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

January 29, 2020

Mr. Frank Payne
Site Vice President
FirstEnergy Nuclear Operating Company
Reg Affairs-A210
10 Center Road, P. O. Box 97
Perry, OH 44081-0097

SUBJECT: PERRY NUCLEAR POWER PLANT – INTEGRATED INSPECTION REPORT 05000440/2019004

Dear Mr. Payne:

On December 31, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Perry Nuclear Power Plant. On January 17, 2020, 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.

No findings or violations of more than minor significance were identified during this inspection.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Billy C. Dickson, Jr, Chief
Branch 2
Division of Reactor Projects

Docket No. 05000440
License No. NPF-58

Enclosure:
As stated

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Letter to Frank Payne from Billy Dickson dated January 29, 2020.

SUBJECT: PERRY NUCLEAR POWER PLANT – INTEGRATED INSPECTION REPORT 05000440/2019004

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000440
License Number:	NPF-58
Report Number:	05000440/2019004
Enterprise Identifier:	I-2019-004-0055
Licensee:	FirstEnergy Nuclear Operating Company
Facility:	Perry Nuclear Power Plant
Location:	Perry, OH
Inspection Dates:	October 01, 2019 to December 31, 2019
Inspectors:	L. Alvarado Guilloty, Resident Inspector S. Bell, Health Physicist G. Hansen, Sr. Emergency Preparedness Inspector J. Nance, Resident Inspector L. Rodriguez, Reactor Inspector J. Rutkowski, Project Engineer E. Sanchez Santiago, Senior Reactor Inspector J. Steffes, Senior Resident Inspector J. Winslow, Resident Inspector
Approved By:	Billy C. Dickson, Jr, Chief Branch 2 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated 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.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000440/2019004-01	Degraded Turbine Overspeed Reset Limit Switch Results in an Extension in USAR Described Test Frequency	71111.18	Open

PLANT STATUS

The plant began the inspection period at rated thermal power. On December 6, 2019, the licensee identified elevated offgas pretreat chemistry results, which was indicative of a fuel defect, from a routine sample. On December 10, 2019, the licensee lowered reactor power to approximately 52 percent to perform power suppression testing and identify potential fuel defects. Following completion of the power suppression testing, Perry began a gradual power ascension on December 12, 2019, and achieved full power on December 14, 2019. The reactor remained at approximately 100 percent power for the remainder of the inspection period.

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). On March 21, 2018, FES, FirstEnergy Nuclear Generation (FENGEN), and FENOC filed for bankruptcy. On July 26, 2019, FES/FENOC submitted a letter to the NRC withdrawing the April 25, 2018, certification of permanent cessation of power operations for Davis-Besse Nuclear Power Station and Perry Nuclear Power Plant (ADAMS Accession Number ML19207A097). 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

External Flooding Sample (IP Section 03.04) (1 Sample)

(1)
- Diesel generator rooms; and
- Emergency service water pump house

71111.04Q - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (5 Samples)

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

(1) "B" train of control room ventilation and emergency recirculation system on October 15 - 17, 2019
(2) "A" train of emergency service water system on October 23, 2019
(3) "B" train of residual heat removal (RHR) system on October 30, 2019
(4) "A" train of standby liquid control system on November 12, 2019
(5) "A" train of annulus exhaust gas treatment system on November 13, 2019

71111.04S - Equipment Alignment

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated system configurations during a complete walkdown of the reactor core isolation cooling system on November 12-15, 2019

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (5 Samples)

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

(1) Emergency service water pump house on October 18, 2019
(2) Diesel generator hallway 620 and 646 foot elevations on October 22, 2019
(3) Auxiliary building 620 foot elevation fire zones 1AB-3A/B on October 24, 2019
(4) Control complex 620 elevation fire zones 1CC-3B/D on October 30, 2019
(5) Intermediate building 654, 665, and 682 foot elevations fire zones 0IB-4/5 on October 31, 2019

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 02.02a.) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

(1) Unit 1, Division 1 and 2, and Unit 2, Division 1, motor control center switchgear rooms from a break in a fire protection main line break

71111.07A - Heat Sink Performance

Annual Review (IP Section 02.01) (1 Sample)

The inspectors evaluated readiness and performance of:

(1) Division 3 emergency diesel generator jacket water heat exchanger during the weeks of November 3 and 18, 2019

71111.07T - Heat Sink Performance

Triennial Review (IP Section 02.02) (3 Samples)

The inspectors evaluated heat exchanger/sink performance on the following:

(1) Residual Heat Removal (RHR) Heat Exchanger "B" (1E12B0001B), cooled by the service water system, Section 02.02.b
(2) Emergency Closed Cooling Water (ECCW) Heat Exchanger "B" (1P42B0001B), cooled by the service water system, Section 02.02.b
(3) Ultimate Heat Sink, Sections 02.02.d.5 and 02.02.d.7

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Sample)

(1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification biennial written examinations and annual operating tests administered from October 28 - December 9, 2019

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

(1) The inspectors observed and evaluated licensed operator performance in the Control Room during the downpower and rod pattern adjust associated with power suppression testing on December 10 - 11, 2019

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

(1) The inspectors observed and evaluated an operations crew-evaluated scenario in the plant training simulator on November 19, 2019

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness Inspection (IP Section 02.01) (4 Samples)

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

(1) "B" combustible gas mixing compressor failure, CR 2019-09212, during surveillance test on November 1, 2019
(2) Division 3 emergency diesel generator following a diesel generator trip, CR 2019-09378, on reverse power relay actuation on December 5, 2019
(3) Remote shutdown panel switches following, CR 2019-09208, RHR "B" containment spray 1st isolation valve lost all position indication on December 7, 2019
(4) Review of licensee's maintenance rule program periodic review on December 13, 2019

Quality Control (IP Section 02.02) (1 Sample)

The inspectors evaluated maintenance and quality control activities associated with the following equipment performance activities:

(1) Component grade dedication of Bailey BLC2000-721 control unit to replace annulus differential pressure controller following unit failure on November 25 - 27, 2019

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (3 Samples)

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

(1) Plant risk assessment with the "B" train of control room HVAC and emergency recirculation systems out of service for planned work and hot weather in the area with a grid alert on October 2, 2019
(2) Emergent troubleshooting after Division 3 emergency diesel generator tripped on November 5, 2019
(3) Plant risk assessment with the Division 2 RHR systems unavailable for divisional work window and power suppression testing on December 10 - 11, 2019

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 02.02) (2 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

(1) Past operability evaluation associated with CR 2019-09208, RHR B Containment Spray 1st Isolation Valve Lost All Position Indication on November 1, 2019
(2) Control rod drive system during inability to select control rods on November 1, 2019

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (3 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) Review of the licensee's extension of USAR described turbine overspeed testing frequency due to degraded test circuitry on November 13 - December 14, 2019
(2) Interim flooding measures in response to a re-evaluation of the local intense precipitation flooding hazard on December 7, 2019
(3) Modification of reactor water cleanup system isolation due to a steam leak on December 16 - 19, 2019

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the following post maintenance tests:

(1) Partial RHR "B" pump and valve operability test after troubleshooting of 1E12-F028B, containment spray "B" first shutoff valve on November 1, 2019
(2) Control rod exercising after troubleshooting and replacement of the malfunctioning beam control card in the Rod Control and Information system on November 2, 2019
(3) Testing following replacement of the channel "C" scram discharge volume high level relay on November 7, 2019
(4) Emergency closed cooling pump "A" test following preventative maintenance window on November 18, 2019

71114.02 - Alert and Notification System Testing

Inspection Review (IP Section 02.01-02.04) (1 Sample)

(1) The inspectors evaluated the following maintenance and testing of the alert and notification system:
    - Annual siren inspection and maintenance records for the period from September 2017 to September 2019
    - Monthly alert notification system (siren) tests for the period from September 2017 to September 2019

71114.03 - Emergency Response Organization Staffing and Augmentation System

Inspection Review (IP Section 02.01-02.02) (1 Sample)

(1) The inspectors evaluated the readiness of the Emergency Preparedness Organization

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

(1) The inspectors completed an evaluation of submitted Emergency Action Level and Emergency Plan changes on November 21, 2019. This evaluation does not constitute NRC approval

71114.05 - Maintenance of Emergency Preparedness

Inspection Review (IP Section 02.01 - 02.11) (1 Sample)

(1) The inspectors evaluated the maintenance of the emergency preparedness program

RADIATION SAFETY

71124.02 - Occupational ALARA Planning and Controls

Radiological Work Planning (IP Section 02.01) (1 Sample)

The inspectors evaluated the licensee's radiological work planning.

(1) The inspectors reviewed the following activities:
- RWP 190904 and associated ALARA plans; 1R17 Reactor Reassembly
- RWP 190522 and associated ALARA plans, 1R17 Bioshield In-Service Inspection Activities
- RWP 190903 and associated ALARA plans; 1R17 In-Vessel Inspection Activities

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 02.02) (1 Sample)

The inspectors evaluated dose estimates and exposure tracking.

(1) The inspectors reviewed the following as low as reasonably achievable planning documents:
- RWP 190904 and Associated ALARA Plans; 1R17 Reactor Reassembly
- RWP 190522 and associated ALARA plans; 1R17 Bioshield In-Service Inspection Activities
- RWP 190903 and associated ALARA plans; 1R17 In-Vessel inspection Activities

Additionally, the inspectors reviewed the following radiological outcome evaluations:
- RWP 190904; 1R17 Reactor Reassembly post job evaluation
- RWP 190522; 1R17 Bioshield In-Service Inspection Activities post job evaluation
- RWP 190903; 1R17 In-Vessel inspection Activities post job evaluation

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Self-Contained Breathing Apparatus for Emergency Use (IP Section 02.03) (1 Partial)

The inspectors evaluated self-contained breathing apparatus program implementation.

(1) (Partial)
This augments the inspection sample documented in NRC Inspection Report 05000440/2018004

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

EP01: Drill/Exercise Performance (IP Section 02.12) (1 Sample)

(1) 07/01/2018 - 06/30/2019

EP02: ERO Drill Participation (IP Section 02.13) (1 Sample)

(1) 07/01/2018 - 06/30/2019

EP03: Alert & Notification System Reliability (IP Section 02.14) (1 Sample)

(1) 07/01/2018 - 06/30/2019

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

(1) 10/01/2018 - 09/30/2019

BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

(1) 10/01/2018 - 09/30/2019

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

(1) 10/01/2018 - 09/30/2019

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

(1) The inspectors reviewed licensee-identified water fire protection system issues to determine if a trend existed that could, if allowed to continue, compromise the installed spray nozzles' functionality and adversely impact the system ability to suppress fires impacting plant electrical transformers and fires occurring within plant areas with fire protection spray nozzles. The inspectors did not find an adverse trend that would cause the inspectors to question the plant's water fire protection system ability to carry out its design function.

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

The inspectors reviewed the licensee’s implementation of its corrective action program related to the following issues:

(1) RCIC Steam supply second drain isolation valve leak caused EOP-3 entry CR2019-10360
(2) Review of plant aggregate risk assessment

INSPECTION RESULTS

Unresolved Item (Open)	Degraded Turbine Overspeed Reset Limit Switch Results in an Extension in USAR Described Test Frequency URI 05000440/2019004-01	71111.18

Description:

On July 27, 2019, a turbine trip and reactor scram occurred during performance of weekly turbine overspeed testing. The turbine trip occurred during performance of step 5.1.2.3 of PTI-N32-P0001, which tests the mechanical overspeed trip, as documented in CR 2019-06321, “Turbine Trip during Weekly Turbine Overspeed Test.” Troubleshooting efforts identified several discrepant conditions which were addressed during the forced outage, except for one. A ground was discovered associated with the reset limit switch of the turbine overspeed system. The inspectors noted, through review of CR 2019-06587, "Limit Switch Causes - 125 VDC Ground," that the licensee decided not to replace the reset limit switch upon discovery due to personnel safety and the potential for another turbine trip.

Updated Safety Analysis Report (USAR) Section 10.2.2.3 states, in part, that “each compartment of the mechanical and electrical overspeed protection systems will be tested at each startup and during normal operations, on a weekly basis, by the following tests:

a. A mechanical overspeed trip test at the the EHC panel to test for operation of the overspeed trip device and mechanical trip valve.
b. A mechanical trip piston test at the EHC panel to test for electrical activation of the trip mechanism.
c. An electrical trip test at the EHC panel to test for operation of the electrical trip valve.
d. A backup overspeed trip test at the EHC panel to test the 2 out of 3 logic circuits.”

Updated Safety Analysis Report 10.2.3.6.1.1 states, in part that, “turbine assembly inspection interval was selected on the basis of acceptably low probabilities [less than 1.0 E-5] of Perry turbine missile generation. Turbine missile generation probabilities are calculated by using either a methodology by General Electric or a methodology developed by Siemens-Westinghouse.

The methodology for determination of missile probability contains three major components:

- The probability of the turbine attaining speeds higher than those occurring during normal operation.
- The estimation of wheel burst probability as a function of speed.
- The probability of wheel fragment penetrating the turbine casing and thus generating an external missile.”

The inspectors reviewed the prompt functionality assessment contained in CR 2019-06321 and determined the licensee contracted with an outside vendor to assess the impacts of changing the turbine overspeed testing on turbine missile probability. The inspectors determined the missile probability analysis, to increase testing frequency from weekly to semi-annually, used a Monte Carlo methodology rather than a methodology by General Electric or Siemens-Westinghouse, as stated in USAR 10.2.3.6.1.1. The inspectors further concluded that the prompt functionality assessment documented that, “the use of an alternate analytical method in lieu of the General Electric methodology is judged to be acceptable for this application and consistent with NRC Inspection Manual [Chapter (IMC)] 0326 Appendix

C.04 guidance." The NRC inspectors noted that IMC 0326 was revised on October 1, 2019 and changed the Appendix C.04 guidance to Section 08 of IMC 0326.
Following review of the prompt functionality assessment the inspectors developed questions associated with the appropriateness to change USAR described testing frequencies using the prompt functionality assessment process rather than the 10 CFR 50.59 process. The licensee developed a "white paper" which established the following position.

"Guidance for implementation of the requirements of 10 CFR 50.59 is addressed in FENOC procedure NOP-LP-4003 and FENOC Business Practice NOBP-LP-4003A. This procedure [NOP-LP-4003] includes references to NRC Regulatory Guide (RG) 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments" and NEI 96-07, Revision 1, "Guidelines for 10 CFR 50.59 Implementation." In November 2000, RG 1.187 (Revision 0), endorsed Nuclear Energy Institute (NEI) 96-07, Revision 1, as acceptable for complying with the NRC regulations in 10 CFR 50.59.

The guidance provided in NEI 96-07 regarding applicability of 10 CFR 50.59 to nonconforming and degraded condition is addressed in section 4.4:

Three general courses of action are available to licensees to address non-conforming and degraded conditions. Whether or not 10 CFR 50.59 must be applied, and the focus of a 10 CFR 50.59 evaluation if one is required, depends on the corrective action plan chosen by the licensee, as discussed below:

If the licensee intends to restore the SSC back to its as-designed condition then this corrective action should be performed in accordance with 10 CFR 50, Appendix B (i.e., in a timely manner commensurate with safety). This activity is not subject to 10 CFR 50.59.

If an interim compensatory action is taken to address the condition and involves a temporary procedure or facility change, 10 CFR 50.59 should be applied to the temporary change. The intent is to determine whether the temporary change/compensatory action itself (not the degraded condition) impacts other aspects of the facility or procedures described in the UFSAR. In considering whether a temporary change impacts other aspects of the facility, a licensee should pay particular attention to ancillary aspects of the temporary change that result from actions taken to directly compensate for the degraded condition.

If the licensee corrective action is either to accept the condition "as-is" resulting in something different than its as-designed condition, or to change the facility or procedures, 10 CFR 50.59 should be applied to the corrective action, unless another regulation applies, e.g., 10 CFR 50.55a. In these cases, the final corrective action becomes the proposed change that would be subject to 10 CFR 50.59.

It is expected the degraded condition of the turbine overspeed protection test circuit ground will be restored to its as designed configuration in a timely manner commensurate with its safety significance. The less frequent test interval that is implemented by the PFA is not viewed to be a compensatory action for the degraded condition, as it does not restore or maintain functionality for the turbine overspeed trip test system. The PFA is not intended to accept the degraded condition "as-is", or to change the facility or its procedures. As such, the less frequent turbine trip test interval that is implemented by the PFA was concluded to not require further review under 10 CFR 50.59."

Planned Closure Actions: The inspectors require further evaluation and assessment as to whether the change in overspeed testing frequency, i.e. non-performance on a weekly basis,

constitutes a compensatory measure for the degraded equipment and required review in accordance with the 10 CFR 50.59 process. This review is to determine whether a violation exists. Thus, the issue is considered and unresolved item pending completion of inspector review and evaluation and discussion with the Office of Nuclear Reactor Regulation.
Corrective Action References: CR 2019-06321 Turbine Trip During Weekly Turbine Overspeed Test

Minor Violation	71124.03

Minor Violation: The inspectors identified that the licensee failed to perform fit testing, as required by 10 CFR 20.1703(c)(6), for all models and configuration of respirators used at its facility. Specifically, the licensee credited its fit testing of a full face respirator with a rubber strap enclosure for its SCBA type of respirator that is configured with a different harness (Kevlar harness closure system).

Screening: The inspectors determined the performance deficiency was minor. The failure to perform fit testing on each model of respirator was a performance deficiency, in that, the licensee failed to implement a regulatory requirement that was within the licensee's ability to foresee and to prevent. The inspectors evaluated the performance deficiency against the criteria contained in IMC 0612. The inspectors determined that the performance deficiency was not a precursor to a significant event; if left uncorrected, did not have the potential to lead to a more significant safety concern; did not impact a performance indicator; and did not adversely affect the cornerstone objective to ensure adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, the inspectors evaluated the potential for the differing configurations to impact the fit of the respirators. In addition, the licensee performed fit testing for individual for both models of respirators, which determined that results were acceptable when individuals were tested with both configurations. Based on the inspectors' review and the licensee's testing data, the inspector concluded that differing configurations did not appear to reduce the licensee's ability to control and limit the intake of airborne radioactivity and other hazards.

Enforcement: Title 10 CFR 20.1703(c)(6) requires, in part, that the licensee implement and maintain a Respiratory Protection Program that includes fit testing before the first field use of tight fighting, face-sealing respirators and periodically thereafter at a frequency not to exceed one year. However, the licensee's program did not perform fit testing prior to field use on the SCBA full face respirator with the Kevlar harness closure system as required by 10 CFR 20.1703(c)(6). Instead, the licensee performed fit testing on the air purifying style of respirator, with the rubber harness, and took credit for that fit test for the SCBA style of respirator, with the Kevlar harness. The licensee has restored compliance by performing fit testing using respirators with the Kevlar closure system.

The licensee entered this issue into the Corrective Action Program as AR 2018-09900.

This failure to comply with 10 CFR 20.1703(c)(6) constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

The disposition of this violation closes URI: 05000440/2018004-03.

Observation: Semi-Annual Trend Review - Fire Protection System (Water)	71152

The inspectors noted that the licensee had experienced two cases of clogged water spray nozzles during this inspection period. On October 9, 2019, CR 2019-08262 listed 13 clogged water spray nozzles found while performing a surveillance test of the water system protection for interbus transformer LH1A. On November 12, 2019, CR 2019-09579 listed three clogged water spray nozzles found while performing a surveillance test of the water system protection for interbus transformer LH2A. The CRs and/or associated test procedures did state that the nozzles were cleaned, and the surveillance tests successfully completed.

The inspectors knew that the spray systems for these outdoor transformers, after the water flow testing, are drained but usually some moisture remains in the steel lines. Since moisture and air produce an environment conducive to corrosion in carbon steel pipes and that there were two instances of clogged nozzles within an approximately one-month period, the inspectors initiated a search of the licensee's condition report system to determine if an adverse trend existed.

The inspectors originally searched CRs for period extending back eight months and then one year with no more reports of clogged water spray nozzles or internal corrosion of firewater spray lines. Then the inspectors searched back greater than four years since the flow testing of transformer spray nozzles is a once every 24 months test. During this expanded review, the inspectors did not identify any water spray nozzle clogging issues or instances of found clogging or fouling of nozzle spray supply lines.

The inspectors also noted that the number of found clogged spray nozzles would have degraded fire suppression capability but would not have incapacitated fire suppression capability for the interbus transformers. The inspectors did not identify an adverse trend associated with the design function of fire protection water spray nozzles and did not identify any concerns.

Observation: Review of Plant Aggregate Risk Assessment	71152

The inspectors reviewed the aggregated effects of operator burdens, workarounds, control room deficiencies and deficient conditions on plant risk. The inspection included a review of programmatic requirements and processes which resulted in discussions with operations and engineering personnel to determine whether the conditions identified, in aggregate, were manageable and being addressed in a timely manner commensurate with their safety significance. The inspectors reviewed the conditions, monitoring plans and trigger points to assess if the adverse conditions were being appropriately tracked and trended. The inspectors determined, overall, that the licensee was effectively managing adverse conditions and no concerns were identified as part of this review.

Observation: RCIC Steam Supply Second Drain Isolation Valve Leak Caused Secondary Containment Control Emergency Operating Procedure Entry	71152

On December 13, 2019, the control room received the RCIC Pump Room Sump Level High alarm and entered EOP-3, “Secondary Containment Control,” emergency operating procedure. The inspectors determined that the licensee dispatched an operator to the RCIC pump room and discovered that a previously identified steam leak from the RHR and RCIC Steam Supply Second Drain Isolation valve packing had degraded and that a real emergency did not exist. The inspectors reviewed condition reports, operation narrative logs, operational decision-making issues and the operations aggregate assessment of plant impacts from deficient conditions. The inspectors determined that prior to December 13, 2019, the steam

leak on RHR and RCIC Steam Supply Second Drain Isolation valve had been identified three previous times. The inspectors reviewed work orders and notifications written as a direct result of the corrective action documents. In most cases the inspectors were able to determine that the licensee addressed each steam leak identification by adjusting the valve packing and either reducing or eliminating the leak. However, the inspectors noted that during the identification of the steam leak on August 25, 2019, the licensee was not able to eliminate the leak as documented in Notification 601236676, "Packing Leak on RHR & RCIC Steam Supply.". The inspectors determined that the licensee put into place a method to monitor the leak using operator rounds and drained the associated sump as needed. During review of narrative logs the inspectors determined that the frequency between sump drains decrease from every two weeks in August to every two and a half days, on average, in December. The licensee documented the emergency procedure entry due to steam leak degradation in CR 2019-10360, "Unplanned Entry Into EOP-03 Secondary Containment Control." Corrective actions identified following the EOP-3 procedure entry included continuing to monitor the steam leak using operator rounds but changed the sump drain frequency to shiftly. The steam leak was scheduled to be addressed during the system outage in January 2020. The inspectors did not identify any concerns as part of this review.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On January 17, 2020, the inspectors presented the integrated inspection results to Mr. F. Payne, Site Vice President and other members of the licensee staff.
- On October 10, 2019, the inspectors presented the Emergency Preparedness Inspection inspection results to Mr. C. Elliott, Operations Manager and other members of the licensee staff.
- On November 20, 2019, the inspectors presented the radiation protection baseline inspection results to Mr. F. Payne, Site Vice President and other members of the licensee staff.
- On November 21, 2019, the inspectors presented the Emergency Action Level and Emergency Plan Changes Inspection inspection results to Mr. T. Kledzik, Emergency Response Supervisor and other members of the licensee staff.
- On December 6, 2019, the inspectors presented the Heat Sink Performance inspection results to Mr. F. Payne, Site Vice President and other members of the licensee staff.
- On December 17, 2019, the inspectors presented the Licensed Operator Requalification program annual examination results review inspection results to Mr. R. Torres, Fleet Exam Team Lead and other members of the licensee staff.
- On January 17, 2020, the inspectors presented the integrated inspection results inspection results to Mr. F. Payne, Site Vice President and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Procedures	ONI-ZZZ-1	Tornado or High Winds	31
	Work Orders	200794255	Flood Mitigation Actions - ONI-ZZZ-1	0
71111.04Q	Drawings	302-0641-00000	Residual Heat Removal System	KKK
		302-0642-00000	Residual Heat Removal	NN
		302-0643-00000	Residual Heat Removal System	CCC
		302-0691-00000	Standby Liquid Control System	Z
		302-0692-00000	Standby Liquid Control Transfer System	V
		302-0791-00000	Emergency Service Water System	BBB
		302-0792-00000	Emergency Service Water System	RR
		912-0605-00000	Reactor Building Annulus Exhaust Gas Treatment	Y
		912-0610-00000	Control Room HVAC and Emergency Recirculation System	CC
	Procedures	SVI-E12-T1182B	RHR B LPCI Valve Lineup Verification and System Venting	14
		VLI-C41	Standby Liquid Control System	8
		VLI-E12	Residual Heat Removal System	15
		VLI-M15	Annulus Exhaust Gas Treatment System	4
		VLI-M25/M26	Control Room HVAC and Emergency Recirculation System	7
		VLI-P45	Emergency Service Water System	20
71111.04S	Corrective Action Documents	CR 2019-03480	Valve Indicates Open Testable Check Valve	04/12/2019
	Drawings	302-0631-00000	Reactor Core Isolation Cooling System	HH
	Procedures	VLI-E51	Reactor Core Isolation Cooling System	10
71111.05Q	Fire Plans	FPI-0CC	Control Complex	11
		FPI-0EW	Emergency Service Water Pump House	7
		FPI-0IB	Intermediate Building	10
		FPI-1AB	Auxiliary Building Unit 1	4
		FPI-1DG	Diesel Generator Building Hallway	9
	Procedures	PAP-1910	Fire Protection Program	41
	Work Orders	200717072	Portable Fire Extinguishers Maintenance Inspection	05/09/2019
71111.06	Calculations	IF-8	Flood Zone 21: Critical Volumes, Flood Heights, Flow Rates, Flood and Alarm Chronology	0
		JL-083	Flooding Analysis of CCB, IB, and FHB - Floor Elevation	3

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			574'-10"	
	Drawings	105-0013-00000	Control Complex Floor Plan - El. 620'-6"	K
		304-0804-00000	ESW - Control Buillding Plan Above 574'-10"	I
	Miscellaneous	PRA-PY1-AL	Internal Flooding Notebook	0
	Procedures	ARI-H13-P970-0001	Common Long Response Benchboard	27
		ONI-R10	Loss of AC Power	15
71111.07A	Calculations	E22-042	Division 3 Emergency Diesel Generator Jacket Water Heat Exchanger Performance Test	4
	Work Orders	200645158	HPCS Diesel Generator Jacket Water Heat Exchanger Performance Testing	06/04/2019
71111.07T	Calculations	E12-089	Required ESW Flow for the RHR HXs	3
		E12-102	RHR System Heat Exchanger "B" Loop Performance Test Evaluation	4
		P42-039	Design Basis Heat Load & Required ESW Flow for the ECC HXs	2
		P42-051	Emergency Closed Cooling Heat Exchanger "B" Loop Performance Test Evaluation	3
		P45-044	Keepfill Check Valve Leak Rate/Standpipe Draindown Level	2
	Corrective Action Documents	CR-2011-91278	Results of ESW Related Diver Inspections (March 2011)	03/18/2011
		CR-2016-09504	Emergency Service Water (ESW) Loop "C" Flow Rates Degraded	08/03/2016
		CR-2016-12106	High Pressure Core Spray Emergency Service Water Flow in the Alert Low Range	10/10/2016
		CR-2017-07247	Received ESW to RHR HX Flow Low Annunciator Alarm	07/07/2017
		CR-2017-09641	Silt Levels in Emergency Service Water (ESW) East and West Pump Bays	09/19/2017
		CR-2018-08003	Small Margin Remaining in RHR Heat Exchanger Loop "B"	09/10/2018
		CR-2018-08122	Silt Levels in Emergency Service Water East and West Pump Bays and Forebay	09/14/2018
	Corrective Action Documents Resulting from Inspection	CR-2019-10102	2019 Triennial Heat Sink Inspection: Drawing 21-0016-00001 Rev. B has Incorrect Work Order Listed	12/03/2019
		CR-2019-10124	2019 Triennial Heat Sink Inspection: Housekeeping Deficiencies Identified in RHR B HX Room 599' and RHR B	12/04/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Pump Room 574'	
		CR-2019-10148	2019 Triennial Heat Sink Inspection: Silt Data not Recorded in Order 200725355 for Intake and Discharge Structures in the Lake	12/05/2019
		CR-2019-10155	2019 Triennial Heat Sink Inspection: CR not Written on Silt Buildup in Forebay at Time of Diver Inspection for WO 200474126	12/05/2019
		CR-2019-10165	2019 Triennial Heat Sink Inspection: Global EMARP-0011 Concerns	12/05/2019
		CR-2019-10175	2019 NRC Triennial Heat Sink Inspection, Documentation for Heat Exchanger Bracing Adequacy can not be Located	12/06/2019
		CR-2019-10185	2019 Triennial Heat Sink Inspection: Inadequate Technical Justification for Deferral of RHR B Eddy Current and Visual Inspections	12/06/2019
		CR-2019-10233	2019 Triennial Heat Sink Inspection: Roll Up CR	12/09/2019
	Drawings	015-0002	Emergency Service Water Pump House Plans and Elevations	F
		21-0016-00002	Residual Heat Removal Heat Exchanger 1E12B001B Tube Sheet Drawing	A
		22-0140-00002	Emergency Closed Cooling Heat Exchanger Loop "B" (1P42B0001B) Tube Sheet Drawing	A
		304-0791	Emergency Service Water Piping	T
		743-0013	Topography and Storm Drain	G
		D-726-210	Offshore Multiport Intake Structure	M
		D-726-213	Discharge Structure	E
	Engineering Evaluations	Spec-625	Seismic Qualification Report for Emergency Closed Cooling Water Heat Exchangers	0
	Miscellaneous	600925874	Revision Notification for First Time Performance - 1E12B0001B/D	04/27/2015
		601199944	Revision Notification for Performing PM Less Often - 1E12B0001B	12/31/2018
		DI-220	Perry Nuclear Power Plant RHR Heat Exchanger Performance Program	1
		EMARP-0011	North and West Intake Structures and Discharge Structure	11/13/2017

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		Emergency Service Water Monitoring Program Report Sheet	Inspections	
		EMARP-0011-Emergency Service Water Monitoring Program Report Sheet	Visual Inspection of Emergency Service Water Pump/Forebay and ESW Normal/Alternate Tunnel	11/27/2017
	Procedures	D-726-201	Intake Tunnel Plan and Profile	E
		EMARP-0011	Emergency Service Water System Monitoring Program	6
		IOI-0015	Seasonal Variations	33
		ONI-P40	ESW or SW Sunction Path Blockage	6
		ONI-P41	Loss of Service Water	19
		PTI-GEN-P0024	Mussel Treatment	21
		PTI-P45-P0004	Emergency Service Water Manual Valve Operability Test	10
		PTI-P45-P0009A	ESW Forebay Low Level Functional for P45-D004A	4
		SOI-E12	Residual Heat Removal System	75
		SOI-P42	Emergency Closed Cooling System	23
		SOI-P45/P49 Section 7.2	Emergency Service Water and Screen Wash Systems	34
	Work Orders	200208230	Cal Check - ESW Keep Fill Pressure Gauge	05/16/2008
		200294673	Calibrate Pressure Gauge Per ICI-B2-0, SEE 302-792, ESW Keep Fill Line	12/27/2007
		200342060	Eddy-Inspect/Clean P42 HX	05/05/2011
		200428423	(4Y) RHR Heat Exchangers B and D Performance Testing	11/19/2014
		200474126	Inspect ESW Forebay and Normal Intake Tunnel	10/24/2017
		200474126	Inspect ESW Forebay and Normal Intake Tunnel	10/24/2017
		200518858	Inspect ESW Forebay and Normal Intake Tunnel	09/07/2018
		200553883	Inspect East/West Pump Bay and Alternate Intake Tunnel	10/23/2017
		200560618	(4Y) Emergency Closed Cooling B Heat Exchanger Performance Testing	11/09/2015

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		200617665	Inspect East/West Pump Bay and Alternate Intake Tunnel	12/05/2018
		200624207	(4Y) RHR Heat Exchangers B and D Performance Testing	09/04/2018
		200632868	Emergency Service Water Manual Valve Operability Test	03/03/2017
		200656789	Inspect SW/ESW Intake/Discharge Ports	08/09/2016
		200656790	Inspect SW/ESW Intake/Discharge Ports	09/13/2017
		200661237	ESW System Loop C Flow and Differential Pressure Test	07/08/2019
		200690654	Lube/Megger ESW Intake Screen "B" Motor	07/23/2018
		200710562	ESW Pump B and Valve Operability Test	04/30/2019
		200711981	Inspect SW/ESW Intake/Discharge Ports	09/12/2018
		200712729	Emergency Service Water Manual Valve Operability Test	10/06/2018
		200714996	ESW Loop A Flow and Differential Pressure Test	04/24/2019
		200718770	ESW System Loop and Differential Pressure Test	06/08/2019
		200718850	ESW Pump B and Valve Operability Test	08/16/2019
		200725357	ESW Forebay Low Level Funtional for P45-D004B	10/14/2018
		200728962	(92D) ESW System Loop B Flow and Differential Pressure Test	08/30/2019
		200728965	ESW System Loop A Flow and Differential Pressure Test	07/21/2019
		200729052	HPCS ESW Pump and Valve Operability Test	07/08/2019
		200764994	Cal Check - Keep Fill Pressure Gauge HPCS ESW	07/09/2019
		98-826	RHR B/D HX Inspection	04/06/1999
71111.11A	Miscellaneous		Perry Annual Licensed Operator Requalification Program Summary Results for 2019	12/16/2019
71111.11Q	Miscellaneous	Evolution Specific Reactivity Plan	December 2019 Power Suppression Test	0
		OT-3070 RP2E	Simulator Scenario Guide	0
		OT-3070-005-RP1B	Simulator Scenario Guide	0
71111.12	Corrective Action Documents	CR 2018-10660	HPCS Agastat TD Relay Outside Times Permitted but Within Allowable TS Times	12/04/2018
		CR 2018-11210	AEGTS Train A Flow Oscillations	12/24/2018
		CR 2019-02590	Valve PMT Stroke Issue - Contact Problem on Switch 1C61S0080	03/21/2019
		CR 2019-05821	Diesel Procedure Step Performed Out of Order	07/09/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR 2019-09208	RHR B Containment Spray 1st Isolation Valve Lost all Position Indication	11/01/2019
		CR 2019-09212	Combustible Gas Mixing Compressor B Trip on Thermal Overloads	11/01/2019
		CR 2019-09358	10CFR21-2017: EMD Fuel Injector - Seized Plunger and Bushing	11/05/2019
		CR 2019-09378	Div 3 DG Tripped on Reverse Power	11/05/2019
		CR 2019-09421	Common Cause Evaluation for Division 3 DG Inoperability	11/06/2019
	Corrective Action Documents Resulting from Inspection	CR 2019-10361	Maintenance Rule Evaluation Required on 1E12F0024B and 1C61-S80	12/13/2019
		CR 2019-10375	NRC Identified: Infantile Failure of 1C61S0080 - November 2018 to March 2019	12/13/2019
		CR 2019-10523	NRC Identified: CR 2019-09212 Maintenance Rule Evaluation Conclusion was Questioned	12/19/2019
	Drawings	208-0039-00004	Remote Shutdown System Division 2 Switch Development and Locations	L
		208-0055-00025	Containment Spray Valve - F028B	Y
		208-0055-00036	RHR "B" Test Return MOV F024B	V
		208-0206-00037	4.16KV Bus EH13 Diesel Brkr. EH1301	Z
	Miscellaneous		A Miniature Instrument & Control Switch for Power Industry Applications (ElectroSwitch)	11/05/1984
		Maintenance Rule System Basis Document System E_C	System Name: Electrical Component Group - Indication	0
		Notification 601219728	BLC2000-721 Control Unit (Blind Controller) Qualification Report	0
		PY-M51-F-1610	Combustible Gas Control Function Basis Document	0
	Procedures	GEI-0046	Division 3 125Vdc Relays	5
		GEI-0100	Maintenance and Calibration of Power Relay 12ICW52B	4
		NOP-ER-3004	FENOC Maintenance Rule Program	5
		PYBP-PES-0001	Maintenance Rule Reference Guide	15
		SVI-C61-T1202	Remote Shutdown Control Test - Division 2 RHR, ECC, and ESW	9

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		SVI-M51-T2003-B	Combustible Gas Mixing System B Operability Test	13
	Work Orders	200341689	Inspect Remote Shutdown Switch 1C61A-S80 as Extent of Condition for CR 08-46021	11/14/2018
		200516341	Relay ICW52B 32B EH13 Bus Reverse Power	02/17/2018
		200701831	PY-1E2207038 Cal Check Agastat E7000 TD Relay	05/06/2019
		200713648	Perform Static MOV [Motor Operated Valve] Test RHR 'B' Test VLV [Valve] to Supr [Suppression] Pool	03/21/2019
		200730436	Replace PY-1M15R0060B-1 Annulus Differential Pressure Controller B	0
		200752416	PY-1E2207032 - Calibrate Agastat E7000 DC TD Relay	05/06/2019
		200775158	Troubleshoot Cause of AEGTS Train A Flow Oscillations	0
		200775159	Replace Control Unit	0
		200775160	Bailey 721 Controller Non-Safety Stock Code 90895255 to be Dedicated to Allow Use as Commercial Grade Stock Code 100027602	0
		200783496	Post Maintenance Testing of Valve 1E12F0024B per Order 200713648 Identified that the Valve would not Stroke Closed	03/21/2019
		200804189	While Stroking Open E12F028B for the Div 2 Combustible Gas Mixing Compressor Run, Valve E12-F028B Lost All Indication	11/01/2019
		200804866	Div 3 DG Tripped on Reverse Power	11/06/2019
		WO 200804216	Combustible Gas Mixing System Compressor B Tripped on Thermal Overloads	11/04/2019
71111.13	Corrective Action Documents	CR2019-09378	Div 3DG Tripped on Reverse Power	11/05/2019
	Procedures	NOP-OP-1007	Risk Management	30
		SVI-E22-T1319	Diesel Generator Start and Load Division 3	28
	Work Orders	200542705	Perform Static MOV Test for RHR C Minimum Flow Valve	0
		200574288	Control Room HVAC	0
		200749548	Perform Static MOV Test for the RHR C Suppression Pool Suction Valve	0
		200804866	Div 3 DG Tripped on Reverse Power	11/06/2019
71111.15	Corrective Action Documents	CR-2019-09208	RHR B Containment Spray 1st Isolation Valve Lost All Position Indication	11/01/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-2019-09228	Inability to Select Control Rods	11/01/2019
	Drawings	208-0055-00025	Residual Heat Removal System, Containment Spray Valve - F028B	Y
	Procedures	NOP-OP-1009	Operability Determinations and Functionality Assessments	8
		SOI-C11(RCIS)	Rod Control and Information System	32
71111.18	Calculations	H-1G33-112	Design Verification Record of 1G33-Reactor Water Cleanup System	15
	Corrective Action Documents	CR 2015-08036	PFA [Prompt Functionality Assessment] Needed for Site Flooding Issues	07/08/2015
		CR 2019-03298	Reactor Water Cleanup Drain Valves (G33F066) Leaking By	04/08/2019
	Corrective Action Documents Resulting from Inspection	CR 2019-10368	Discrepancy Between Intermediate Building Roof Drawing and Calculation Live Load	12/13/2019
	Engineering Changes	19-0178-001	Interim Flooding Protection for Plant Structures - Ground Level Vulnerabilities	0
		19-0178-002	Temporary Roof Protection for Flood Mitigation	0
		ECP No. 19-0091-000	Engineering Change Package Design Report to Change the Safety/Quality Classification of Selected Piping for Test, Vent, and Drain Connections to ASME Class 1, 2, or 3 Piping to Non-Nuclear Safety (NNS)/quality Group D	0
	Engineering Evaluations	NORM-LP-7322	Perry Nuclear Power Plant Flooding Focused Evaluation Report	11/22/2019
		Notification 601216082	Evaluate Kill of Downstream Pipe/Cap	04/09/2019
	Miscellaneous	TCC-1-G33-LR-002	Temporary Configuration Change that Installs a Line Kill	1
	Procedures	ONI-ZZZ-1	Tornado or High Winds	31
		PAP-0204	Housekeeping/Cleanliness Control Program	31
	Work Orders	200794255	Flood Mitigation Actions - ONI-ZZZ-1	
		200799298	Stage Sandbags at Gross Openings (Vents, Louvres, Penetrations) and Roof Door Openings	09/17/2019
		WO 200785169	Penetration P131 Outboard Test Connection Second	04/16/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Isolation Valve	
71111.19	Drawings	208-0055-00025	Residual Heat Removal System, Containment Spray Valve - F028B	Y
	Procedures	SVI-E12-T2002	RHR B Pump and Valve Operability Test	39
	Work Orders	200290508	Replacing the 1C71K051C Relay for Scram Discharge Volume Level Hi	11/07/2019
		200753726	SVI-C11-T1003B Control Rod Exercise Part 2	11/02/2019
		200753785	SVI-C11-T1103A Control Rod Exercise Part 1	11/02/2019
		200770274	Emergency Closed Cooling Pump "A"	11/18/2019
		200804181	Inability to Select Control Rods	11/02/2019
		200804189	Containment Spray B First Shutoff	11/01/2019
71114.02	Miscellaneous		FEMA Approval Letter for Perry Nuclear Power Plant Prompt Alert Siren System (PASS) Design Report Update, Revision 0	07/17/2015
			Perry EPZ Siren Test Data	09/01/2017–09/30/2019
			Perry 2017 EPZ Siren Annual Maintenance Records	09/01/2017 - 12/31/2017
			Perry 2018 EPZ Siren Annual Maintenance Records	01/01/2018 - 12/31/2018
			Federal Signal Models 2001-130, Equinox, and 508-128 Sirens Installation, Operation, and Service Manual	A5 0017
			Tempest T-112/ T-121 Omni-Directional Siren Installation, Operation, Maintenance and Parts Manual	H
			Perry EPZ Siren PI Test Schedules	09/01/2017-12/31/2019
	Procedures		Perry Nuclear Power Plant Prompt Alert Siren System (PASS) Design Report	0
		NOBP-LP-5018	FENOC Siren Testing and Maintenance	3
		NOP-LP-5005	FENOC Siren Testing and Maintenance	0
		PTI-GEN-P0003	Quarterly Testing of the Emergency Pager System	10
71114.03	Corrective Action Documents	CR-2018-07283	ERO Drill - During 8/15/2018 Drill Objective B.1, Notification of ERO Personnel Not Met	08/16/2018

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-2019-04530	ERO Drill - Objective B.1 Not Met - ERO Not Notified in 10 Minutes	05/20/2019
	Miscellaneous		Technical Support Center Equipment Checklists (Completed Survey Records)	12/01/2018 - 09/30/2019
			Emergency Response Organization Roster	09/20/2019
			ERO Augmentation Quarterly Pager Test Records	09/01/2017 – 09/30/2019
			Emergency Operations Facility Equipment Checklists (completed survey records);	12/01/2018 - 09/30/2019
	Procedures	NOP-LP-5006	Emergency Response Organization Training Program	4
		PYBP-ERS-0037	Notification of Key Plant Personnel	3
71114.04	Miscellaneous		Perry Station 10 CFR 50.54(q) Evaluator Qualification and Training Records Spreadsheet	06/25/2019
		PY-2019-013-00 10 CFR 50.54(q)2 Analysis	Emergency Plan Change - Public Information Response Team Relocation	05/22/2019
		PY-2019-013-00 10 CFR 50.54(q)3 Screen/Evaluation	Emergency Plan Change - Public Information Team Relocation	06/03/2019
		PY-2019-06-00 10 CFR 50.54(q)2 Analysis	Emergency Plan Change - Elimination of EOF Plant Operations Assistant Position	04/30/2019
		PY-2019-06-00 CFR 50.54(q)3 Screen/Evaluation	Emergency Plan Change - Elimination of EOF Plant Operations Assistant Position	04/30/2019
		PY-2019-09-00 10 CFR 50.54(q)2 Analysis	Emergency Plan Revision 53 - Editorial Changes	05/22/2019
		PY-2019-09-00 10 CFR 50.54(q)3 Screen/Evaluation	Emergency Plan Revision 53 - Editorial Changes	05/22/2019
	Procedures	EP-0000	Emergency Plan for Perry Nuclear Power Plant	52
		EP-0000	Emergency Plan for Perry Nuclear Power Plant	53
		NOP–LP–5002	Evaluation of Changes to Emergency Plans and Supporting	7

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Documents 10 CFR 50.54(q)	
71114.05	Corrective Action Documents	CR-2017-11819	Lake County Letter of Agreement was Expired for Two Months	11/30/2017
		CR-2018-05456	ERO Drill 6-6-18: Objective F.6 Not Met - Release Start Time	06/12/2018
		CR-2018-07292	ERO Drill: Objective C1 - Not Met, Failure to Notify Offsite Agencies within 15 Minutes	08/17/2018
		CR-2018-08213	ERO Exercise - Objective U11 and U12 Not Met - Dose Assessment	09/18/2018
		CR-2018-08245	ERO Exercise - Objective C.2 Demonstrate Ability to Notify NRC within One Hour Not Met	09/19/2018
		CR-2018-08276	ERO Exercise - Weaknesses in Dose Assessment	09/19/2018
		CR-2018-08293	ERO Exercise - Objective K.7 Not Met - Accuracy of Alert News Statement	09/20/2018
		CR-2018-09836	10/18/18 EOF General Emergency Classification Made Using Alternate EAL	11/06/2018
		CR-2019-00834	Negative Trend Noted in Drill & Exercise Performance for the Month of January 2019	01/28/2019
		CR-2019-04480	ERO Drill - Objective E.6 Was Not Met During 5/15/2019 Integrated Drill	05/17/2019
		CR-2019-04730	Protective Action Flow Chart Recommendation	05/18/2019
	Corrective Action Documents Resulting from Inspection	CR-2019-08255	NRC EPlan Inspection: NOBP-LP-5018 "FENOC Siren Testing and Maintenance" Scope of Review Discrepancy	10/09/2019
	Miscellaneous		Letters of Agreement with Agencies Supporting Emergency Preparedness (Sample)	09/01/2017 - 09/30/2019
			Emergency Preparedness Drill and Exercise Records (Sample)	09/01/2017– 09/30/2019
			Emergency Response Organization Training and Qualification Records (Sample)	10/10/2019
		KLD TR-1029	Perry Nuclear Power Plant 2018 Population Update Analysis	09/27/2018
		KLD TR-481	Perry Nuclear Power Plant Development of Evacuation Time Estimates	10/01/2012

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		KLD TR-997	Perry Nuclear Power Plant Evacuation Time Estimate Sensitivity Study Due to the Vrooman Road Closure	05/04/2018
	Procedures		Emergency Plan for Perry Nuclear Power Plant	54
		PYBP-ERS-0003	Emergency Plan Facility/ Equipment Inventory Checklists	21
	Self-Assessments	MS-C-17-11-24	Fleet Oversight Audit Report of Emergency Preparedness	12/08/2017
		MS-C-18-11-24	Fleet Oversight Audit Report of Emergency Preparedness	12/07/2018
71124.02	ALARA Plans	190522	1R17 Bioshield ISI Activities	0
		190903	1R17 In Vessel Inspection Activities	0
		190904	1R17 Reactor Reassembly Activities	0-4
	Corrective Action Documents	CR 2019-02298	Hydraulic Oil Spill into Refueling Cavity	03/13/2019
		CR 2019-02512	In Vessel Inspection Outage Project Elevated Dose Levels	03/19/2019
		CR 2019-02607	1R17 Bioshield ISI RWP 190522 Estimate Challenged	03/21/2019
		CR 2019-03322	1R17 Elevated Reactor Cavity Dose Rates after Second Draindown	04/08/2019
	Miscellaneous		1R17 Outage Alara Report	06/12/2019
		190522	1R17 Bioshield ISI Work in Progress Reviews	0
		190522	1R17 Bioshield ISI Activities Alara Post Job Review	08/19/2019
		190903	1R17 In Vessel Inspection Activities Work in Progress Reviews	0
		190903	1R17 In Vessel Inspection Activities Alara Post Job Review	08/20/2019
		190904	1R17 Reactor Reassembly Activities Work in Progress Reviews	0-4
		190904	1R17 Alara Post Job Review	07/24/2019
	Procedures	NOP-OP-4107	Radiation Work Permits	18
	Radiation Work Permits (RWPs)	190522	1R17 Bioshield ISI Activities	0
		190903	1R17 In Vessel Inspection Activities	0
		190904	1RF17 Reactor Reassembly Activities	0-4
71151	Miscellaneous		NRC Performance Indicator Data; Emergency Preparedness – Drill/Exercise Performance (DEP)	07/01/2018 - 06/30/2018
			NRC Performance Indicator Data; Emergency Preparedness – ERO Readiness	07/01/2018 - 06/30/2019
			NRC Performance Indicator Data; Emergency Preparedness – Alert and Notification System Reliability	07/01/2018 - 06/30/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NOBP-LP-4012-10	Reactor Coolant System Leakage	10/01/2018 - 09/30/2019
	Procedures	NOBP-LP-4012	NRC Performance Indicators	7
71152	Corrective Action Documents	CR 2018-08732	2018 NRC Fire Protection Inspection - Obstructed Sprinkler Head on CC-574 Overhead Suppression System	10/04/2018
		CR 2018-08805	Motor Fire Pump Pin Hole Leak Downstream of Pump Relief Valve	10/07/2018
		CR 2019-01465	Packing Leak Has Returned on RHR & RCIC Steam Supply Second Drain Isolation Valve	02/18/2019
		CR 2019-05479	Packing Leak on RHR & RCIC Steam Supply Second Drain Isolation Valve	06/25/2019
		CR 2019-07109	Packing Leak on RHR & RCIC Steam Supply	08/25/2019
		CR 2019-08262	L -H-1-A Clogged Nozzles Found During Deluge Test PTI-P54-P0064A	10/09/2019
		CR 2019-09579	Three Clogged Nozzles Discovered During Interbus Transformer LH2A Deluge Testing per PTI-P54-P0065A	11/12/2019
	Drawings	17-936 Sh37	Interbus Transformer Plan View	05/30/1980
	Procedures	NOBP-OP-0012	Operator Work-Arounds, Burdens, Control Room Deficiencies and Operations Aggregate Assessment	8
		NOP-LP-2001	Corrective Action Program	46
		NOP-OP-1009	Operability Determinations and Functionality Assessments	8
		NOP-OP-1010	Operational Decision-Making	8
		PAP-1910	Fire Protection Program	42
		PTI-P54-P0064A	Water Spray Flow Test for Unit 1 Interbus Transformer A	6
		SOI-P54 (WTR)	Fire Protection System - Water	30
	Work Orders	200694434	PTI-P54P0065A LH-2-A Spray Flow Test	11/11/2019