesel Generator Start and Load Division 3; Revision 27
- SVI–R43–T1317; Diesel Generator Start and Load Division 1; Revision 22

71114.04—Emergency Action Level and Emergency Plan Changes

- Emergency Plan for Perry Nuclear Power Plant; Revisions 51 and 52
- NOP–LP–5002; Evaluation of Changes to Emergency Plans and Supporting Documents 10 CFR 50.54(q); Revision 7
- Perry Station 10 CFR 50.54(q) Evaluator Qualification and Training Records Spreadsheet; 05/31/2018
- PY–2017–013–00; 10 CFR 50.54(q) Screen for “PSI-0019, Emergency Action Levels (EAL) Bases Document” Revision; 06/12/2017
- PY–2017–022–00; 10 CFR 50.54(q) Evaluation for “Emergency Plan for Perry Nuclear Power Plant” Revision; 11/30/2017
- PY–2017–022–00; 10 CFR 50.54(q) Evaluation for “PSI-0019, Emergency Action Levels (EAL) Bases Document” Revision; 06/13/2017

- PY–2017–022–00; 10 CFR 50.54(q) Screen for “Emergency Plan for Perry Nuclear Power Plant” Revision; 10/30/2017

71114.06—Drill Evaluation

- NEI 99–02, Regulatory Assessment Performance Indicator Guideline, Revision 7
- OT–3070–PC1D; Biennial Requal Exam Operating Test Scenario, Week 5
- PNPP No. 7794, FENOC Nuclear Power Plant Initial Notification Form Perry, Revision 01/09/2018

71124.01—Radiological Hazard Assessment and Exposure Controls

- CR 2018–09900; NRC Identified: Preliminary Debrief of a Green Non-Cited Violation, for the Failure to Fit Test Respirator Masks with Differing Harness Configurations; 11/07/2018

71124.03—In-Plant Airborne Radioactivity Control and Mitigation

- Bauer Air Compressor Maintenance Record; December 2017
- CR 2018–09900; NRC Identified: Preliminary Debrief of a Green Non-Cited Violation, for the Failure to Fit Test Respirator Masks with Differing Harness Configurations; 11/07/2018
- Firehawk M7 SCBA Annual Inspection and Flow Test Records; 2017
- Firehawk M7 SCBA Inspection Records; First Quarter 2018
- Grade D Air Quality Records; 2017–2018
- HPI–G0007; Maintenance of Respiratory Protective Equipment and Operation of the Respiratory Cleaning/Issue Facilities; Revision 24
- NOP–OP–4301; Respiratory Protection Program; Revision 10
- NOP–OP–4310; Firehawk M7 Self Contained Breathing Apparatus; Revision 7

71124.05—Radiation Monitoring Instrumentation

- Annual Calibration of Portable Radiation Survey Instrumentation; 03/21/18
- Calibration Record Whole Body Counter; 02/2/18
- Calibration Record; ASP–1/HP–270 Serial Number L70L161H; 11/01/17
- Calibration Record; ASP–2/Ludlum 43–2 Serial Number L70L093M; 03/14/18
- Calibration Record; Fluke 451B Serial Number L70L0010C; 08/18/18
- Calibration Record; H809V–1 Serial Number L70L200G; 01/18/18
- Calibration Record; Ludlum Model 12 Serial Number L70L096O; 04/04/18
- Calibration Record; RM–14 Serial Number L70L121J; 01/15/18
- Calibration Records; High Purity Germanium Gamma Spectroscopy Systems; Various Records
- Calibration Records; Liquid Scintillation Counting Systems; Various Records
- CR 2017–11746; Cross Check Sample Failed on MCA#1; 11/28/17
- Drywell High Range Monitor Channel A Detector Calibration; 03/18/17
- Drywell High Range Monitor Channel A Electronic Calibration; 08/08/17
- Fleet Radiation Protection Instrumentation Assessment; 12/29/17
- HPI–J0047; Calibration of the SAM Small Article Monitor; Revision 6
- HPI–J0054; Calibration of the Abacos 2000 Whole Body Counting System; Revision 3
- HPI–J0059; Peration of the Radcal MDH; Revision 5
- Interlaboratory Comparison Data Gamma Spectroscopy Systems; Records 2016–2018
- JL Shepherd Model 89; Performance Verification; 1/9/18
- NOP–OP–4401; Radiation Protection Instrumentation Program; Revision 3

- NOP–OP–4413; PM–12 Calibration, Source Checks and Use; Revision 00
- Self–assessment; Radiation Monitoring Instrumentation and Performance Indicators; 08/14/18

71151—Performance Indicator Verification

- CR 2018–09591; NRC Identified Unposted Ladder Provided Access to a Posted High Radiation Area in the Overhead; 11/30/18
- Station Radioactive Effluent Dose Summary Information; July 2017 through September 2018
- NOBP–LP–4012–10; Reactor Coolant System Leakage; October 2017 through April 2018; Revision 02
- NOBP–LP–4012–10; Reactor Coolant System Leakage; May 2018 through September 2018; Revision 03
- Reactor Water DEI Data; July 2017 through September 2018
- eSOMS Plant Narrative Logs; 10/01/2017 – 09/30/2018
- Reactor Water DEI Analysis; 10/31/18

60855.1—Operation of an Independent Spent Fuel Storage Installation

- 10 CFR 72.212 Report; Perry Nuclear Power Plant; Revision 8
- 10 CFR 72.212 Report; Perry Nuclear Power Plant; Revision 9
- CR 2018–10230; 2018 Dry Cask Inspection: Records Retention per 10CFR72.174; 11/15/2018
- ISFSI Annual Thermoluminesent Dosimeter Readings; 2016–2018
- ISFSI Condition Reports; 2016–2018
- ISFSI Pad Survey Map; 2018
- ISFSI Quarterly Thermoluminesent Dosimeter Readings; 2016–2018
- L–17–076; Annual Environmental and Effluent Release Report; 04/21/2017
- L–18–127; Annual Environmental and Effluent Release Report; 05/01/2018
- MS–C–17–03–30; Consoli Audit Checklist - ISFSI
- Quality Assurance Program Manual; 03/13/2018
- SA–BN–2018–1179; Pre-NRC Inspection Assessment for ISFSI, 72.48, and 72.212 Programs; 10/15/2018
- WO 200712149; HI-STORM Annual Inspection; 07/12/2018
- WO 200737342; Inspect Dry Cask Storage Concrete Areas; 07/16/2018